Engaging Learners in Underachieving Locales: A Socio-Cultural Approach to Pupil Motivation

Nicola Birdsey
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Cardiff University
School of Social Sciences

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It is finished! The joy caused by these three words cannot be underestimated; my amazing family, friends, colleagues and supervisor who have remained by my side during every step of my rocky PhD experience will appreciate how much this means. The thanks written here can in no way repay the kindness shown to me but everyone mentioned here is more than worthy of acknowledgement.

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Abstract

This study employs a sociocultural lens to explore differential academic achievement at the institution, classroom and individual plane of analysis within an 'underachieving' locale in Wales. Sociocultural approaches to learning view cognitive processes as being embedded within social events and mediated by cultural activity, best understood in its historical context. This study investigates why some children succeed academically in school and others do not in an underachieving locale. Attention is paid to the context of the school, the classroom and individuals' understanding of tasks. The sample comprises 213 children from four schools, specifically chosen to represent higher achieving and lower achieving institutions, with eight classes across two year groups (Year 6 and Year 2). Within each classroom 'central' and 'peripheral' learners were identified. Multiple methods, including standardised national SATs assessments, questionnaires, interviews and specifically designed research instruments were used to investigate children's academic performance and their broader social and cultural views and experiences of learning. Findings suggest that classroom culture influences pupils' motivation to learn and their potential educational achievement. In comparison to 'peripheral' learners, the children identified as 'central' participants were able to identify problems according to school-related abstract concepts. Schools and teachers can indeed make a difference.

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HIGHER ACHIEVING SCHOOLS

North Higherbank Primary	Highbury Park Primary
Head Teacher	**Head Teacher**
Mr Night	**Mrs Humble**
Year 6 Teacher	**Year 6 Teacher**
<u>**Mr Nowledge**</u>	<u>**Mr Humour**</u>
Caitlin Nelson	Cerys Hill
Charlotte Norman	Camilla Hawkins
Charles Newtown	Cassie Hayes
Clifford Naish	Coral Hudson
Peter Nolan	Paddy Hunter
Patrick Notton	Perry Hayes
Paige Naylor	Paula Hammond
Phoebe Nugent	Polly Harper
Year 2 Teacher	**Year Teacher**
<u>**Mrs Noble**</u>	<u>**Mrs Heart**</u>
Catherine Norris	Caroline Hart
Caleb Northcott	Christine Hemmingway
Carl Newcombe	Casey Hoyland
Callum Nicholls	Callie Hargreaves
Poppy Nyman	Phillip Hadley
Pablo Nightingale	Padrig Hewson
Palmer Nisbett	Pierre Haine
Pascal Neale	Percy Hicks

LOWER ACHIEVING SCHOOLS

Lowerbridge Primary

Head Teacher
Mrs Leader

Year 6 Teacher
Mrs L'Enthuse

Cathleen Lovett
Connor Lewis
Cayla Lawrence
Colin Larson

Phoenix Lowe
Parker Lenton
Peggy Lee
Patricia Law

Year 2 Teacher
Miss Lovejoy

Christy Llewellyn
Carla Leader
Caron Lake
Chelsey Locke

Philippa Luffman
Paul Lugg
Piers Lucas
Portia Lloyd

Fallowfield Primary

Head Teacher
Mrs Friend

Year 6 Teacher
Mr Fairly

Carol Francis
Corey Farrant
Chris Fenton
Cate Fuller

Parry Fitzgibbon
Preston Fryer
Pippa Ferguson
Patrick Fisher

Year Teacher
Mrs Funlead

Cameron Farley
Ciaran Fenton
Connie Furlong
Cara Ford

Palmer Foster
Petra Fairclough
Pandora Freeman
Peyton Farr

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Abbreviations

CSI	Core Subject Indicator
DES	Department for Education and Science
DfEE	Department for Education and Employment
ESTYN	Her Majesty's Inspectorate for Education and Training in Wales
FF	Fallowfield Primary School
GCSE	General Certificate in Secondary Education
GNVQ	General National Vocational Qualification
GTCW	General Teaching Council for Wales
HP	Highbury Park Primary School
KS	Key Stage
KS1	Key Stage 1: School Years 1-2
KS2	Key Stage 2: School Years 3-6
LB	Lowerbridge Primary School
LEA	Local Education Authority
Level 2	Benchmark Attainment Level in KS1
Level 4	Benchmark Attainment Level in KS2
NAfW	National Assembly for Wales
NC	National Curriculum
NFER	National Foundation for Educational Research
NH	North Higherbank Primary School
NQT	Newly Qualified Teacher
NVQ	National Vocational Qualification
OFSTED	Office for Standards in Education
QCA	Qualifications and Curriculum Authority
SATs	Standard Assessment Tasks
SES	Socio-Economic Status
SMT	Senior Management Team
TA	Teacher Assessment
TES	Times Educational Supplement
TT	Test/Task
WAG	Welsh Assembly

CHAPTER 1   INTRODUCTION

> "Schools do not exist in isolation. They operate within a local context (with its own history and complexities) that is constantly changing. The people within a school community - and the way they interact with one another - are the most important factor in the way the school works" ('School Effectiveness Framework', Welsh Assembly Government, 2008, p.8).

1.0 Introduction

This study employs a socio-cultural approach to investigate the issue of underachievement. It takes a broader view of pupil motivation to understand how place, institution and classroom contribute to academic achievement within a locale identified as 'underachieving'. This study is specifically concerned with understanding why some children succeed academically in school while others do not, in higher and lower achieving schools within an underachieving locale in Wales. This chapter outlines the context within which the research took place, firstly by exploring relevant policy established by the Welsh Assembly Government (WAG) to tackle underachievement in schools throughout Wales. Brief examination of WAG educational policies and documents, drafted and implemented in Wales in recent years, will provide the educational framework within which this study was conducted. Background literature will then be presented to further contextualise the study; empirical support is also offered to underscore the importance of researching underachievement within particular locales. An overview of the multilayered research design is then provided to illuminate the multiplicity of using a socio-cultural framework to explore pupil engagement in learning. The structural organisation of this thesis is outlined in the latter part of this chapter.

1.1 Policy context

Wales is committed to raising standards of education and promoting equality of access and opportunity for all. Just two years since the inception of the National Assembly for Wales, the Welsh Assembly Government produced 'The Learning Country Document' in 2001, which outlined a comprehensive strategy to raise educational standards by 2010. Its far-reaching agenda and ambitious goal was for "Wales to have one of the best education and lifelong learning systems in the world" (p.8). In essence, it aimed to drive standards of teaching and attainment in all Welsh schools and tackle social disadvantage, especially in the

most deprived communities. Its principles included: (i) promoting high standards and expectations; (ii) ensuring the interests of learners override all others; and (iii) ensuring barriers to learning are recognised and steadily overcome. Jane Davidson AM, then Minister for Education and Lifelong Learning, stressed in the foreword to the document the importance of offering wider access and opportunity for all and recognising the importance of schools as learning resources. The Learning Country document firmly stated that raising educational standards is critical to the long-term social and economic development of the community and "inequalities in achievement between advantaged and disadvantaged areas, groups and individuals must be narrowed in the interests of all. Children facing special disadvantage and poverty of opportunity must be better provided for" (NAfW, 2001; p.10). The Learning Country document sought to garner support in tackling widespread underachievement across Wales and identified, in 2001, the need for a new approach in tackling underachievement, which this study set out to achieve the following year, in 2002.

In 2002, the National Assembly for Wales produced 'Narrowing the Gap in the Performance of Schools'; a report which identified wide variation in the performance of secondary schools across Wales, particularly with regard to levels of disadvantage. Some pupils in disadvantaged areas were actually found to progress at a greater rate than might be expected, thus questioning the link between low attainment and deprivation. The sequel to this document, 'Narrowing the Gap in the Performance of Schools Project: Phase II Primary Schools' (WAG, 2005; p.6) identified key factors that contribute to the success of schools working in challenging circumstances. It recognised "a productive, strong and highly inclusive culture that focused on ensuring effective and enriched teaching and learning for all pupils" as the central characteristic found in successful primary schools. A further six characteristics were identified, including: (i) strong leadership; (ii) high expectations and pride in the school; (iii) a cohesive teaching team; (iv) engaged and committed parents; (v) efficient management; and (vi) mutual support from all those connected with the school, all of which resulted in soaring levels of attainment for pupils who experience high levels of social and economic disadvantage. This report concluded that excellent community relationships directly impact on pupils' attainment and are central to successful schools. WAG (2005, p.33) further explained the importance of community links, stating that:

> "engagement with the community raises the status of learning and has a positive impact in terms of raising standards of attainment, whilst providing an important

resource for communities particularly in disadvantaged areas. Schools should review their relationships with the communities they serve and consider how to develop them".

This supports the Welsh Assembly's (2003a) 'Community Focused Schools' circular which stressed the benefits of strong community relationships for schools, including: higher levels of pupil performance; increased pupil motivation and self-esteem; enhanced status for learning in the local community and reduced pupils disaffection. The circular further proposed that schools which actively engage with their local community experience greater parental involvement in children's learning and communities experience closer relationships with the school.

In 2006, the Welsh Assembly Government published 'The Learning Country 2 - Delivering the Promise' document, which served to review progress five years on from the original Learning Country 2001 document. It identified the following as important achievements: (i) the abolition of statutory national tests for 7 year olds in 2000, 11 year olds in 2004 and pupils aged 14 years in 2005; (ii) enhanced standards of education; and (iii) improved KS2 and KS3 test results. However, it also acknowledged the many challenges and objectives were yet to be achieved, stating:

- The curriculum for pupils aged 7-14 years needs to be more learner focused;
- More needs to be done to improve the percentage of pupils achieving 5+ GCSE A-C grades;
- The number of individuals leaving school with no qualifications needs to be reduced;
- The underachievement of boys compared to girls needs to be addressed;
- The attainment of ethnic minority pupils needs to improve (p.6).

This document conveyed the sentiments of educational policy makers who recognised the need to address discrepancies in the educational attainment of pupils from similar backgrounds. They believed a change in focus was required, stating:

> "We intend to apply a more forensic approach to tackling poverty of educational opportunity and low educational outcomes. To 2010 and beyond the focus will be on schools operating in challenging circumstances and schools where problems of low expectations, weak attainment and underperformance arise. The gap in outcomes between schools serving similar as well as different socio-economic areas remains significant. We cannot ignore this variability" (WAG, 2006, p.26).

Some of the specific objectives outlined in the Learning Country 2 document to raise standards included:

- Maintaining high expectations of all pupils
- Adapting the curriculum to promote respect for diverse cultures, languages and identities;
- Developing a sense of belonging to a diverse and multi-ethnic Welsh identity;
- Preparing all children for life in a diverse interdependent world;
- Providing appropriate academic and language support for all pupils according to need;
- Taking a firm stance against prejudice, stereotyping and discrimination in all forms including racism;
- Working closely with the community, seeking to encourage greater involvement of parents from all backgrounds;
- Striving to ensure that the school workforce and governing body reflects the diversity of both the local community and wider Welsh society.

The Welsh Assembly Government clearly championed the need for schools in Wales to attend to these objectives, including fostering a sense of belonging and promoting community links, in a bid to improve academic achievement in Wales. However, these objectives were set exclusively within the government's Minority Ethnic Achievement Strategy (WAG, 2006, p.29). The government absolutely needed to address the poor educational attainment of ethnic minority groups who were performing well below the all-Wales national averages in all Key Stages. However, preclusion of similar objectives set for non-ethnic minority groups inferred that the same level of governmental attention, initiatives and funding was not required to raise standards for these pupils. Within the field of socio-cultural research, the issues highlighted here are not restricted to ethnic minority groups. As this study is primarily concerned with understanding differential academic achievement within an underachieving locale, attention will be given to these objectives within a socio-cultural framework. This will be discussed further in Chapter 10.

The final educational policy worth noting is the 'School Effectiveness Framework' (WAG, 2008), which addressed concerns that significant variation was still being found between schools with children of similar ability and similar backgrounds. It further suggested that children in Wales were still not being offered an equal opportunity to fulfil their potential, which is a matter of moral and social justice. The tri-level approach to school effectiveness outlined in this document stressed the importance of working holistically; at the national, local, and individual level in order to improve learning outcomes for all. This document highlighted the Welsh Assembly Government's commitment to improving educational

outcomes and equity of performance in Wales. Akin to socio-cultural theory, this framework acknowledged that schools are not isolated institutions, and recognised instead that schools have to negotiate constantly changing socio-cultural complexities when operating within a locale. The School Effectiveness Framework also identified that the school community and its interactions are critical to successful school functioning.

The central features outlined in these WAG policy documents lend further support to the call for socio-cultural research to identify the importance of culture and community across classroom, school, local authority and government levels. In building upon the 'Community Focused Schools' circular (WAG, 2003a), the Welsh Assembly recognises the purpose of schools as: (i) promoting a culture of social inclusion; (ii) establishing strong learning communities in schools; (iii) offering a curriculum that engages and motivates children, (iv) providing a learning community for all engaged in school life, with children and their families at the centre; and (v) meeting the needs of the community and engage them as partners to ensure that all schools are community focused. The Welsh Assembly Government is beginning to recognise the need for relationships between schools, parents and local communities.

While these policy documents, frameworks and circulars appear to be encouraging, and suggest that Wales is now on the right path, in terms of tackling inequality of opportunity and performance equity, it must be noted that the former Education Minister for Wales, Leighton Andrews, criticised the implementation of such policies in Wales over the last decade. He apportioned blame firmly on his own department, saying it had been:

> "…culturally and geographically fragmented without clear focus. There has been a lack of alignment of performance measurement, including qualifications in particular. Implementation of policy has been weak. Historically civil servants have been strong on policy design, but less good at policy implementation and embedding" (Andrews, 2011; p.8).

Andrews further suggested that these weaknesses will be addressed by narrowing all focus to raising performance:

> "Performance will be our driver. All other matters - curriculum, qualifications, professional development…will be subservient to that…I set out three clear goals for the School Effectiveness Framework: (i) literacy, (ii) numeracy, and (iii) tackling the link between poverty and poor attainment" (p.8).

However, Andrews was not able to drive this policy forward following his resignation in June 2013 over controversy surrounding his defence of a constituency school at risk of closure under his own surplus-places policy (Brown, 2013). Andrews was replaced by Huw Lewis who acknowledges that "there are 'no quick fixes' for turning the education system around in Wales' (BBC, 2013). It is too early to determine whether Lewis will take on Andrews' performance driver mantel. It is, however, clear that educational policy in Wales seeks to tackle underachievement by focusing specifically on raising standards in literacy and numeracy, particularly in locales which commonly experience high levels of deprivation and low levels of academic attainment. The purported correlation between these variables has been questioned from the outset of this study.

1.2 Background to the study

Underachievement has featured as a predominant discourse in recent years particularly within the field of school improvement. National and international debate has centred on the disengagement and poor academic performance of particular groups, including boys (Epstein, Elwood, Hey & Maw, 1998), ethnic minority groups (Gillborn & Gipps, 1996) and individuals from low socio-economic status backgrounds (Palardy, 2008), however, such views have since been contested (e.g. Whaley & Noel, 2011). Although underachievement is a widely used term in educational policy and practice, it is shrouded with confusion; there are discrepancies in the way it has been operationally defined and apparent methodological inconsistencies and widespread misunderstanding of it as a concept (Demie, 2003). Despite years of debate, consensus on a straightforward definition is yet to be reached. Smith (2003a) asserts the notion of underachievement is often confused and conflated with that of low achievement. For example, Welsh pupils in the past have wrongly been identified within the media as 'underachievers' when in fact the proportion of children in Wales achieving expected benchmarks was simply lower than that of English pupils. Further confusion has arisen because the term underachievement is broadly used to describe a range of phenomena from individual pupils not living up to their potential (emphasised in psychological literature) to the differential attainment of groups of students (Gorard & Smith, 2003), as stressed in educational and sociological literature, and is further compounded by its application to diverse groups including individuals, schools and nations (Smith, 2003b). While this study acknowledges that what actually constitutes 'achievement' in terms of demands placed on individuals to reach required levels in narrow standardised tests is inherently problematic, it

is not within the scope of this chapter to address such issues. It is accepted that mandatory formal assessments, as stipulated by Central and Welsh Governments, continue to be used as measures of academic achievement and underachievement. Although the reliability of measures of underachievement has been questioned by those working in this arena, it is nonetheless a useful concept in identifying potential inequality of opportunity for particular individuals (Preckel et al., 2006).

Concerned with such inequality of opportunity, leading academics at Cardiff University School of Social Sciences have amassed a strong body of research in this field with specialist education and locality, culture and society research groups providing empirical support for underachieving locales. For example, Rees, Gorard, Fevre & Furlong (2000) identified Coalshire[1] as the lowest achieving region in Wales; it consistently demonstrates underachievement by failing year after year to achieve National Benchmark Figures in SATs, GCSE and A Level examinations. As underscored by the Department for Education and Employment (DfEE) (1997), underachievement in the most deprived parts of the country (including Coalshire) should never be excused; striving to eliminate underachievement is a necessary precursor to "overcome economic and social disadvantage and to make equality of opportunity a reality" (p.3) for those situated in these locales. Researching in low-achieving locales is, therefore, critical to understanding both why these pupils fare worse than their counterparts in neighbouring locales and what can be done to help these individuals achieve academically to, hopefully, overcome social disadvantage.

1.3 Researching in a low-achieving locale

Although Rees et al. (1997, 2000) identified Coalshire as the lowest achieving locale in Wales; closer inspection of data provided by Estyn (2003) reveals that underachievement consistently transcends all Key Stages (KS) in this locale. Performance in National Curriculum (NC) assessments and external examinations is among the lowest of all local authorities in Wales. In the year preceding this study, 2001, the proportion of 11 year old pupils achieving expected KS2 benchmarks in English, mathematics and science SATs assessments (Core Subject Indicator - CSI) lagged 10% behind the Welsh average while 7 year olds in KS1 fell 4% behind, with the gap increasing to 10% in 2003. According to the National Assembly for Wales (NAfW), only 30% of pupils achieved GCSE grades A-C in

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[1] Coalshire is the pseudonym given to maintain anonymity.

English, mathematics and science (CSI); well below the Welsh Assembly's target of 50% (NAfW, 2001). Also in 2001, 39% of students in Coalshire achieved A-C in two A Levels compared with the Welsh average of 62% (NAfW, 2002a). Almost half as many persons in this locale (9.3%) attained qualifications at degree level or higher, compared with the 2001 Welsh average of 17.4 % (Estyn, 2002). Furthermore, the proportion of adults living in this local authority with no qualifications was 45%, compared to the national average of 33% in 2001 (Estyn, 2002). Whilst these figures indicate that Coalshire was certainly underperforming when this study commenced, examination of Statistics for Wales (SfW, 2011) data suggests that it has maintained its underachieving status. Examination results for 2011 reveal that Coalshire continues to lag behind all Wales CSI averages in KS1 by 7%, KS2 by 7%, KS3 by 13% and KS4 by13%, placing this local authority at the bottom of the examination league tables (SfW, 2012).

It should, however, be noted that low educational performance is not exclusive to Coalshire. Wales' former Education Minister, Leighton Andrews, acknowledged that Wales as a whole is not producing enough top grades, stating that England is performing better and the gap is expanding (Evans, 2011). Andrews further asserts:

> "The Welsh school system underperforms for all ability levels. These results cannot be argued away or excused. We need to face up to the harsh reality that the education system in Wales is not delivering the outcomes that our young people need and deserve. These results cannot be excused on the basis of low socio-economic status" (pp.3-4).

Recent Programme for International Student Assessment (PISA) results confirm that Wales remains the lowest of all the Home Nations across all subject areas, with an alarming decline in standards in maths and science (Evans, 2013). Given the extent of underachievement across Wales and Coalshire in particular, it is paramount that those responsible for educational policy and implementation fully comprehend the broader social and cultural factors that enhance and impinge on pupils' learning experiences.

1.4 The social nature of educational achievement

The role of social and cultural influences on educational outcomes has been given greater credence in policy documentation in recent years, which has included issues such as

"poverty, family circumstances, housing and health" (WAG, 2008; p.5) and community (WAG, 2003a; WAG, 2005). Whilst many empirical studies explore causal links between such factors (e.g. Cooper, Lloyd-Reason & Wall, 2003; Berliner, 2005; Harker, 2006) it is not within the scope of this thesis to view these as discrete factors potentially influencing academic achievement. Instead, this thesis is guided by a socio-cultural theoretical framework and will consider the unique social and cultural climate of the locale, within which school institutions, classrooms and individual pupils are rooted. This perspective views the individual child as being embedded within a range of contexts from the immediate classroom to the locale. The classroom context itself is not a separate entity to the outside world, and the influence of the outside world should be recognised when researching the cognitive development sequences occurring within the classroom setting.

Influenced by Vygotsky's (1978, 1987) theory of cultural mediation & Rogoff's (1995) observations of socio-cultural activity on different planes of analysis, this thesis considers the mutual embeddedness of pupils' engagement in learning and their social world. While Rogoff's three planes of analysis correspond to (i) personal, (ii) interpersonal and (iii) community processes (these will be discussed further in Chapter 2), the four planes of analysis employed in this study are: (i) individual, (ii) classroom, (iii) institution and (iv) locale.

Although the immediate classroom setting structures individual cognitive activity, it is the embedded socio-cultural history and practices of the child's 'outside world' that channels cognitive development (Rogoff, 1995). The social system of the classroom context is one plane of analysis employed to explore the situatedness of children's cognitive development in this study. The next plane of analysis involves exploration of the school institution, as children's cognitive development is greatly influenced by the role of the social orchestration of thinking through the cultural institution (Rogoff & Lave, 1999). The final plane of analysis occurs at the level of the locale as it is here that the development of the child is guided by the social interaction (with family and the wider community) to adapt to the intellectual tools and skills of the culture. The formal institutions of society and the informal interactions of individuals within the locale are, thus, central to the process of development (Rogoff & Lave, 1999).

This study focuses on differential performance within the locale and explains it with reference to individual pupils' motivation. For example, maladaptive motivational styles in school (i.e. learned helplessness or self-worth motivation) have been linked to underachievement as opposed to adaptive styles such as mastery orientation motivation (based on a psychological need for competence or autonomy) (Puca & Schmalt, 1999). Sansone & Morgan (1992), among others, have established positive relationships between academic performance and intrinsic motivation. Research has identified links between the classroom environment, intrinsic motivation and learning (Rigby et al., 1992) but this study considers the processes that contribute to differential motivation across classrooms. It also examines children's attitudes and performance in different areas of the curriculum (mathematics and English) since pupils may be more motivated to perform educational tasks in some subjects and not in other curriculum areas (Harter & Jackson, 1992). This indicates that motivation may be subject specific.

This study therefore seeks to add to the existing corpus of research by investigating underachievement within Coalshire from a socio-cultural perspective; attempting to throw light on why some children achieve academically and others do not within this underachieving locale. Moving beyond naïve assumptions that motivation to learn and subsequent achievement can be explained purely in terms of individual cognitive processes, in isolation from the social milieu, this study will attend to the social and cultural contexts within which children are embedded in an attempt to identify factors that enhance or impinge pupils' engagement in learning. Given that learning and academic performance are active and dynamically changing constructs, it is imperative that socio-cultural approaches are used to investigate such mutually constituting processes, particularly within areas identified as underachieving.

The Welsh Assembly Government (2008, p.6) identifies, "research has long shown that social disadvantage is the single biggest obstacle to achievement in education" and acknowledges that progress in this area "is uneven and needs to be advanced further" (p.5). The extent of economic and social disadvantage throughout Coalshire, which is empirically identified as being among the most deprived in Wales (Estyn, 2003), coupled with its status as an underachieving locale, makes it an area worthy of investigation not only because of the unique socio-cultural features found in this region (as outlined in Chapter 4) which may throw light on its underachieving status, but also because specific schools within Coalshire

fail to conform to patterns of underachievement shared by most schools in this locale (NAfW, 2000). These schools achieve KS1 and KS2 SATs results in the top 25th percentile of national results (Estyn, 2002). As identified by WAG (2003b), some schools achieve remarkable results in the most deprived communities, yet more needs to be done to enable the worst performing schools to catch up.

Differentially performing schools within this locale (two higher and two low achieving schools) have therefore been selected as the focus of this study with the aim of identifying how certain schools are successful in achieving expected National Benchmarks (Level 4 or above in end-of-Key Stage 2 and Level 2 or above in end-of-Key Stage 1 SATs tests) whilst others are not, even though all schools share similar socio-cultural environments. This study will investigate the differential participation of Year 6 and Year 2 pupils in four contrasting schools in one low achieving locale. The focus will be on children identified as most and least involved in learning as they complete English and mathematics tasks. Prior to identifying the multiplicity of levels explored in this study, it is first necessary to highlight the research questions that have driven and informed the whole research investigation.

1.5 Research objectives

- Why do some children succeed academically in school and some do not in an underachieving locale?

- Are there any characteristics of any of the contexts in which children are embedded that provide resilience to educational underachievement?

- What do socio-cultural approaches bring to our understanding of pupils' motivation to learn in school?

1.6 Multiplicity of levels of investigation

This study is unique in that that the field under investigation (i.e. higher and low achieving schools in Coalshire) is explored on a variety of levels, thus offering a more complex understanding of the context of the locale. The first level of investigation is the society/community level of the underachieving locale. As the school institution is embedded

in the community practice of the locale, it is paramount that learners' socio-cultural environment is thoroughly explored and examined. Secondly, the school institution itself is a prime focus of research, as the schools participating in the study will fall into one of two categories: higher achieving and low achieving. Inclusion of contrasting schools may reveal why some schools are able to achieve higher results in national statutory tests than neighbouring schools cohabiting within the same socio-cultural environment. Through provision of rich descriptive accounts of each of the four institutions, it will be possible to map out the specificities of successful and ineffective practices that contribute to each school's achievement levels. Thirdly, all classroom activity is embedded within the school institution; hence it is necessary to explore how the rituals practised in specific classrooms may promote academic performance, whilst other classrooms in schools within a close proximity are failing to achieve the same levels of attainment because they are practising different, less effective practises. The final level of investigation occurs at the individual level, thereby determining the significance of the dynamic socio-cultural influences upon a child's motivation. As learning activities are impacted by the social environment, the socio-cultural specificities of the classroom and out of school environment will be probed and linked to children's learning trajectories. By asking individual children about their own experiences, they are able to paint a picture of their own socio-cultural context. Whilst Government records can create a picture of the locale, by reporting employment, education, health, and crime statistics, individual pupil reports will produce a more accurate account of the socio-cultural context within which they are situated. Investigating the research questions on the individual level will benefit the study, as the shared experiences of children within the 'underachieving' locale can be understood. Exploring the research questions on a variety of levels further contributes towards the complexity of the investigation. A clear diagram of the research instruments utilised in each level of the investigation can be found in Chapter 3.

1.7 Structural organisation of thesis

The theoretical background to the study is provided in Chapter 2. It begins with an historical overview of literature supporting the notion of motivation as a psychological construct. Competing theoretical traditions offering conceptual frameworks and heuristic models are introduced and limitations of these psychological theories are highlighted; particularly dominant cognitive approaches which have been established in a social vacuum. Redressing these concerns, sociological explanations of educational performance are briefly explored as

academic achievement is considered a social construction derived from the way knowledge is categorised. This chapter argues that a new approach is needed to explore motivation, as both individualistic psychological and sociological theories fail to offer sufficiently comprehensive theoretical accounts. It proposes that a socio-cultural approach effectively bridges the ravine between psychological and sociological theoretical camps and suggests that the field of motivation can sufficiently advance within this theoretical framework.

Focusing on the locale, which analytically serves as a midway point between a sociological approach (which refers back to structures such as class) and a psychological approach (which focuses on individualistic learning reminiscent of traditional psychology), this study recognises the need to attend to broader social and cultural influences on children's learning experiences. Following the socio-cultural assumption that cognitive development is embedded within a variety of contexts (individual, classroom, school and locale), Chapter 3 addresses the methodological considerations for each plane of analysis and the issues inherent in using specifically designed research instruments appropriate to each plane. Key philosophical, epistemological and analytical issues surrounding the complex multilayered research design of this study are also explored in this chapter.

Chapter 4 provides a rich flavour of the research setting at each plane of analysis: locale, institution and classroom. The specific historical, social, cultural, political and economic features of Coalshire are described in order to depict its broader socio-cultural nature. Empirical data confirming Coalshire's low-achieving status is supported with documentary evidence to further highlight that underachievement transcends all Key Stages in this locale. Once the chapter has provided empirical support for the wide variation found in school performance within this underachieving locale, focus moves to the school institutions. The internal culture of each of the four schools is explored and commonalities between the higher and lower achieving schools are identified. The analytic lens then turns to the classroom in order to provide a detailed picture of the learning cultures fostered within each of the eight classrooms; recognising the situated nature of learning in each. Comparative accounts of two contrasting classroom cultures are provided; one from a higher achieving school, the other a lower achieving school.

The empirical findings are found in Chapters 5-9. The intervention mock 'research' SATs used in this study to simulate formal assessment practices within classroom contexts is

described in Chapter 5. Specifically, the eight class teachers' perceptions of SATs are explored to gain insight into their underlying values and methods of instruction in preparing pupils for their end of Key Stage tests. Recognising the embedded nature of cognitive development in the context of relationships and cultural practices, this chapter explores the ways in which teachers mediate tests and the messages they convey to pupils regarding the importance of SATs tests. Pupils' results from the research SATs are then delineated to reveal performance differences between the Year 6 and Year 2 pupils across the higher achieving and lower achieving schools.

While maintaining focus on the research SATs tests, attention shifts from teachers to the children in Chapter 6 as pupils' own accounts of learning and engagement in school activities are explored. Drawing from children's responses to questionnaires completed immediately after the research SATs tests; this chapter seeks to throw light on why some children succeed, academically, while others do not. Pupil motivation is explored first, by identifying children's self-reported interest and perseverance in completing the tests. Children's broader social and cultural experiences are then assessed to identify whether there are differences in the outside-school opportunities experienced by higher and lower achieving children which may influence or explain their inside-school learning experiences.

Chapter 7 focuses on the class teachers. Using the research SATs as a basis to probe teachers' perceptions of differential academic achievement within their respective classes, teachers identify two distinct groups of children; those they deem to be centrally involved in learning and those children who, for whatever reason, are not and subsequently remain on the periphery of engagement in learning. Triangulating between research instruments, teachers' assessments of these pupils' current performance and anticipated future trajectories are presented here. Drawing from end-of-year teacher reports and teacher interviews, profiles for the most and least involved learners are examined to identify commonalities between individuals identified in each group.

Again, focus shifts from the teachers to the children in Chapter 8. Findings from a range of specially designed instruments (sorting tasks and picture tasks) used to probe pupils' differential academic competence are presented in this chapter. These instruments seek to identify whether children who succeed in school are more adept at recognising 'school codes' (i.e. scientific categories) even in out-of-school contexts, thus suggesting that they have

become decontextualised. Central and peripheral children's social and cultural experiences are also probed to identify whether or not their outside school opportunities and experiences play a role in providing resilience to educational underachievement.

Having identified differential social and cultural experiences of the most and least involved children in the previous chapter, Chapter 9 presents longitudinal SATs data. Here, pupils' actual end-of-year 2003 SATs results are presented and compared with their earlier research SATs results on the English and mathematics tests. SATs data obtained for the following year (2004) is briefly presented to reveal changes in the higher and lower achieving status of the four schools. The attainment scores of the central and peripheral pupils are presented to identify whether academic performance corresponds with teachers' differential representations of these two groups of learners.

The discussion and final conclusions are found in Chapter 10. Here, the findings from each plane of analysis are drawn together to explain why some children in this underachieving locale succeed academically in school whilst others do not. Characteristics of the contexts in which children are embedded that provide resilience to educational underachievement are discussed and related to literature. The value of socio-cultural approaches of learning in understanding pupils' motivation is explored and implications for policy and practice are highlighted.

CHAPTER 2   THEORETICAL CHAPTER

2.0   Introduction

This chapter begins with a critique of literature as the first step in investigating the problem of why some children become engaged in education whilst some do not, in a locale that is well known as an educationally underachieving locale. It will begin by reviewing the field of motivation research, charting major developments in the field throughout the last century to the predominant focus on motivation as an individual cognitive process, which fails to address the social. To redress the issue, selected sociological literature will be explored and the merits of each approach discussed. Because sociological literature is not without its failings in addressing the influence of psychological processes, this chapter will argue that a rapprochement of the two approaches, in the form of socio-cultural theory, provides a way forward in investigating children's engagement in learning. Motivation itself is inherent in learning (Piaget, 1932), so the way researchers define learning will influence their definitions of motivation as the two are inextricably linked. A dominant explanation for children's lack of engagement in education has traditionally been discussed in terms of motivational theory. The next section will delineate key theories of motivation and critiques of each theory will be explored. First, however, contested definitions of motivation will be outlined.

2.1   Contested definitions of motivation

Put simply, motivation theories are concerned with explaining variation in behaviour (Beck, 1983) and attempt to explain three interrelated aspects of human behaviour: the choice of a particular action, persistence with it and effort expended on it (Dornyei, 2000). Pervin (1983) views motivation as a set of physiological and psychological forces that influence behaviour in different ways; firstly, by changing levels of activity; secondly, by directing actions towards particular goals; and, finally, by making individuals responsive to certain goal related stimuli. The focus of motivational research has burgeoned in recent years and demonstrates a shift towards individuals' self-perceptions and interests, with specific research concentrating on student motivation (Wigfield, 1997). Motivation remains a problem area, as there is no general consensus on a defined model of motivation (Fontana, 1995). Further issues arise in defining motivation, as it is a broad and loosely defined field. McClelland (1985) illustrates the point in positing that motivation covers everything from detailed investigations of the physiological mechanisms involved in animal drives to elaborate analyses of the unconscious

motives behind abnormal or symptomatic acts. As differential concepts within motivational theory must relate to each other, a definition cannot be given in isolation from other concepts (Beck, 1983). An early conceptualisation from Peters (1958) refers to 'motives' as "directed dispositions, which are widespread, and dependable in a given culture. Indeed motives refer to those goals which exert so much influence on men (and women) that they will depart from their routines and flout social convention to attain them" (p.36). Motivational needs promote success, arouse curiosity, allow originality and encourage relationships (Strong, Silver & Robinson, 1995). Hebb (1949) purports that the term 'motivation' is multifaceted in that it refers (a) to the existence of an organised phase sequence, (b) to its direction or content, and (c) to its persistence in a given direction, or stability of content, which is subsequently a concept which joins together drive and goals (Peters, 1958). In developing a conceptual understanding of motivation, Korman (1974; p.2) contends that "the psychology of motivation concerns itself with attempting to understand (and predict) the arousal, direction and persistence of behaviour, given the characteristics of the behaving subject at any given time and the characteristics of the environment (both real and perceived) at the time. Motivation is regarded as a general trait and state and involves a complex interaction of personal and situational factors. Although originally thought to stem from survival drives (Maslow, 1970; Weiner, 1972), these are rarely strong determinants of behaviour once infancy has passed. Further, there are a range of important motives that effectively work against survival drives, such as self-denial and self-sacrifice (Fontana, 1995). These definitions have arisen from research measuring motivation in different ways.

2.2 Traditional measures of motivation

Motivation has traditionally been measured by assessing individual differences in behaviour under relatively standardised conditions (Korman, 1974). McClelland (1985) has sought to measure achievement motivation using projective Thematic Apperception Tests (TAT) and voluminous studies rely on self-report measures to determine individual differences. Additional measures include; examining persistence in a task (Brophy, 1983), assessing students' curiosity to learn (Gottfried, 1983), measuring the time individuals spend on a task (Deci, Vallerand, Pelletier & Ryan, 1991) and focusing on pupils' efficacy and desire to select an activity (Dev, 1997). More recent measures include ASQ (Attributional Style Questionnaire) (Peterson et al., 1992), ASI (Approaches to Studying Inventory) (Entwistle & Ramsden, 1983 cited in Jacobs & Newstead, 2000), and SPQ (Studying Processes

Questionnaire) (Biggs, 1987). Waugh (2002) highlights the need to address the problems of measuring motivation and reassess the construct validity and reliability of existing measures. Each of these measures seek to throw light on individual differences in motivational styles yet the standardised and uniform nature of these measures are restrictive in that motivation cannot be discussed in terms of the learner's own frame of reference (May, 1997). The alternative would be to employ 'unobtrusive and disguised measures' (Korman, 1974), however, these measures are laced with substantial ethical considerations (BPS, 2009). Traditional measures of motivation are critiqued for being too crude in focusing on general motivation; subject specific motivation may reveal changes that grosser measures fail to identify (Jacobs & Newstead, 2000). Although there remains an enormous amount of work to be done to ensure that instruments are truly effective measures of the constructs they are designed to measure, motivation is a concept worth persisting with and it is only through learning from past failures that more robust and valid measures can be formulated in the future (Korman, 1974).

The literature reviewed in this chapter will focus on key theories of motivation (as outlined in section 2.5), social theories of learning (section 2.6), sociological approaches (section 2.7) and socio-cultural theory (section 2.8).

2.3   Theories of motivation

The next section explores the shift in traditions from behavioural to humanistic to cognitive models of motivation.

2.3.1   Behavioural approaches

Heckhausen & Weiner (1972) report how the 1920 to 1960 era of psychology witnessed motivational theories characterised by behaviourism. However, the predominant behaviouristic approach asserted by Watson (1913) has received much criticism for overemphasising the objective descriptions of observables (such as stimuli, responses and reinforcements) to the exclusion of subjective internal processes (Weiner, 1974). Skinner (1971) received similar criticism for failing to recognise the role played by inner processes in shaping behaviour. As Weiner (1974) denotes, Hull (1943), an influential neo-behaviourist, incorporated the inner processes that mediated between the stimulus and response; however, he too has encountered criticism for proposing a highly mechanistic approach. Hull postulated that the linkage of physiologically based stimuli of evolutionary significance and

responses subsequently lead to the arousal of behaviour (Korman, 1974). Further criticism was directed toward Hull's theory as logical and empirical problems in the application of the theory to humans became evident. Put simply, Korman (1974; p.72) reveals that Hull's goal of achieving an "objective, physically orientated, natural-science approach to motivation did not succeed" as it became apparent that the definition of 'drive' displayed clear weaknesses and the tendency of organisms to seek both increased and reduced stimulation became questionable. Although behaviourist approaches have become redundant in recent motivational theories, Fontana (1995) argues that reinforcement models can account for many motives, particularly within the family arena where parental motivation orientation impacts on children's patterns (Ames & Archer, 1987). With pedagogical focus on control and adaptive response, behaviourist theories of motivation completely ignore issues of meaning (Wenger, 1998).

2.3.2   Humanistic approaches

From the mid 1950s, previous behaviouristic perspectives lost momentum as a newer humanistic approach began to emerge. Rooted in existential philosophy, a central tenet of this theory is that individuals have free will and make choices that determine their destiny. As Deci (1975) highlights, this non-experimental, iconoclastic approach has encountered vast criticism as scientific data are seldom collected and the validity of the limited humanistic studies on offer is questionable. In seeking to respond to the deficits of behaviouristic theories (e.g. failing to recognise the role of subjective states in behaviour), humanistic theories focus on behaviour as influenced by personal knowledge. Maslow's (1970) Hierarchy of Needs Theory draws attention to the prerequisites of satisfying basic needs before channelling motivational energies into higher-order motivation to realise one's potential. First, physiological satisfaction must take place, then safety needs, followed in succession by social (affiliation) needs, esteem (self-respect, recognition), and finally, Goldstein's (1939 in Crain, 2005) notion of self-actualisation (i.e. fulfilment, realisation of potential). Self-actualisers realise potential and talents whilst maintaining a level of independence from society and thereby demonstrating non-conformity. Rather than being motivated by needs such as belongingness and respect, self-actualisers are primarily motivated by the development of their own potential (Crain, 2005; p.373). Maslow (1970) reasons that the 'self-actualising individual would have clear perceptions, be self-accepting and spontaneous, have an orientation towards problem solving, require a certain amount of

privacy and detachment, be autonomous, appreciate the basic qualities of life, have a deep affection and sympathy for all humans, carry on deeper and more meaningful love relationships, have peak experiences (either mystical or transpersonal experiences), and understand both "humanness" and "non-humanness (Deci, 1975). While humanistic explanations of motivation attend to the unique qualities of individuals, they are, nonetheless, naively optimistic, subjective and don't lend themselves well to empirical investigation. Moreover, humanistic approaches are broadly critiqued for generalising about the positive nature of human behaviour and fail to account for individuals who do not, when given opportunities, seek fulfilment and realisation of potential; humanistic models do not fully account for 'unmotivated' individuals.

2.3.3   Cognitive Theories

A cognitive approach (CA) to motivation is primarily concerned with choice behaviour. It developed out of the pioneering work of Tolman (learning phenomena) (1959) and Lewin (social behaviour) (1936), who first recognised the importance of cognitions as causal factors in behaviour (Dornyei, 2000). Cognitive approaches assert that humans process information and make choice about what behaviours to engage in. Implicit in this is the assumption that cognitions are causal determinants of behaviour (an assumption contradictory to behavioural theories). This approach reasons that people will select behaviours that they expect will lead them to desired end states. A complete cognitive theory is believed to consider antecedent stimuli, mediating cognitive events, and behaviour. This school of thought assumes that people make choices about what to do by processing information which they receive from the environment or memory or personal knowledge, i.e. attitudes, feelings and other internal states used in decision making process. Deci (1975) asserts that in making choices about what to do, individuals work with a cognitive representation of the environment; "This cognitive representation includes stimuli, which come from each of the sources mentioned above – environment, memory, and internal states. By operating on this representation, people choose behaviours to engage in which they believe will lead them to a desired end state or goal" (Deci, 1975, p.93). These goals are also cognitive representations. In essence, they are cognitive expectations about future states. The cognitive approach reasons that individual thoughts follow a sequence of events from stimulus inputs to termination of behaviour, such as motivation. This sequence can be seen in Figures 2.1 and 2.2: Deci's (1975) basic cognitive models of behaviour.

Figure 2.1: Basic model of cognitive behaviour

```
┌──────────┐        ┌──────────┐        ┌──────────┐
│ Energy   │───────▶│ Goals    │───────▶│ Behaviour│
│ Source   │        │          │        │          │
└──────────┘        └──────────┘        └──────────┘
```
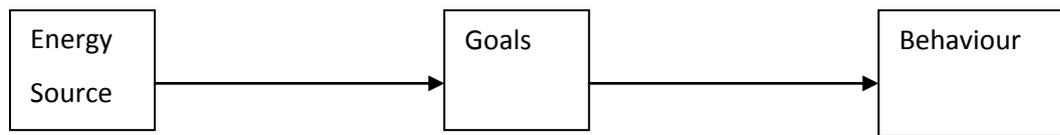
Tolman (1959) refers to the energy source as drive stimulation, involving internal conditions/needs that they set up both positive and negative goals. Meanwhile, Lewin (1951) refers to energy source as tensions. Whilst maintaining that goals are set, Lewin introduced the notion of valence; a psychological value of a particular end state. Each theory contends that goals are established and individuals behave to approach goals and therefore decrease drive stimulation or tension.

Developing the work of Tolman and Lewin, Atkinson (1964) and Vroom (1964) have posited Expectancy Theories of Motivation, which primarily focus on people's expectations about the achievement of goals. Atkinson purports that the model enables one to make precise predictions about certain kinds of intrinsically motivated behaviours. This theory asserts that the tendency to approach (or avoid) an achievement-related situation is the resultant tendency to approach success and avoid failure. One's tendency to approach success is a function of the motive for success, the probability of success, and the incentive value of success (Deci, 1975). Vroom's model developed within the realm of industrial motivation and focused primarily on the extrinsic aspects of motivation. Vroom (1964) was concerned with force toward action (i.e. the motivation to do a particular act) and began with the assumption that any act could lead to a variety of outcomes. The force toward some action is determined by the valence of each of these outcomes and the expectancy that the action will lead to each of the outcomes. The commonality between expectancy theories is the assertion that goal directed behaviour is determined by a multiplicative relation between one's expectation about attaining a goal and the valence of that goal.

Figure 2.2: Unilinear process from input to reward

```
┌──────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐
│ Stimulus │──▶│ Awareness│──▶│ Goals    │──▶│ Goal     │──▶│ Rewards  │
│ inputs   │   │ of       │   │ (plans)  │   │ Directed │   │         ╱│
│          │   │ Potential│   │          │   │ Behaviour│   │       ╱  │
│          │   │Satisfaction│ │          │   │          │   │     ╱    │
└──────────┘   └──────────┘   └──────────┘   └──────────┘   └──────────┘
```

Developing this model further, Deci (1975) provides a schematic representation depicting how feedback mechanisms alter motivational behaviour.

Figure 2.3: Cognitive model of motivated behaviour
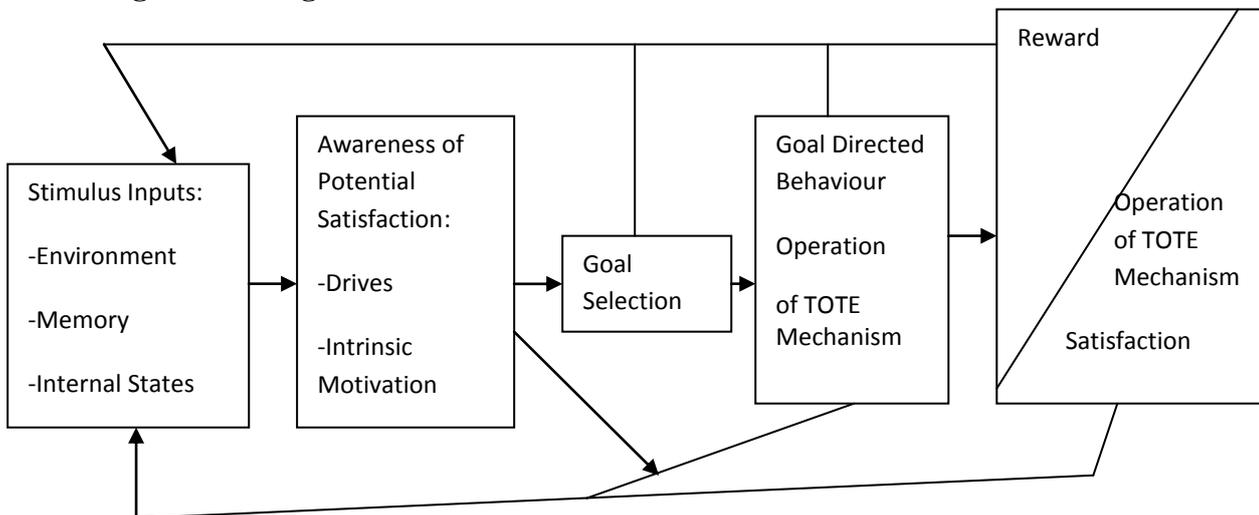
Following this model, cognitive psychologists (Eisner, 1994; Dornyei & Csizer, 2002) posit that the way the brain makes learning does not differ from one culture to another as it, unlike the mind, is a biological entity and not a social cultural product. This approach reasons that individuals see goals which they expect to bring rewards, either extrinsic (relating to drives), intrinsic (relating to the need for feelings of competence and self-determination, and changes in affect ('which are relatively positive by comparison with the affect which initiated the behaviour) (Deci, Koestner & Ryan, 2001). Satisfaction is the final step in the sequence and follows the reward. In the case of intrinsic or affective rewards, it is difficult to separate out the positive affect, which is the reward from the feelings of satisfaction. Satisfaction feeds back to the awareness of potential satisfaction element. When there disparities exist between these two, the individual may begin new sequences by setting new goals. The particular awareness of potential satisfaction will no longer serve as an energizer if these elements are in accordance with one another.

Awareness of potential satisfaction plays a key role in the motivational process as it causes individuals to establish goals that will ultimately lead to the reward and therefore satisfaction. However, if this awareness alters (due to changes in primary drives), the sequence is interrupted. The goals set lead to goal directed behaviour which is terminated when the goal

is achieved. Behaviour may be followed by extrinsic, intrinsic or affective rewards, resulting in feelings of satisfaction. Acquiring satisfaction results in the behaviour being terminated. Termination can occur when valence or goal attainment change, or when satisficing, impatience or discouragement takes place. Hence, the cognitive approach advocates that individuals select behaviours that will lead them to desired goals. An individual's motivation will be affected if the goal directed behaviour results in a negative experience. A discrepancy between cognitions (the anticipated outcome and the actual outcome) causes cognitive dissonance (Festinger, 1957), which requires resolution to reduce the discomfort.

2.3.3.1 Motivation to Learn

According to cognitive theory, the three key elements in an individual's motivation to learn comprise: expectancy (beliefs about ability to perform a task), value (goals and beliefs about a task) and affect (i.e. emotional responses to the task) (Pintrich, 1989 cited in Jacobs & Newstead, 2000). Burden & Burdett (2005) explain these components as individuals' attitudes towards learning and the learning tasks they encounter, their thoughts and feelings about themselves as learners and their sense of agency in knowing how to overcome any difficulties encountered (Burden & Burdett, 2005).

Figure 2.4: Deci's (1974) model of motivation to learn

23
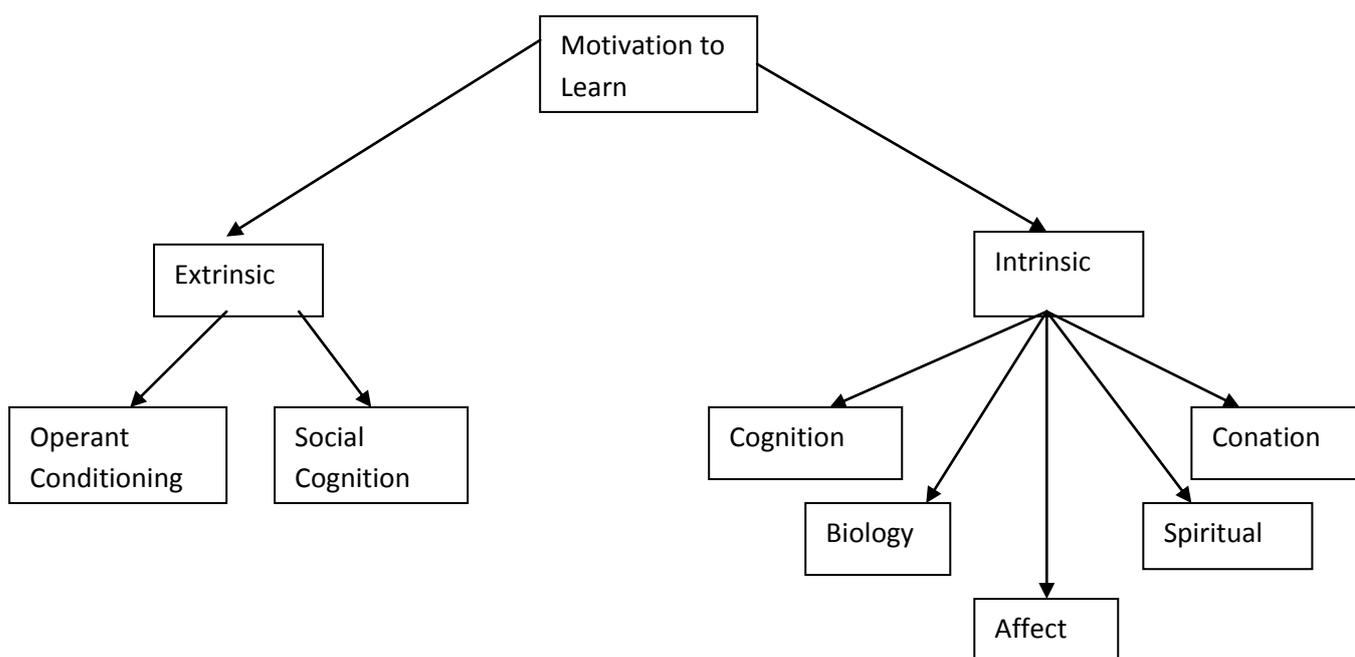
Within contemporary educational psychology, the four most prominent theories of motivation are: Achievement Goal Theory, Self-Efficacy theory, Attribution Theory and Self-Worth Theory. They are all still rather individualistic; a critique of the most relevant theory, Achievement Goal Theory will follow.

2.3.4 Achievement Goal Theory

Achievement motivation theory has experienced enormous interest since the 1950s. Its concept developed out of the affective arousal theory of McClelland (1966, 1985) who was concerned with the behaviours related to individuals' tendency to strive for success against some standard of excellence. Half a century later, however, there remains a critical variation in different individuals' motivation to learn, and more specifically, to complete tasks (Cavaco, Chettiar & Bates, 2003). There is still a fundamental need to fully understand why some learners relish and actively seek challenges (thereby demonstrating adaptive motivational styles) whilst others avoid challenges and give up easily upon facing obstacles (Heyamn & Dweck, 1992). The widely recognised concepts of *adaptive motivational styles* (which include intrinsic motivation) and *maladaptive motivational styles* (including extrinsic motivation and learned helplessness) will be discussed in the next section.

2.3.4.1 Adaptive motivational styles

Individuals adopting learning or mastery orientated goals are said to have adaptive motivational styles and are frequently said to be intrinsically motivated. Heyman & Dweck (1992) offer a framework which views adaptive motivation in terms of the co-ordination of achievement goals and intrinsic motivation: adaptive motivational patterns foster long-term achievement and reflect and promote intrinsic goals and interests (Heyman & Dweck, 1992). However, not every individual experiences adaptive motivational patterns. Many learners make task choices that lean towards short term-success at the expense of long-term development. Whilst mastery and learning orientated goals are most commonly associated with adaptive motivational patterns, and ego or self-worth orientated styles are linked to maladaptive styles, researchers have found that perceived ability can enable an individual to shift from a maladaptive style to an adaptive pattern whilst maintaining the original orientation. For example, Dweck (1986) and White, Kavussanu, Tank & Wingate (2004) report that adaptive motivational styles are not only predicted for individuals high in learning orientation, but also when an individual is high in ego or self-worth orientation and yet is

convinced of his or her high ability (Kavussanu & Harnisch, 2000). This view is consistent with the basic tenet of achievement goal theory.

2.3.4.2 Intrinsic motivation

Voluminous research has emphasised the importance of both intrinsic and extrinsic motivational processes in the promotion of learning and achievement. Hebb (1949) suggests, intrinsic motivation is based in the human need to be self-determining and competent in relation to the environment and that all humans have an innate need to feel competent and self-determining. Intrinsic motivation is differentially manifested at differential developmental stages. Hunt (1971 cited in Deci, 1975) outlines three developmental stages of intrinsic motivation, which begin at birth, 4 months and 9 months. In the latter stage, infants begin to seek out novelty, stimulation and challenge and conquering such challenges results in feelings of competency and self-determination. It is worth noting here that intrinsic motivation researchers frequently work within a Piagetian framework, i.e. using a biological model whereby a child is intrinsically motivated to develop schemata through the process of accommodation (adapting own cognitive structure to fit the environment) and assimilation (incorporating aspects of the environment into pre-existing cognitive structures). Activities are intrinsically motivating when they offer opportunities for learning or growth (Csikszentmihalyi & Nakamura, 1989). Engagement in activities enables skills to develop and individuals can seek out greater challenges to maintain motivation and avoid boredom. Intrinsic motivation is associated with factors characteristic of mastery orientation, including deep concentration and a lack of worry (Heyman & Dweck, 1992). Deci & Ryan (1985) suggests that intrinsic motivation occurs when an individual's natural curiosity and interest energise their learning. Such curiosity is a basic propensity in human functioning and the desire to explore, discover, understand and know is intrinsic to people's nature. This desire is a potentially central motivator of the educational process yet the importance such intrinsic motivation is perennially ignored, with policy makers and educators placing greater emphasis on extrinsic processes. Individuals are said to be intrinsically motivated when the activity is a goal in itself (Simons, Dewitte & Lens, 2000). This has positive consequences for both performance and persistence (Deci & Ryan, 1985; Rigby, Deci, Patrick & Ryan, 1991).

Intrinsic motivation can be facilitated with the presentation of a learning culture that provides optimal challenges, rich sources of stimulation and a context of autonomy (Deci, 1985). Dev

(1997) determines that an inherently interesting task within the child's ability level is likely to encourage intrinsic motivation. The task itself should be challenging enough to stimulate the child's desire to attain mastery. Brophy (1983, 1999) posits that an intrinsically motivated student will invariably find school-related tasks meaningful. Intrinsic motivation is the innate stimulation or drive from within oneself based on organismic needs for competence and self-determination (Deci & Ryan, 1985) as well as the desire to seek and conquer challenge (Adelman & Taylor, 1990; Dev, 1997). White (1959) believes that children seek to extend their mastery over the environment through acquiring knowledge and skills and such feeling of competence holds its own reinforcing and motivating quality. Valas & Sovik (1993) suggest, meanwhile, that pupils' intrinsic motivation is related to the control orientation of their teacher. Middleton & Spanias (1999) propose that children will assess an activity's motivational value by determining if intrinsic interest exists. Perceived fun, control and arousal interact to influence children's interpretation of academic activities as intrinsically worthwhile. Arousal is achieved through curiosity, challenge and fantasy, while an optimum control level is obtained when a child is given free choice of activity, with challenging tasks. Intrinsically motivated activities are characterised by no apparent reward except the activity itself (Deci, 1975); activities are ends in themselves rather than a means to an end. Achievement goals are habitually incorporated into conception and measures of intrinsic motivation (Heyman & Dweck, 1992). The amount of intrinsic interest an individual has in an activity can be influenced by external rewards (Deci, 1985). Sansone & Morgan (1992) cite evidence of positive relationships between intrinsic motivation and academic performance and Rigby et al. (1992) have determined a link between classroom environment, intrinsic motivation and learning. Harter (1992) further contends that achievement is subject-specific as individuals are intrinsically motivated to perform some educational tasks but extrinsically motivated to perform others. Extrinsic motivation is considered to be a maladaptive motivational style.

2.3.4.3   Maladaptive motivational styles

Maladaptive motivational styles are easily identifiable as individual's exhibit key patterns of behaviour, including; giving up easily and avoiding challenges, failing to allow sufficient time to complete tasks and shying away from opportunities to reach potentially attainable goals (Heyman & Dweck, 1992). Failing to persist in difficult tasks and opting for incredulously easy or challenging tasks are characteristic of maladaptive ego-orientations and low perceptions of ability. Attention should be drawn to the deleterious outcomes of children

setting performance goals if they manifest low levels of confidence. When students opt for performance over mastery goals, opportunities for long-term development are surrendered in preference for securing positive outcomes in the short-term, resulting in cognitive and emotional states that undermine performance and intrinsic motivation (Heyman & Dweck, 1992). However, caution needs to be taken in dismissing the role of performance goals entirely. Promoting learning goals without concern for performance goals would, in itself, be maladaptive as students may fail to pass necessary assessments, thereby diminishing their chances of further learning opportunities. Similarly, students may acquire extensive knowledge in within a subject domain without ever accomplishing what they'd like to be (Heyman & Dweck, 1992).

Maladaptive motivational theories that equate motivation with ability have received much criticism, namely because they imply that children do not possess the necessary skills to meet challenges effectively. An abundance of research counters the view that maladaptive responses are limited to children with low intellectual ability. Instead there is a strong body of literature identifying maladaptive motivational styles in very bright children (e.g. Light & Dweck, 1984). Heyman & Dweck (1992) further condemn the reasoning that an insufficient experience of success in previous tasks lowers the expectations of maladaptive learners in subsequent tasks. Similarly, research evidence demonstrates that maladaptive motivational styles are not exclusive to learners with a history of academic failure (Heyman & Dweck, 1992). Maladaptive motivational styles are more prevalent among low achievers (Rogers, Galloway, Armstrong & Leo, 1998) and tasks selected to represent aspects of the English curriculum (compared to mathematics) (Galloway, 1996). Maladaptive motivational styles show age-related trends, with prevalence increasing with the transition from primary to secondary school (Rogers et al., 1998). Dweck's view of ability as a fixed and stable entity is associated with maladaptive patterns of motivation and incremental views of ability coalesce with more adaptive styles of motivation.

2.3.4.4 Extrinsic motivation

Learners are said to be extrinsically motivated when they participate in an activity in order to obtain a reward that is not inherently related to the activity itself and the reward becomes the incentive for engaging in the action (Simons et al., 2000). Extrinsic and intrinsic motivation are not additive (Deci, 1974). It has been argued that most children are not intrinsically

motivated for the socially sanctioned activities and behavioural regulations that school practices require; for example, sitting still or remaining silent for long periods of time or eating lunch in an orderly fashion. Thus, many aspects of both the acculturation and achievement of pupils requires the employment of extrinsic supports and structures (Deci, 1985). However, the frequent use of extrinsic rewards carries the risk of children responding to a task in order to achieve the extrinsic reward and consequently failing to transform their learning into 'flexible, useful cognitive structures' e.g. improving memory at the cost of developing creative thinking abilities (Bruner, 1962; Deci, 1985). Holt (1964) condemns the use of extrinsic rewards, arguing that children should not be encouraged to work for petty and contemptible rewards, such as gold stars that inevitably reduce intrinsic interest (Deci, 1985). Brandt (1995) advocates that extrinsic rewards, such as grades, money or praise and such rewards could be abused to coerce individuals to participate in tasks that they wouldn't ordinarily do. Whilst extrinsic rewards have been the focus of much contentious discussion in recent years, Deci et al. (2001) determine that verbal rewards have been found to enhance intrinsic motivation.

Encouragement of extrinsic motivation carries the risk that children complete tasks in order to gain a reward and come to view the task as not worth doing for its own sake. Kadzin & Bootzin (1972) suggest that permanent change cannot be brought about by extrinsic rewards because the attitudes underlying behaviours are not altered. However, Simons et al. (2000) reason that the maladaptive effects of extrinsic motivation are reduced when extrinsic motivation is personalised. These findings are in accordance with Rigby et al. (1992) as some types of extrinsic motivation are not maladaptive and, in fact, share some advantages with intrinsic motivation. While extrinsic rewards decrease intrinsic motivation in many situations, positive feedback can increase intrinsic motivation (Deci, 1974). External rewards can motivate a person extrinsically whilst simultaneously decreasing the person's intrinsic motivation (Wong, 1976). Performance orientation is associated with extrinsic motivation, whereby individuals manifest shallower levels of cognitive processing, poorer performance and maladaptive behaviour (Ames & Archer, 1988). Extrinsic motivation may lead to an adaptive orientation if the extrinsic motivation is personally meaningful (Simons et al., 2000).

2.3.4.5   Learned helplessness and self-worth mechanisms

Learners with low confidence and self-esteem, lowered expectation, impoverished performance, weak persistence and passivity, diminished motivation and a lack of engagement are said to demonstrate learned helplessness (Peterson et al., 1993). Burden & Burdett (2005) argue that children with learning disabilities are especially predisposed to feelings of learned helplessness as negative past experiences and future (reading) challenges appear insurmountable. This view advocates that ability is fixed rather than incremental. Learned helpless students fail to utilise talents to their potential, rapidly abandon efforts once failure is experienced and adopt self-protection mechanisms when failure is anticipated (Abramson, Seligman & Teasdale, 1978). Although employment of these strategies may prove useful in protecting self-worth, it does not enhance the individual's chance of academic success. Rogers et al. (1998) highlight how attributing failure to lack of ability is closely associated with learned helplessness.

2.3.4.6   Achievement motivation

Achievement motivation can be defined as "a desire or tendency to overcome obstacles, to exercise power, to strive to do something difficult as well and as quickly as possible" (Beck, 1983; p. 374) and is concerned with the cognitive self-motivation of an individual to excel on any significant activity (Cavaco et al., 2003). Achievement motivation is perceived to be a relatively stable phenomenon over time. The individual sets specific goals, instigates a plan and exerts effort in order to realise that goal and maintain a sense of self-worth. However, most theories offer insufficient explanations as to why these individuals actively enjoy and seek challenges when many others give up easily and avoid challenges (Dweck, 1989). Achievement motivation is mediated by causal attributions for success and failure (as identifiable in McClelland's Achievement Motivation and Attribution Theory (1985) and concepts of effort and ability are said to be logically interdependent. The motive for success is one's need for achievement. McClelland (1966, 1985) argues that this is a relatively stable personality characteristic that develops from the association of achievement cues to positive affect. It is a specific motive, which differentiates out of the basic need for feelings of competence and self-determination. McClelland's theory postulates that all motives are learned through the pairing of cues and affective experiences. Achievement motivation is supposedly learned when cues related to high performance become associated with positive affect. The achievement motive is an intrinsic motive; the reward is in the achievement, however, achievement is generally accompanied by extrinsic rewards (Deci, 1975; p.77).

The motive for success is viewed as being constant within a person and across situations and manifests when the situation allows an individual to feel responsible for the outcome. Probability of success depends on the individual's expectancy of achieving the goal, based on past experience in similar situations. This can be seen in Figure 2.5.

Figure 2.5: Expectancy of achieving goal

(Deci, 1975; p.108)
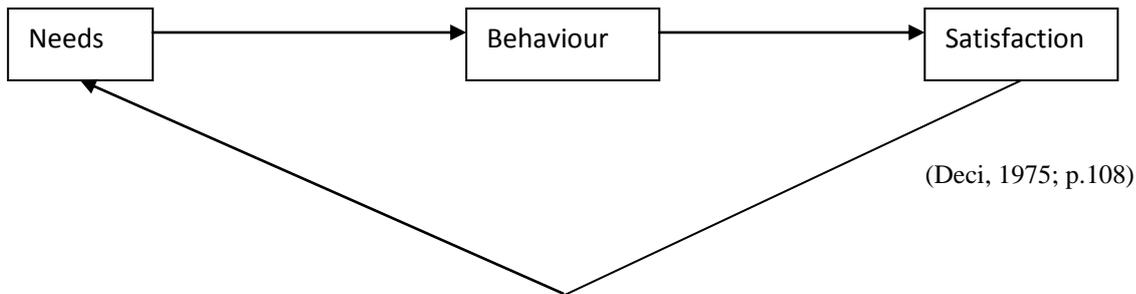
Nicholls (1978) identifies that the ability aspect refers to what the individual can do, which requires evidence of optimal effort in order to accept the performance to be indicative of ability. Weiner (1974; p.19) advocates, "causal attributions for success and failure mediate between antecedent-consequent relationships in achievement related contexts". Such causal attributes include: ability, effort, task difficulty and luck as well as less common ascriptions such as mood, fatigue and illness. Chaplian (2000) attributes success to stable factors, in that the greater an individual's ability, the higher their expectation of future success. Chaplain further notes the central importance of causal explanations, i.e. attributions of previous success and failure in shaping levels of engagement and persistence in subsequent tasks. The expectancy of success is based upon individuals' assumed level of ability in relation to perceived task difficulty, in addition to estimated effort and anticipated luck (Weiner, 1974). Galloway (1996) further recognises that the long-term consequences lead to the development of either adaptive or maladaptive motivational styles.

Duda & Nicholls (1992) purport that individual's fall into one of three categories with regard to achievement motivation. Firstly, task orientation (i.e. goal of gaining knowledge). Here, pupils improving existing skills or acquiring knowledge. This motivational style demands a requirement to work hard, understand the work set and collaborate with peers. The key focus is on completion of the task over the aesthetics of the task. Secondly, is ego orientation (i.e. goal of superiority); the key feature of this motivational pattern is the emphasis on establishing superior ability in relation to others. Finally, is work avoidance, i.e. the goal of

not having to exert any effort. A common feature of this style is the goal of not working hard and a shared understanding that school is dependent on 'good behaviour' in class. It is essential to note that these categories were formulated from studies focusing on children and cannot necessarily be generalised to Further and Higher Education settings. Nicholls (1983) asserts that occupational motivation exists within F.E. and H.E settings although it could be argued that this is merely a sub-set of task orientation. Hastings et al. (2001 cited in Cavaco et al, 2003) formulated the following model applicable to F.E. and H.E. settings. First, is mastery orientation, whereby individuals express a desire to develop competence and further understanding. Second, is performance orientation, whereby students demonstrate a desire to develop competence and ability. Finally, academic alienation occurs when students show no concern for developing competence or for demonstrating achievement. With regard to learning strategies, students with low need for achievement respond to less challenging assignments, more flexible marking and avoidance of failure in public. Students with a high need for achievement are thought to benefit from more challenging assignments, stricter marking and feedback (McClelland, 1985).

Differential achievement motivation can be explained in terms of environmental influences. McClelland (1985) argues that child-rearing practices (parental attitudes and behaviours, expectations, mother's warmth and supportiveness) are the most important determinants of achievement motivation. Other environmental factors such as religion, culture and class also impact on the development of achievement motivation. Cognitive explanations can account for further differences. Fear of success, for example, can account for sex differences (Horner, 1972 cited in Deci 1975). Women often have a motive to avoid success, which seems to develop from the conflict they experience between a desire to succeed and a fear that success is inconsistent with appropriate female behaviours. It was previously suggested that women might be afraid that high performance would interfere with their chance of marriage and happiness whereas nowadays it is the male's perception of success as "uncool" that is impacting on their performance. Individuals may hold multiple goals in the social domain and the key to coordinate these goals may be critical to success. Further, an ability to coordinate achievement goals over time may play a key role in success (Heyman & Dweck, 1992). Coordination of learning, performance and intrinsic interests leads to adaptive styles of motivation. Achievement goal theory maintains the belief that factors promoting learning goals (emphasising the development of competencies) are coupled with enhanced intrinsic motivation whilst those promoting performance goals (emphasising the evaluation of

competence) are linked to diminished intrinsic motivation. Although it is widely held that students should be encouraged to adopt learning goals and be dissuaded from utilising performance goals, caution needs to be taken in dismissing the role of performance goals entirely. Promoting learning goals without concern for performance goals would, in itself, be maladaptive as students may fail to pass necessary assessments, thereby diminishing their chances of further learning opportunities. Similarly, students may acquire extensive knowledge in within a subject domain without ever accomplishing what they'd like to be (Heyman & Dweck, 1992).

Goal manipulation is successful in securing and maintaining learners' levels of intrinsic motivation and promotes intrinsic motivation more effectively than performance goals. However, Heyman & Dweck (1992) identify an important caveat in employing goals and patterns as measures of intrinsic motivation as great caution needs to be taken when using measures of intrinsic motivation to predict achievement goals or motivational patterns. As achievement goals and patterns are embedded in measures of intrinsic motivation, it should therefore be assessed by employing factors related to enjoyment and interest. Caution should be taken not to measure the same construct in different guises. Research focusing on pupils labelled as underachieving consistently reveals a common belief that these individuals have little control over their ability to achieve. Whilst pro-active learning-orientated pupils embrace failure with a positive attitude, reflect upon the success of the learning strategies employed and consider alternative learning strategies in the future, learned helpless underachievers under-use available learning strategies and attach little importance on the need to try alternative resources (Abramson et al., 1978).

2.3.4.7 Multiple selves: Linking cognition to motivation

Dornyei & Csizer (2002) identify the need to redress Markus & Nurius' (1986; p.954) notion of 'possible selves' (individuals' ideas of what they might or would like to become or what they are afraid of becoming) to provide a conceptual link between cognition and motivation. Higgins' (1987) further differentiates between 'ideal selves' and 'ought selves'. Whilst the former represents attributes that an individual would like to possess such as hopes and desires, the latter encompasses attributes such as a sense of duty and responsibilities that individuals believe they ought to possess. Dornyei & Csizer (2002) conclude that individuals' motivation to learn is therefore allied with achieving possible selves and resolution of any

discrepancies between one's actual self and ideal self. By imposing such a distinction between self domains, individuals' motivation to learn can be understood. Human motivation to learn is a complex phenomenon involving a number of diverse sources and conditions (Dornyei & Csizer, 2002). Whilst some motivational sources are situation specific i.e. rooted in the pupil's immediate learning environment, others stem from the individual's past experiences in the social environment (Clement & Gardner, 2001). Hence, declining motivation and achievement is best understood in reference to individual and contextual variables (Murdock, Hale, & Weber, 2001). In accordance, eminent motivational theorists have unearthed the importance of focusing on motivational patterns as exhibited within the classroom context; in particular, the coalescence of personal (expectations and values) and situational factors (impact of the teacher) (Rogers et al., 1998 who draw on the work of Dweck, 1989; Dweck & Leggert, 1988; and Elliott & Dweck, 1988). Maehr & Midgely (1991) also highlight the importance of relationships whereby diminished interest and performance in school were brought about by changing relationships between teachers and students within the classroom and school context. The enforcement of the National Curriculum (NC) within the learning environment appears to be negatively affecting the achievement motivation of pupils in Key Stage 2. Murdock et al. (2001) attribute this decline to the increasing focus on grades and performance, heightened competition among classmates (as made explicit by National League Tables), a loss of involvement in decision making and impersonal relationships with teachers (Crozier, 1997). The role of the social should, therefore, not be ignored.

2.3.4.8 Critiquing cognitive approaches

As far back as the turn of the twentieth century, Dewey (1902, 1956) argued that psychology needs to address how individuals are culturally, historically and institutionally situated *before* they can understand many aspects of mental functioning. Despite this, many theories of motivation have been used to explain learning but have continued to rely on cognitive approaches, which emphasise individualistic qualities, such as self-regulated learning. Such approaches explain student underachievement in examinations (such as end-of-Key-Stage tests) by suggesting that the tasks are not meaningful, therefore children see no point in undertaking them. However, these approaches remain primarily cognitive and individualistic and fail to develop a strong understanding of how tasks relate to social contexts. In order to achieve this kind of explanation, a strong theory of the social is needed. Cognitive

psychologists have traditionally suggested, for example, that the culture fosters little or no connection to the learning material and low motivation and subsequent poor performance are displayed. The standardised, curriculum based, criterion-referenced end of Key Stage SATs assessments (phased out in Wales first and later in England) are encouraging pupils to enhance performance motivational patterns over mastery or learning orientation styles. The incompatibility between enforced context, irrelevant assessments and development of motivational orientation conducive to learning is responsible for the academic potential not being realised for vast numbers of students. The rigidity in structure of the National Curriculum is inhibiting many pupils from acquiring competence and fulfilling the need for self-determination (as advocated by Deci & Ryan, 1985), which are important prerequisites for increasing mastery.

Cognitive approaches can be further critiqued for assuming a very conventional transmission model of pedagogy, which dehumanises learners in social contexts. These approaches fail to consider how learners have to manage and negotiate social identities in formal and informal settings (Lave & Wenger, 1991). Cognitive theoretical frameworks presuppose that units of analysis remain within the individual and the predominance of rigid quantitative techniques present children's learning environment as different from the natural milieu. Assumptions that children spontaneously construct their own mental representations of the world completely ignore the relationship between thinking, cultural, institutional and historical situations in which learning occurs and, as Rogoff (1984) argues, researchers need to attend to the content and the context of intellectual activity. Learning takes place in a participatory framework and not solely in the head of the individual (Rogoff, 1995). Learners are so inextricably interwoven in the fabric of social relations that a representation of the 'individual' divorced from the 'social' is theoretically inadequate (Lloyd & Duveen, 1992). Motivation discourse predicated in individualistic accounts of achievement dissects learning from the larger realm of activity and the broader social context, which Hickey (1997) surmises renders such understanding of motivation as meaningless. Classroom practices are differentially recognised and valued according to pupils' personal experiences and biographies (Sharkey, 2004; de Abreau, 1995). Hence, pedagogic and motivational factors cannot be isolated from cultural context as all actions and activities are deeply embedded in interpersonal contexts and are rich in social dynamics (White et al, 2002). The learning context must include existing tools of practice within wider communities for learners to access the curriculum (Engeström et al., 1995). The complementary roles of classroom and

socio-cultural experiences therefore need to be maintained when theorising differential achievement motivation. Attention now turns to social approaches to learning.

2.4   Social approaches

Having established that the social context needs to be addressed when investigating children's motivation to learn, key psychological and sociological social approaches will be explored next, commencing with social learning theory.

2.4.1   Social learning theory (SLT)

SLT goes beyond cognitive, individual explanations of motivation and suggests that the social environment is important. Rotter (1966), deriving from his work on Social Learning Theory, coined the term "Locus of control" to explain how people differ in the extent to which they believe rewards are contingent upon their own behaviours or attributes; in doing so, they comprise internal controls and external controls. Internal controls determine that rewards follow behaviours or attributes and the relationship between these behaviours and rewards can significantly impact on the environment if they are acted upon. External controls, meanwhile, are associated with luck or fate and no amount of control can alter the impact on the environment. Deci (1975) identifies the locus of causality as being either internal or external for someone who is high on internal locus of control. Thus, Rotter's concept of internal locus of control is a necessary condition for intrinsic motivation whilst external control is a defensive response to failure. Whilst social learning theories take social interactions into account they still do so from a primarily psychological perspective. Emphasis is placed on interpersonal relations involving imitation and modelling (Bandura, 1997; Fontana, 1995) and the theory focuses on the study of cognitive processes by which observation can become a source of learning. Social learning theories are useful for understanding the detailed information-processing mechanisms by which social interactions affect behaviour (Wenger, 1998). It is apparent that existing theories of motivation and learning, even those which address elements of the social, appear to be written within a socio-cultural vacuum (van Etten, 2004; p.1). Categories such as cognition, learning and motivation that have traditionally been located within the individual (as features of the individual *per se*) need to be reconsidered from the socio-cultural perspective (Lave & Wenger, 1991; Cole & Engestrom, 1993; Wenger, 1998; Renshaw, 2003; Carr, 2001). Sociological theories of

educational achievement, meanwhile, have focussed on the social field and it is to these theories that attention now turns.

2.5 Sociological theories

A brief overview of key sociological theory is documented in this section to assess whether sociological theoretical frameworks can adequately move the field of motivation and under-achievement research forward. The work of three founding fathers of sociology: Karl Marx (section 2.5.1), Max Weber (section 2.5.2), and Emile Durkheim (section 2.5.3) are considered before a critique of macro theories is presented (section 2.5.4) The writings of more recent sociological theorists: Samuel Bowles & Herbert Gintis (section 2.5.5), Bourdieu (section 2.5.6) and Basil Bernstein (section 2.5.7) are also briefly explored.

2.5.1 Marx

This thesis could potentially draw on the pioneering theory of Marx (1933, 1990) as there is historical evidence in Coalshire of the ruling class disseminating their capitalist beliefs and oppressive power on the proletariat in this locale. The monopolisation of materials and the product of collective labour (i.e. in the production of coal and steel) have been appropriated by a handful of capitalists, while the miners and steelworkers in this region do not benefit from the product of their labour. The socio-economic status of Coalshire has also been influenced by the forcible reduction of wages beneath the value of labour power (orchestrated by the Bourgeoisie to cheapen commodities) and the increasing number of factory closures (e.g. 300 steelworkers were made redundant in the year preceding data collection), resulting in an industrial climate of crisis and stagnation (Marx, 1976). Moreover, labour in Coalshire has been made increasingly superfluous as the capital state has striven to increase the production of forces (Marx & Engels, 1987). Marxists posit that education is stratified to reflect class differences and call for a power shift to rebalance society. Marx undoubtedly produced a radical theoretical critique of the existing circumstances of modern society, which could be useful in explaining and challenging the educational, social and economic inequalities evident in Coalshire (as documented in Chapter 4). However, this theoretical framework can be critiqued for depicting an overly instrumental understanding of production and its relation to culture (Turner, 2006) and for conveying the individual as overly dependent upon society (Dodd, 1999). Marxist theory was, therefore, not employed as a

theoretical framework for this study. Alternative sociological theory, including that of Max Weber, could instead be considered.

2.5.2 Weber

Weber (1947) proposed an instrumental synthetic theory which offers an interpretivistic yet rational and positivistic perspective of sociology which could be applied to education. Weber's theory captured important aspects of social action by analysing social situations in terms of the instrumental motives and values that individuals apply to different situations. These motives should, Weber argued, be understood in terms of complex subjective meanings which may be context dependent, temporary or agreed by mutual consent (Weber, 1947) and, therefore, not as independent internal drives. Weber's belief that action is both instrumental and rational and is bound by normative considerations fits with this study, which is concerned with the individual (agent) in relation to the social and normative context of educational settings and wider cultural environments. Weber's macro theory alone could not fully explain differential motivation and academic achievement in an underachieving locale and was, therefore, not pursued.

2.5.3 Durkheim

Sociological theory posited by Durkheim (1972) was briefly considered as Durkheim's theory of normative integration of society offers a profound understanding of the social nature of individuals, which is wholly relevant when trying to move motivational theory beyond individualistic cognitive models. While the traditional psychological theories of motivation account for children's learning behaviour in terms of internal drives which propel action, Durkheim reasoned that individuals are shaped by external factors beyond the control of the individual which influences internal factors. Durkheim's assertion that actions and attitudes are influenced by institutionalised values (including achievement, self-interest and environment) is potentially relevant to this study. Durkheim's vision for social change and cohesion also appeals when researching in a locale beset with social, cultural and economic issues. Durkheim (1972) believed that education serves to develop children in a number of physical, intellectual and moral states valued by the political society to consolidate its embedded norms, values and habits (Durkheim, 1972). Schools subsequently represent the social rules and moral order of a society. Durkheim argued that schools do not simply inculcate children with particular beliefs but, instead, create particular attitudes of mind, a

certain *habitus* (Williamson, 1979). Durkheim addressed issues related to the division of labour and education and social solidarity, which may explain social and cultural issues inherent in under-achieving locale at the centre of this investigation. However, as this study is concerned with investigating social phenomena at the agency (individual) level, it does not sit well with Durkheim's belief that the individual is constrained by external social factors beyond their control; one might question how the individual as actor fits into the picture. Moreover, this study questions the positivistic methodological approach employed by Durkheim to determine universal laws underlying social reality. Finally, Durkheim held an undifferentiated view of society, and can be critiqued for not fully examining precisely whose views form the core of the education system.

Although these sociological theories have notable merits, e.g. Marxist theory could be useful in explaining broader social issues within Coalshire, Weberian theory could explain the instrumental motives and values that children apply to the learning process, and Durkheim's theory could facilitate awareness of the institutionalised values that influence children's motivations and behaviour, the limitations of these macro theories (outlined in the next section) preclude their use as the primary theoretical framework for this research.

2.5.4 Critiquing macro theories

These structural (macro) theories offered by Marx (1933), Weber (1947) and Durkheim (1972) have been challenged by sociologists wanting to recognise that human action depends on the reasons, meaning and intentions of individuals, as explored in more interpretivistic, individualistic (micro) theories. The duality between macro and micro theories offer a false doctrine that does not exist in reality, causing Giddens (1994) to call for a reflexive sociology that offers a variegated view of the dynamics of the modern social world. Structural functionalists, including Parsons (1949), recognise inadequacies in macro explanations, arguing that an element of volunteerism must be included in theories of social behaviour (Field, 1974). According to Parsons, individuals internalise beliefs and values during early socialisation which motivates their behaviour. Symbolic interactionists critique motivation conceptualised in terms of inner drives and suggest instead that motives should be seen as "socially structured and acceptable linguistically mediated reasons for acting which are acceptable and understandable only in specific contexts of action" (Field, 1974, p.11). Functionalists also identify the need for societal differentiation to allocate roles. A central

issue within sociological theory is the relationship between structure and process, focusing on the transactional nature of human conduct. Individuals actively construct behaviour within the limits imposed by the social contexts of behaviour (Field, 1974). Society is not made up of a set of predictable structures but a collection of individuals who create a working consensus by interacting with one another on the basis of shared symbols (Goffman, 1959). The post-sixties academic radicalism initiated a shift in educational sociology which focused on the social construction of meaning (Young, 1971), attending to transformations in culture, social knowledge and technology. The work of Bowles & Gintis, Bourdieu and Bernstein are explored next.

2.5.5 Bowles & Gintis

Bowles and Gintis (1976) hold a comprehensive Marxist view of education in capitalist society and contend that pupils' class largely determines school performance and schooling tailors the beliefs and aspirations of learners to the requirements of the social division of labour. Bowles & Gintis (1976) believe that academic instruction is designed to prepare children for their future roles in capitalist society by teaching children to conform to school rules (and prepare for life as a subservient worker), accept authority (first teachers, then employers) and learn to be motivated by external rewards (exam grades and then wages). Advocates of Bowles and Gintis' correspondence theory therefore reason that schools mirror workplaces and capitalist class ideology desires societies to recreate their labour force to perpetuate its economic and social structure. Examinations and the schools in which they operate can therefore be seen as a tool of the state (Egglestone, 1990) and education contributes to and holds back economic growth (Willimson, 1979). This neo-Marxist analysis of education suggests that education serves to prepare individuals for their economic fate in capitalist production; preparing to either be exploited or to exploit (Williamson, 1979) and according to this perspective, the education system is subordinate to the economic order of society. Competition and hierarchy within the labour force impacts even on young learners in school who are expected to compete for scarce academic rewards on a path to secure desirable labour in future. Bowles & Gintis further claim that schooling shapes children's personalities but have been critiqued for not undertaking detailed research in school and for ignoring the influence of the formal curriculum. Additional criticisms relate to the reproduction of social hierarchy; Bowles & Gintis' (1976) theory does not deal with the

specificities of school cultures and is, therefore, not suitable as a theoretical framework for this study which requires fine grained analysis of the classroom setting.

2.5.6 Bourdieu

In agreement with Weber (1947), Bourdieu (1988, 1993) contested the primacy given to economic factors by Marxists. However, unlike Weber, who saw class and culture as separate, Bourdieu (1997) saw these as interrelated. In blending the influential theories of Marx, Weber and Durkheim and structuralism (O'Byrne, 2011), Bourdieu attempted to unite the dichotomies of subjectivism (i.e. social phenomenology) and objectivism (i.e. structuralism) (Moore, 2004) in a single relational model. Bourdieu's pioneering framework advocated the concept of cultural capital (a transformation of economic capital), where social actors can actively engage in cultural productions and symbolic systems. Social relations in structured social spaces, which Bourdieu termed '*field*', are considered to be relatively autonomous from wider social structures. Bourdieu was concerned with fundamental theoretical issues, including a desire to resolve the relationship between agency and structure through a system of dispositions termed as *habitus,* where social agents adapt to the social worlds they inhabit (O'Byrne, 2011). Bourdieu believed habitus is central to regulating social practices and structural relations shape habitus (Crossley, 2010). Habitus and field exist in relation to one another. Bourdieu (1997) identified embodied, objectified and institutionalised forms of cultural capital. In its objectified form it appears as material objects and media (i.e. books, writing, instruments), which requires individuals to decode the code (Moore, 2004). Bourdieu reasoned that individuals' tastes and dispositions are influenced by class, which impacts on later opportunities in life. In contrast to Bowles & Gintis (1976), Bourdieu and Passerson (1977) focus more on education and the broader realm of culture (Williamson, 1979). Bourdieu acknowledged that assessments play a role in the social and cultural reproduction of societies (Bourdieu & Passerson, 1977). Borudieu's work on the relational sources of cultural distinction (Mische, 2011) could be drawn on in this study to explore children's differential academic achievement in relation to cultural capital, however the notion of habitus is difficult to operationalise at the level of the classroom environment, which is critical to this investigation.

It is clear that Bowles & Gintis and Bourdieu have much to offer in understanding learning in classroom contexts, particularly in conceptualising knowledge as a culturally relative concept defined by society, however, these theories cannot sufficiently account for pupil motivation within an underachieving locale. Attention must therefore turn to Bernstein.

2.5.7 Bernstein

The work of British sociologist, Basil Bernstein, is considered the most substantial intellectual achievement of educational sociology (Moore, 2004). While it is not possible to delineate Bernstein's theory in its entirety, central tenets will be highlighted here to determine the appropriateness of a Bernsteinian theoretical framework for use in this study. Bernstein wrote about distinctive collectivity, i.e. where children are bound by school rituals, which relate children to social order. Bernstein (1971) reasons that the focus of education is the socialisation of pupils into conformity through control of the learning process, rather than learning itself. Pedagogic practices are intimately bound together with patterns of authority and control, which reflect societal values. Classrooms are physically organised and reflect a desire to monitor and control pupils' behaviour: "how a society selects, classifies, distributes, transmits and evaluates the educational knowledge it considers to be public, reflects both the distribution of power and the principles of social control" (Bernstein, 1971, p.47). Bernstein suggested that teachers' policing of the learning process reflects a desire to control pupils' behaviour. Evaluation, according to Bernstein (1975) is the purest form of educational control. The stratification of knowledge is determined and directed by powerful interest groups in society (Bernstein, 1971) and access to knowledge is restricted in the education system; the syllabus is broken into distinctive subjects rather than integrated subjects and Bernstein critiques the artificiality of subject boundaries.

Bernstein's complex work on the classification and framing of educational knowledge offers a broad level of analysis. According to Bernstein, there are three elements in the social construction of knowledge; (i) children gain knowledge through the message systems of the formal curriculum (which defines valid knowledge), (ii) pedagogy (which involves the transmission of knowledge) and (iii) evaluation (i.e. the valued realisation of knowledge). Ability and achievement are, therefore, viewed as social constructions derived from the way knowledge is constructed. Bernstein (1975) conceptualised pedagogic codes (collection codes and integrated codes), which characterise connections between knowledge transmitted

through the curriculum, and how knowledge should be transmitted through pedagogy and evaluation through which codes are realised (Filer & Pollard, 2000). Bernstein permits translation form social structuration to classroom via competence and performance models in explaining the organisation of knowledge within the school. The way knowledge is classified and framed has consequences for the kinds of messages pupils receive about the nature and purpose of education. Framing is used to determine the message systems of pedagogy and boundary maintenance, i.e. the extent to which teachers insulate educational knowledge from pupils' everyday knowledge, varies between teachers (Filer & Pollard, 2000). Some teachers maintain high control over what counts as knowledge (strong framing) while others permit greater opportunities for pupils to contribute from their everyday experiences (weak framing) (Bernstein, 1975). The curriculum represents culturally transmitted knowledge that places emphasis on things not always immediately useful in pupils' everyday lives; every day practices are deemed to be tied to perceptual objects and specificities, which may be considered as horizontal form of knowledge (Bernstein, 1996). Schools often encourage children to work individually rather than collaboratively, which reinforces knowledge as private and as a commodity that can be used to make an individual powerful (Bernstein, 1971) and work becomes more individualised with age. Assessing children's performance on tests locates them in terms of hierarchical judgements (Bernstein, 1975), which promotes performance-oriented goals over learning oriented goals. Moreover, teacher's work as transmitters of knowledge rather than facilitators of learning and pedagogic discourse is not culture free (Bernstein, 1995); rituals and school traditions promote the building of sentimental attachments to school (Bernstein, 1975; Brint, 1998).

According to Bernstein (1971), groups located at different positions in the social structure experience the world in different ways. Children in lower working class families brought up in 'positional families' are expected to obey instructions by the virtue of their ascribed status as a child; with limited experiences and a rigid allocation of responsibility, children are taught to recognise and accept their position in relation to others. Bernstein (1996) proposed that socialisation occurs within interrelated contexts, including: (i) instructional contexts where pupil-teacher relationships develop, (ii) innovative contexts where teachers encourage children to re-create their world on their own terms and (iii) interpersonal contexts where children are made aware of their own and others' affective states.

Bernstein (1961) further reasoned that the structure of social systems shapes communication and language, which, in turn, shapes thought and cognitive styles of problem solving (Hess & Shipman, 1974). Language structures and conditions what and how children learn, setting limits within which future learning may take place (Bernstein, 1961). Bernstein proposed two forms of communicative codes, i.e. the organising principles behind the language used by social groups: (i) restricted codes and (ii) elaborated codes. Restricted codes are limited, condensed, lacking in specificity needed for precise conceptualisation and differentiation and yet easily understood, commonly shared and often used in impersonal situations to promote solidarity and reduce tension, i.e. limiting the detail of the concept involved (Halsey, Floud & Anderson, 1961). Restricted codes are characterised by a higher degree of predictability. Elaborated codes, meanwhile, are more particular, differentiated and precise, and messages are specific to particular situations or people, resulting in a higher degree of cohesion. Elaborated codes enable greater discrimination between cognitive and affective content and permit more complex range of through (Bernstein, 1961). According to Bernstien (1972), patterns of speech are initially dependent upon patterns of social relationships characteristic of the social groups to which they belong and habitual forms of speech influence other forms of social life. Although attention is drawn to language, the relationship between words and acts remains under-analysed. While Bernsteinian theory has been developed by psychologists and linguists, including Daniels (2012), Hasan (2001) and Ivinson and Duveen (2006), no one has sought to problematise the individual learner within the locale. Bernstein's theory has much to offer but fails to offer analysis at the level of the individual required for a detailed understanding of pupil motivation. Although Bersteinian theory would permit movement from social structuration to classroom setting, it would not allow this study to move from classroom structuration to cognition. Bernstein's theory is, therefore, an inappropriate theoretical framework for this particular study, which focuses on individuals within an underachieving locale.

2.5.8 Critique of sociological theory

Traditional sociological theories of groups, organisations and institutions have been critiqued for leaving temporal features unanalysed (Glaser & Straus, 1974) and for taking aspects of human nature for granted (Field, 1974). Further criticisms relate to schools, which are more than mere adjuncts to the labour market (Giroux & McLaren, 1989). Sociologistic models appear to ignore the active and symbolic nature of classroom activities and fail to adequately

explore notion of the individual as being both shaped by and shaping the environment at the same time. Also, the individual is dissolved in social system; although sociologists attend to role requirements in social systems, individual role players have not received the same attention. Finally, reification of social structures leaves no room for individual choice or control over action and cannot account for internal sources, which influence how individuals act in a particular way. While psychological theories focus on individual action and choice, they can be justifiably critiqued for failing to consider wider social, cultural and contextual issues. Sociological theories, meanwhile, fail to offer a full and complete analysis at the individual level; although some attempts have been made to demonstrate how social structuration relates to individual motivation within the field of sociology and those that draw on the works of, for example, Bourdieu (1986) and Bernstein (1971) have been profitable. While such approaches aim to achieve a rapprochement between the levels of social and individual explanation, for the purposes of this study there was a need to relate social, local, institutional and individual levels of analysis. The study therefore required a theory that bridges between the two in order to explain why children in the same locale, sometimes even within the same classroom, achieve well in an under achieving locale and others do not. In order to work with multiple plain of analysis, attention now shifts to socio-cultural theories of learning. Socio-cultural approaches to learning allow researchers to focus on the specificities of local contexts, as they recognise that practice is situated.

2.6 Socio-Cultural Theory

Socio-cultural theory developed initially as a theoretical rebuttal of the perceived dominance of Piagetian developmentalism and in response to ontological and epistemological criticisms of cognitive constructivism (Edwards, 2005). Unlike traditional cognitive approaches to learning, which are distanced from experience (Chaiklin & Lave, 1996) and focus on decontextualised individual learning, socio-cultural theory affords greater value on the activity itself, viewing cognitive development as a product of activities and cultural practices that individuals engage in with others (Plowman & Stephen, 2005). Vygostky (1981) explored cognition commencing with the social and purports that cognitive development appears on two planes: social and psychological planes. Vygotsky (1981) asserted that:

> "Any function in the child's cultural development appears twice, or on two planes. First it appears of the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary

attention, logical memory, the formation of concepts, and the development of volition. We may consider this position as a law in the full sense of the word, but it goes without saying that internalization transforms the process itself and changes its structure and functions. Social relations, or relations among people genetically underlie all higher functions and their relationships" (Vygotsky, 1981, p. 163).

Although Vygotsky's seminal work has influenced educational research in recent decades, Vygotsky assumed a natural line of development from primitive to advanced and failed to problematise the differing socio-cultural experiences of social groups (Wertsch, 1985).

Socio-cultural approaches to learning recognise that teachers have to give children access to culture via instruction; culture is where social structuration is carried. Socio-culturalists identify both a cultural line of development and an individual line of development; these two have to cross over for children to learn. Learning involves gaining access to culture, which is achieved via teachers in joint interaction. Through joint social interaction, between pupils and teachers, the class teacher is able to scaffold the child's zone of proximal development, thereby enabling the child to internalise the learning. In some classrooms, children are able to develop a sense of belonging while in others they do not. This may be related to motivation. Socio-cultural approaches recognise that processes of motivation and learning 'have deep roots traced back into the whole world of the individual' (McInerney & van Etten, 2004; p.1). Learning is seen as an aspect of interrelated, historical, institutional and communicative processes where learners are embedded within and constituted by a matrix of social relationships (Wertsch, 1991, 1997; Renshaw, 2003). Within the socio-cultural theoretical framework, motivation is conceptualised in terms of 'participation' in 'communities of practice' (Wenger, 1998). Motivation should, therefore, be understood as being embedded in learning communities rather than a construct within the mind of the child (Dornyei & Csizer, 2002). Hickey & Granade (2004; p.2) assert: "the values and goals that support engagement in learning are defined by and resident in the practices that define knowledgeable communities, rather than the hearts and minds of individuals". They advance the notion of engaged participation and maladaptive non-participation as alternatives to intrinsic and extrinsic motivation. Wenger (1998) offers a better framework to assess motivation as embedded within the social context. By focusing on the deeply interconnected and mutually defining components of meaning, practice, community and identity, learners can be seen as experiencing, doing, belonging and becoming.

The following sections provide a brief overview of key tenets of socio-cultural theory, attending to context (section 2.6.1), community (section 2.6.2), communities of practice (section 2.6.2.1), semiotic mediation (section 2.6.3), tools (section 2.6.4), bridging (section 2.6.5), instruction (section 2.6.6), zone of proximal development (section 2.6.7), scaffolding (section 2.6.8), meaning (section 2.6.9), language (section 2.6.10), literacy (section 2.6.11), numeracy (section 2.6.12), assessments (section 2.6.13) and scientific concepts (section 2.6.14). Key criticisms of socio-cultural theory are also provided. Context is addressed first.

2.6.1 Context

Within the psychological arena, the relationship between cognition and its 'environments' are often treated in terms of stimuli, which evoke responses, particularly since the information processing revolution shifted focus from behaviourism. The 'non-context' approach of experimental psychology has been criticised for overlooking the interactions of thinking and social context. Although contexts have been studied form an ecosystemic perspective (e.g. Brofenbrenner, 1994), motivation, traditionally, has not. It is encouraging that motivation is beginning to be recognised as contextually situated but conceptualising motivation from a socio-cultural perspective requires consideration of theoretical issues beyond simply attending to context (Walker, Pressick-Kilborn, Arnold & Sainsbury, 2004). As Rogoff (1984) asserts, thinking is intricately interwoven with the context of the problem to be solved, the purpose of the activity and the social milieu in which it is embedded. Pupils' beliefs about learning develop in multiple contexts; home, school and community. Meaning is encoded in these contexts, which provide information and resources that facilitate appropriate problem solving. Contexts, therefore, need to be mutually interpreted and understood for learning to be effectual (Soloman, 1998). Teachers who possess knowledge of the social contexts in which children operate can enrich their understandings of their beliefs, expectations and actions (Greene & DeBacker, 2004).

The problem of context can be approached through its temporal dimension, as activity or practice (Chaiklin & Lave, 1996). Newman, Griffin & Cole (1989) clarified how task, setting, text and context constitute each other (Cole, 1991). Understanding the significance of the learning context is a central tenet of socio-cultural theory, which attends to the content and context of intellectual activity (Rogoff, 1984). Adopting this theoretical approach affords researchers a more complete picture of motivation as learning and learners are embedded in a

variety of particular and often unpredictable cultures (Haggis, 2004). A truly socio-cultural perspective views the socio-cultural context as the crucible *for* rather the influence *on* development (Edwards, 2003) and theories which attend to the situatedness of activities do not separate "action, thought, feeling and value and their collective, cultural, historical forms of located, interested, conflictual, meaningful activity" (Chaiklin & Lave, 1996). However, despite the recognised importance of the socio-cultural context, few attempts have been made to theorise the complexity of situated learning in context (Lave & Wenger, 1991; Engeström, 2001; Vygotsky, 1978). Culture serves to frame pupils' worlds by providing social codes, which indicate norms around which learners are encouraged to think. Learners thrive in classroom contexts that foster feelings of autonomy, meaning and competence (Seifert, 2004). This thesis does not hold a narrow view of context, i.e. children's immediate classroom environments but, in accordance with the views of Rogoff (1984), sees context more broadly, including the role of influences such as outside school activities and informal instruction provided by other adults and peers in children's immediate communities. Socio-culturalists believe that how children make sense of the world is tied to situated practice and the affordances of contexts, i.e. mediational means (Wertsch, 1997). Children are not divorced from the message systems of classrooms that are tied to the rituals, and patterns of practice. Learners' immediate communities therefore need to be understood.

2.6.2 Community

All communities are defined by boundaries. Economic, political and material factors within communities offer possible tools for learners to take up and use. It is within the community that messages are transmitted regarding the value of education and cultural constraints surrounding the availability of cultural tools necessary for achieving goals. Wenger (1998) identified the following five characteristics that shape identity: (i) negotiated experience, (ii) community membership, (iii) learning trajectory, (iv) nexus of multimembership and (v) in relation between the local and the global. Children construct identities in relation to the communities in which they belong (Wenger, 1998). Pupils can change their identity from apprentice to master within communities of practice (Rogoff, 1998).

2.6.2.1 Communities of practice

Communities of practice (CoP) have been defined as "a set of relations among persons, activity and world, over time and in relation with other tangential and overlapping CoPs. A

CoP is an intrinsic condition for the existence of knowledge...participation is an epistemological principle of learning" (Lave & Wenger, 1992, p.98). Communities of practice are not static contexts, but practices in constant motion which seek to maintain well-established practices (Engestrom & Mieltenen, 1999). CoPs develop a shared repertoire of practices, artefacts, actions, understandings and routines (Wenger, 1998) which carry the accumulated knowledge of the community. Lave and Wenger (1991) challenged traditional perceptions of learning, teaching, knowledge and assessment, arguing instead that learning is about becoming a participant. Lave & Wenger further suggest that knowing should be judged in terms of belonging and participating in a community – what constitutes knowledge is, therefore, the practices, activities and discourse of the community (Murphy, 1999). Lave & Wenger's (1991) notion of *legitimate peripheral participation* is not directly related to school and, instead, places emphasis on participation in everyday settings. Within learning communities, individual members encounter different levels of engagement. The tools selected and endowed with meaning are appropriated by some but not others. Lave & Wenger have, however, been criticised for suggesting that continuity can be achieved for generations when full participants may be displaced as 'newcomers' become 'old timers' (Lisewski, 2005). Lave & Wenger (1991) acknowledge the learning is a social process and are keen to clarify that legitimate peripheral participation is not a simplistic participation structure in which apprentices occupy roles at the periphery of a larger process. Instead, they explain it is:

> "an interactive process in which the apprentice engages by simultaneously performing in several roles – status subordinate, learning practitioner, sole responsible agent in minor parts of the performance, aspiring expert, and so forth – each implying a different sort of responsibility, a different sort of role relations, and a different interactive involvement" (Lave & Wenger, 1991, p.23).

Peripherality is, therefore, a dynamic concept. All pupils learn practices of the community through ritualistic and dialogic interaction, in doing so, they gain knowledge represented by rituals within their immediate community and access different forms of knowledge valued and legitimised by teachers and schools. Individuals participate as members of social groups, using the material resources of the larger systems. Knowledge constructed within these communities is shaped through social interaction; this knowledge may support formal learning in school or may be antagonistic to school learning (Hickey & McCaskin, 2001). Learners actively negotiate their place among other members of the community (i.e. peers) and novices need to perceive the social and material world in order to become more adept

(Griffiths, 2005). Full participation is not central (which implies place) or complete (a measurable acquisition). Some members select a position on the periphery, some may choose not to participate in certain activities and those on the periphery need to learn to become willing members of the class community. Wenger (1998) explains that the periphery of a practice is a region "neither fully inside nor fully outside, and surrounds the practice with a degree of permeability" (p.117). Renshaw (2003) believes that participants must be allowed freedom to change their relationship to the community over time in order to remain an inclusive community. Engagement in multiple tasks and participation in multiple communities of practice results in what Engeström, Engeström Kärkkäinen (1995) refer to as polycontextuality.

Rogoff (1995) identified three inseparable mutually constituting planes. Firstly, a *community* plane (where pupils engage other learners and adults in routine, tacit and explicit collaboration in culturally organised activity. *Apprenticeship* takes place in this plane. Apprenticeships are the societal provision of culturally organised activities (Rogoff, 1990), within which the competence of the community transforms the identity of members and *vice versa*. Secondly, relationships with others take place in the *interpersonal* plane. Here, learners engage in *guided participation* and shared activity which require active communication and co-ordination. Finally, through *participatory appropriation* and reflection on the *personal* plane, pupils change through involvement in creating collaborative activity; practice precedes competence. Rogoff (1995) asserts that personal, interpersonal and cultural processes all constitute each another as they transform socio-cultural activity. Cognitive development form this socio-cultural perspective is understood as participatory appropriation through guided participation in a system of apprenticeships. Sign systems function as a means of communication for groups of learners and their operations depend on the intersubjectively shared social representations of group members. Signs include linguistic conventions, words and numbers, which are mediated by pupils in everyday learning.

2.6.3 Semiotic mediation

Vygotsky (1978) developed the idea of semiotic mediation in which cultural artefacts remove the ontological division between individual action and the structure of society (Shreeve, 2005). Cultural artefacts are simultaneously conceptual and material; conceptual as they contain in coded form the interactions in which they were previously a part and yet are

embodied in the material (Cole, 1998) and can be considered tools (as outlined in section 2.6.5) as they mediate interaction with the world. Following a socio-cognitive framework, Vygotsky (1987) asserts that learning is embedded in social events and occurs as children interact with people, objects and events in the environment, thus linking the individual (agent) to society (structure) through the mediation of language, and facilitating their understanding of themselves within certain contexts and situations. Cultural resources, if appropriated, are imbued with meaning. Meanings emerge in the interplay between individuals acting in these social contexts, with mediation appropriated by material and semiotic tools (language, activity structures, signs and symbol systems) existing within that context (Lave & Wenger, 1991). Peers, parents and teachers also mediate learning and enculturation through cultural tools; culture and meanings on the external plane need to be internalised by the child (Lerman, 2000). Symbolic resources, including discourse and ideas, are appropriated and used by learners to negotiate their learning trajectory; the availability of cultural resources and tools influences pupils' appropriation of them.

2.6.4 Tools

Within the classroom, seating arrangements, the use or non use of text books, posters, displays and sign systems can be viewed as physical and psychological 'tools' that mediate children's activities and shape possibilities for thought and action (Vygotsky, 1978). These cultural artefacts, such as speech, serve as tools, which shape thought and, in turn, are shaped by those who use them (Daniels, 2005). In order to gain a more thorough and holistic understanding of motivation in the social context, it is necessary to recognise the mediational process between individual and supra-individual factors within learning (Jackson, 2001; Daniels, 2005). Research within the motivation remit, needs to be situated within social organisations and institutions as the values attached to classroom practices are often anchored in these communities (such as home, school, peer and friendship groups and gender) (Tapia, 2004; Renshaw, 2003; Tudge, 1992; Murphy & Elwood, 1998; Gulbrandson, 2000). This thesis recognises that the development of the child is guided by social interactions, which enables learners to adapt to the intellectual tools and skills of the culture (Rogoff, 1984). Tools are selected and endowed with meaning by some pupils but not others. Tools and symbols are two aspects of the same phenomenon (Daniels, 2005). Tools (or mediational means) do not simply amplify existing cognitive processes but fundamentally change the nature of the task, the processes and the actors involved (Renshaw, 2003).

2.6.5 Bridging

Educational practices often fail to take account of pupils' cultural knowledge and participation in multiple communities. Consequently, children are expected to learn skills in identifying similarity across contexts. In order to independently solve problems, children need to make use of whatever is familiar in the context of the new problem to apply skills available from familiar problems in bridging a solution to the novel problem (Petrie, 1979 cited in Rogoff, Ellis & Gardener, 1984). Children are not necessarily responsible for establishing connections between familiar and novel problems; teachers' construction of contexts during academic instruction can aid learning if new information introduced in class is made compatible with learners' current knowledge and skills. Brown (1979) referred to this as 'headfitting' (Rogoff & Gardner, 1984). The social representations children hold may bridge between individual and social worlds, which teachers can draw on during instruction to make learning accessible to pupils.

2.6.6 Instruction

Teachers are responsible for defining and communicating task demands; children need clear and realistic expectations about tasks, including tests, to direct their engagement in academic activity (Broekamp, van Hout-Wolters, van den Bergh & Rijlaarsdam (2004). Socio-cultural approaches to learning acknowledge that teachers differ not only in the tasks set, but in the way task demands are conveyed to pupils, resulting in differing perceptions of task demands. According to McInerney and van Etten (2004), children not only rely on explicit information provided by teachers, but also use implicit signals given by teachers and may obtain task information directly from peers. Children also base their experiences of tasks on previous learning activities and tests and pick up on cues provided within the learning materials being used, for example, authors highlighting extracts in textbooks signals the importance of particular material (Broekamp et al., 2004). When teachers establish a joint frame of reference, children are more likely to agree with teachers' interpretations.

Children's academic performance is mediated by teachers' expectations of pupils and the ways in which teachers communicate their expectations (Bempechat, 2004). Some teachers place responsibility for children's poor performance in academic tasks on discrepancies between home and school values (Edwards & Warin, 1999); this can lead teachers to maintain low expectations of some children, which Smith (2003) reasons allows poor quality

teaching to remain unchallenged. Brophy (1983) strongly asserts that effective and successful teachers have a congruent set of expectations and attitudes and assume responsibility for children's academic failure, treating it as a challenge rather than writing some pupils off as un-teachable. While traditional motivational researchers underscore the importance of task enjoyment (e.g. Puca & Schmalt, 1999), this alone is insufficient; teachers need to engage learners in meaningful tasks if children are to learn effectively (Yair, 2000). Effective instruction, according to Vygotsky (1978) employs scaffolding and considers each pupil's zone of proximal development.

2.6.7 Zone of proximal development

It is widely accepted that the zone of proximal development (ZPD) is:

> "the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers...the zone of proximal development defies those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow, but are currently in embryonic state" (Vygotsky, 1978, p.86).

This is a central feature of learning and in order for learning to occur, a number of internal process need to be initiated, which only occurs when interacting with the environment and co-operating with peers (Heinze, 2005). The establishment of ZPD is dependent upon the orientation of goals, motives and needs of participants (Lerman, 2000).

2.6.8 Scaffolding

Through the scaffolding and framing of learning activities, children are able to appropriate and internalise knowledge, thus transforming an interpersonal process into an intrapersonal one. Vygotsky (1978) recognised that scaffolding is beneficial in: providing support, functioning as a tool, extending the range of the worker, allowing the worker to accomplish a task not otherwise possible and, used selectively, can aid the worker where needed. When activities are scaffolded, novice learners are able to carry out simple aspects of tasks as directed by more experienced experts, which Wertsch & Stone (1979 cited in Rogoff, 1984) refer to as proleptic instruction. This process facilitates the transference of responsibility of joint problem solving from expert (teacher) to novice (child), which enables learners to acquire some of the expert's understanding of the problem and its solution. This process of collaborative work between teachers and pupils can advance children's skills whilst

accomplishing the task at hand (Marks-Greenfield, 1984). Learning is, therefore, the internalisation of jointly held knowledge represented by social interaction (Hickey, 1997), as influenced by meaning.

2.6.9 Meaning

Although children are believed to be mutually orientated in the teacher-pupil relationship, it should be noted that their subjective meanings might be context dependent, temporary, or agreed by mutual consent (Weber, 1947). It is worth considering Schutz's (1967) critique of subjective meaning as being a primitive and solipsistic conception which neglects the complexity and richness of meaning inherent in the social (and intersubjective) nature of society (Tucker, 1998). Human beings give meaning to their lives but researchers often overlook in what sense and for which contexts this meaning is given (Haggis, 2004). According to Wenger (2008), the negotiation of meaning involves the interaction of participation and reification, which form a duality fundamental to the experience of meaning and, in turn, practice. Wenger (1998) further explains that meaning is concerned with *learning as experience*, i.e. a way of individually and collectively talking about lives and the world as meaningful. Practice involves *learning as doing*; a means of discussing shared social and historical resources, frameworks and perspectives that sustain mutual engagement in action. Community, meanwhile, entails *learning as belonging* as it allows individuals to talk about social configurations which define enterprises as worth pursuing and participation is recognised as competence. Finally, identity relates to *learning as becoming*; learners can create personal histories of becoming (as shaped by learning experiences) in the context of communities (Wenger, 1998). The remaining sections briefly address language, literacy, numeracy, assessments and scientific concepts.

2.6.10 Language

Language is considered as a socio-cultural tool as it has both interactional and representational functions (Vygotsky, 1987). According to Lerman (2000), "the world of words precede us; they constitute us through multiple and overlapping social and cultural communities, which themselves develop and change over time" (p.231). Language is at the heart of becoming literate. The role of language should not be underestimated but this study affords greater attention to literacy and numeracy, outlined next.

2.6.11 Literacy

Literacy is argued to have had a profound historical impact on how societies handle cognitive challenges (Rogoff, 2008). Different uses of literacy and forms of written script (e.g. stories, letters, lists etc.) promote distinct cognitive skills (Scribner & Cole, 1981 cited in Rogoff, 2008). Variations in the practice of literacy are dependent upon how literacy is embedded within the social institutions in which it takes place. Enjoyable early encounters with literacy (which broadly refers to all literate activities) are considered to strengthen children's predisposition to read frequently and broadly in subsequent years and collaborative reading within a positive socio-emotional climate is believed to play an important role in promoting children's interest in reading (Baker & Scher, 2002). According to Guthrie & Alaao (1997), reading engagement is influenced by a number of factors including: social collaboration, curricular coherence of the texts, real-world interactions. Reading motivation research situated within cognitive theoretical frameworks argues that affective and cognitive processes enable some children to engage in literacy activities while preventing others from beginning them (Oldfather & Dahl, 1994). Although access to literature is believed to have an important influence on the amount children choose to read (Baker, Scher & Mackler, 1997), few studies have examined access to reading material in a comprehensive way, including home, school and community resources (McQuillan, 2001). This socio-cultural study will seek to address this by attending to literacy issues, including access, in a broader way. This thesis views literacy as a social accomplishment and considers children's motivation to learn to be embedded within wider socio-cultural contexts. Literacy, therefore, cannot be understood without acknowledging the role of more knowledgeable others in facilitating learning, which Sonnenschein & Munslerman (2002) identify as powerful predictors of later reading motivation, which in itself is influenced by different classroom contexts (Wigfield, Eccles & Rodriguez, 1998). In classroom cultures, pupils collaboratively construct understandings about the nature and value of English. Pupils construct a sense of self as readers through reciprocal participation in these interactions (Thomas & Oldfather, 1997). Galloway (1996) believes that children are more likely to demonstrate maladaptive motivational styles in English than mathematics.

2.6.12 Numeracy

Traditional cognitive theorists believe that pupils' willingness to invest effort in mathematics is determined by domain-specific variables such as perceived attraction of task, personal

relevance, perceived task outcome on previous tasks and estimated task competence (Seegers, van Putten, & de Brabander, 2002). Boaler, William & Brown (2000) consider setting and ability grouping to negatively impact on some children's mathematics learning opportunities. Students are constructed as successes and failures dependent upon the sets in which they are placed and how they conform to teachers' expectations of the set (Boaler, William & Brown, 2008). For example, top set maths students are perceived as mini-mathematicians expected to work through mathematical problems at a swift pace while lower set students are expected to complete lower-level work. Socio-culturalists view mathematics as a set of social practices; a particular discourse, a social tradition that has important implications for learning what mathematics is all about (Soloman, 1998). Children's performance on mathematical tasks and tests relates to familiarity with particular numerical practices (Rogoff, 2008). To fully understand how learners are motivated to achieve in mathematics, the cultural nature of schooled maths must be recognised and the social valorisation of maths practices should be accounted for (de Abreu & Cline, 1995). According to Lerman (2000), pupils are apprenticed into mathematical practices and act in the context according to the rules they appropriate. Children should, therefore, not be seen as passive recipients of mathematical knowledge but as active interpreters of the classroom reality.

2.6.13 Assessments

The educational value and effectiveness of formative assessments have been questioned for a number of years (Torrence, 2008). From a sociological perspective, assessment policies and requirements are structurally, culturally and politically embedded in particular societies at particular times; testing questions are not considered to neutrally measure children's pre-existing knowledge but, instead, are expressions of power relations that embody hidden social and cultural values (Filer & Pollard, 2000). Assessments play an important legitimating role in reproduction, enabling ruling classes to legitimate the power and prestige they have (Eggleston, 1990). Cultural and social reproduction is reinforced through examinations, which become key instruments of social control. Eggleston further explains that tests are a crucial component in the selection, distribution and evaluation of knowledge. Children from different socio-economic contexts interpret and respond to test items differently (Copper & Dunn, 2000), suggesting that tests may bias particular groups. Meanwhile, socio-culturalists contend that children learn very different kinds of knowledge and cognitive functioning in school and home settings (Lave, 1988). School learning favours abstract and decontextualised

knowledge over situated knowledge. According to Solomon (1998), traditional teaching practices support ritual rather than principled knowledge (Edwards & Mercer, 1987), which is shaped by the production of shared mental contexts or frames of reference culminating in apprentices gaining competence from the guide, i.e. the class teacher.

Despite learning being a fundamentally social process, scholastic tests require children to demonstrate knowledge out of context; collaboration is considered as cheating (Wenger, 1998). McDermott's (1999) seminal work on the learning biographies of different children found that some children are equipped to do well in everyday life but not in school testing situations. Adam, for example, was a child in McDermott's study with a learning difficulty who was always eager to try. In everyday life, Adam appeared competent; he was able to appropriate resources to complete tasks. However, when placed in a testing situation, Adam performed dismally and relied heavily on guesswork. The resources Adam used to succeed in everyday life, i.e. asking others or taking notes, are considered cheating in testing situations. Testing situations can, therefore, be considered at the opposite end of the spectrum to everyday life as they demand clarity of argument and precision in calculation, which ultimately disadvantages children like Adam, who struggle to work in such a decontextualised manner. Critiquing the static reporting of traditional testing, Thomas & Oldfather (1997) call for assessment procedures that emphasise children's envisioned potential.

2.6.14 Spontaneous and scientific concepts

Vygotsky's (1987) development of scientific concepts sought to explain the relationship between formal (decontextualised) thinking and academic instruction. Vygotsky argued that scientific concepts are acquired through systematic instruction in educational settings; they are used in a conscious, explicit and intentional way, are related to other concepts in systems and evolve from abstract to particular groundings (Douek, 2006). Vygotsky further reasoned that the generality and systemic organisation of scientific concepts differentiates them from everyday (spontaneous) concepts, which are appropriated through social interaction in jointly undertaken activities in the child's immediate community (Wells, 1994). Despite this differentiation, Vygotsky suggested that scientific and everyday concept formation are strongly linked; everyday concepts create the potential for the development of scientific concepts within the context of formal academic learning environments, while scientific concepts prepare the necessary formations to underpin everyday concepts (Fleer &

Ridgeway, 2007). The combination of embedded everyday and scientific knowledge will lead toward disembedded academic thought and new ideas (Daniels, 2012; Vygotsky, 1978).

2.6.15 Criticisms of socio-cultural theory

Daniels (2005) critiques the CoP approach for its elusive theorisation of social and cultural engagement. This approach, like other post-Vygotskian work, does not fully account for how discourse itself is constituted and recontextualised (Bernstein, 2000; Daniels, 2005). Moreover, relational power is often overlooked and theorised as a process rather than a structure. As Wenger (1998) denotes, a theory of community is almost a pre-requisite of power theories. Finally, Lave and Wenger (1991) are accused of being too dismissive of the role of formal teaching in learning processes (Lisewski, 2005).

2.7 Summary

Previous individual and cognitive motivational theories have critically failed to recognise the significance of the social context. Whilst sociological theories can explain the importance of the social context, they cannot account for cognitive processes. A socio-cultural approach, meanwhile, encompasses the social and cultural norms and values attached by learners to the learning process and their willingness to actively and voluntarily participate in the learning process. Learning occurs via language yet also via a multiplicity of other message systems, including the rituals and routines of the school, as Bernstein (1996) highlighted. However, it is important to identify how the cultural context, including aspects such as wall displays or seating arrangements influence cognition; for example, in understanding whether routines and rituals influence the sense of belonging felt by children in their classroom environments. This may explain why some pupils are motivated to engage in learning processes and others are not. For children to learn the cultural line of development and the individual line of development have to cross over; learning is about getting access to culture that is achieved via teachers. In this study, it is how the class teachers teach the child that is important. The focus of this study will remain on the academic culture, as it is instantiated in specific classroom practices, settings and how teachers talk to children.

This thesis holds that the classroom context itself is not a separate entity to the outside world, thus the influence of the outside world should be recognised when researching the cognitive development sequences occurring within the classroom setting. Without a theoretical

conception of the social world, one cannot analyse and understand pedagogic and motivational factors (Chaiklin & Lave, 1996). Although the immediate social interactional context (i.e. the classroom setting) structures individual cognitive activity, it is the embedded socio-cultural history and practices of the child's 'outside world' that channels cognitive development (Rogoff, 1995). The social system of the *classroom* context is the first level in which the child's cognitive development is situated. The second level is the school *institution*, whereby the child's cognitive development is greatly influenced by the role of the social orchestration of thinking through the cultural institution (Rogoff & Lave, 1999). The third level of influence occurs at the level of the *locale*. It is here, that the development of the child is guided by the social interaction (with family and peers) to adapt to the intellectual tools and skills of the culture. The formal institutions of society and the informal interactions of individuals within the locale are central to the process of development (Rogoff & Lave, 1999). This work has been developed within a socio-cultural framework by, for example, Rogoff and Lave (1999).

This study seeks to investigate the learning engagement of children from an underachieving locale from a socio-cultural perspective. The following research objectives have been identified:

2.8   Research objectives

- Why do some children succeed academically in school and some do not in an underachieving locale?

- Are there any characteristics of any of the contexts in which children are embedded that provide resilience to educational underachievement?

- What do socio-cultural approaches of learning bring to our understanding of pupils' motivation to learn in school?

CHAPTER 3 METHODOLOGY

3.0 Introduction

In order to examine the socio-cultural influences on pupil motivation to understand why some children succeed academically while others do not, this study has utilised a multi-method framework. The methods have been chosen to investigate four planes of analysis following Rogoff's (1995, 2003) work. Socio-cultural approaches recognise that cognition and motivation are situated practices that cannot be separated from social contexts. In this study, the contexts that were investigated were: the *locale, institution, classroom* and *individual*. Analysis of the contexts in which children are embedded might reveal characteristics that provide resilience to educational underachievement. Qualitative and quantitative methods and instruments were speciality chosen and designed to investigate each plane of analysis. It is hoped that this multi-method socio-cultural approach will bring a greater understanding of pupil's motivation to learn in school.

3.1 Philosophical discussion

Acknowledging that the researcher's view of social phenomena is mediated by the choice of paradigm and subsequent methods used (Hughes, 2001), extensive consideration was given to the knowledge, methodology and validity inherent within positivist and interpretivist paradigms in the design stages of the study. Philosophical issues are integral to the research process and cannot be ignored until after the event (Scott & Usher, 1999). The previous chapter identified the predominance of cognitive theories of motivation in the latter half of the last century. Much of this research followed a positivist empiricist tradition, which assumes that all genuine knowledge is based on sense experience; advanced only by observation and experimentation (Cohen, Manion & Morrison, 2000) and, when produced according to scientific investigation, is considered objective and validated through replication. Positivist assumptions of the world can be witnessed on two levels; in one there is a continuously changing surface of appearances and events, and in the other an unchanging foundation of order, expressed in universal laws (MacNaughton, Rolfe & Siraj-Blatchford, 2001). Here, the world is viewed in terms of measurable variables that interact with each other in determinate ways (Smith, 2003b). However, the sustained and vehement criticism surrounding the epistemological and ontological bases of positivism, particularly regarding its mechanistic and reductionist view of human behaviour, cannot be ignored, particularly social and contextual

issues that do not neatly fit positivistic research deigns (Charmaz, 2002). Positivism is commonly criticised for leading to reductionism, reification, artificiality and non-generalisability to natural causes (Sanger, 1996). Further criticisms against the apparent hegemony of positivist research traditions concern the passive, essentially determined and controlled view of human behaviour as social action and human experience are highly contextualised (Carspecken, 1996). This thesis acknowledges that in a subjective world, where knowledge, understanding and meaning are symbolically constructed and held in social convention and unity with others (Greig, Taylor & Mackay, 2007), methods of controlling and isolating variables and quantifying behaviour fail to fully account for the inextricable relationship between human behaviour, culture and context.

This socio-cultural study, which holds the inextricable relationship between learners and their cultural contexts at its core, positions itself nearer to an interpretivistic research paradigm, which seeks to explain how individuals make meaning of their social and material circumstances within a framework of socially constructed and shared meanings (MacNaughton et al., 2001). As outlined in Chapter 2, learners create and re-create their social world as dynamic meaning systems which are not readily translatable into variables and, therefore, cannot be investigated using purely positivistic approaches. Interpretivistic theories of human behaviour are considered valid if the authentic voice of the research participant is heard; the voice of the learner is critical in this study. Within this paradigm, interpretivists have argued the importance of emergent theory, grounded in data generated by research and not preceding research (Glaser & Straus, 1967; Cohen at al., 2000). Through the dialectical process of engagement, reflection and action, knowledge becomes personalised, owned and transmitted (Sanger, 1996). This naturalistic form of enquiry is, however, not exempt from criticism; namely concerning over-interpretation, bias and lack of verification. Nonetheless, as this study is concerned with identifying pupils' authentic voices regarding motivation to learn, this approach was broadly adopted within a multi-method framework. It is important to note that core elements of this study appear to follow an ethnographic methodological approach, i.e. the comparative, descriptive analysis of the everyday (Toren, 1996), particularly evident in Chapter 4 (which provides a detailed account of the material culture of the classrooms and school institutions in Coalshire) and Chapter 5 (which presents a detailed analysis of teachers' mediation of tests and the messages conveyed to pupils in testing situations). While these ethnographic chapters are critical to understanding motivation from a

socio-cultural perspective, this study does not strictly adhere to the principal tenets of ethnography and is best described as employing a multi-method framework.

3.2 Multi-method Approach

This study is guided by a socio-cultural approach and adopts planes of analysis (Rogoff, 1995) to explore the complex reality of life in an underachieving locale. Methods appropriate to each plane of analysis, from the locale to the individual, were selected and the application of combined quantitative and qualitative methods adds to the uniqueness of this study. It therefore espouses the naturalistic and interpretivistic methods of qualitative inquiry *in addition to* the scientific and positivistic methodologies associated with quantitative research. Although these methodologies are supported by very different epistemological approaches, combining these methods was believed to add rigour, breadth and depth to the investigation (Denzin & Lincoln, 1998). Although Bryman (2001) argues that quantitative and qualitative paradigms should not be combined since they are incommensurable; as each paradigm is grounded in incompatible epistemological principles, this study acknowledges that qualitative and quantitative methods are not necessarily easily distinguishable (Coffey & Atkinson, 1996) and despite being considered as different research paradigms, middle ground between positivist and post-positivist approaches can be found (Robson, 2011). This study will reject the naïvely optimistic view that that a 'truly objective' social reality can be achieved simply using a triangulation of methods (Hammersley & Atkinson, 1995). Instead, it follows the epistemological assumptions of a synthetic approach, with each method revealing different aspects of empirical reality and therefore enabling the researcher to address more ambitious research questions (Denzin & Lincoln, 1994). Thus, instead of merging competing paradigms, this study employs sequential methodological triangulation, as advocated by Morse (1997); where each method is completed independently, although the two are inextricably linked. As the researcher recognises that the research tools used inevitably affect the outcomes extrapolated, careful consideration was given to the design of the research instruments in each plane of analysis, thus presenting a more accurate account of the social world under investigation. This chapter will later explain how the research instruments were knitted together across three planes.

The majority of instruments employed in this study were grounded in epistemological theory and designed specifically to answer the research questions (see section 2.8) from a socio-

cultural perspective. Much research on academic achievement and pupil motivation relies predominantly on individual scholastic and psychological testing. As this study seeks to investigate motivation from a socio-cultural perspective, it was necessary to employ specifically designed quantitative and qualitative instruments. This was necessary due to the absence of definitive instruments available to 'borrow' for this study. Hence, a variety of research tools were designed to probe the socio-cultural effects on pupil motivation by determining what it is that children actually bring 'from the outside environment' into the school learning environment that either enhances or inhibits their learning experience. Utilising a multiplicity of methods, on a variety of planes, should therefore enable the study to bridge the gap between elements previously segregated as being either 'inside school' (i.e.cognitive theories of motivation and individual explanations of achievement), and 'outside school' factors (such as sociological theories on class and society), thus, offering a more thorough and holistic account of the factors that contribute to underachieving locales. This study employs both qualitative and quantitative approaches for different purposes. Exploring pupil motivation with a socio-cultural approach requires differential levels of investigation; some large scale across a locale, and some to explore individual meanings.

3.2.1 Quantitative methods

Although quantitative methods have been widely denigrated in some academic circles (Robson, 2011), this study acknowledges that quantitative methods have some merit in capturing the diversity of children's learning experiences (Greene & Hill, 2005). Whilst qualitative methods are able to explore both interactions occurring within the classroom and complex teacher-pupil and pupil-pupil relationships, there are many facets of the research questions that are not amenable to qualitative techniques alone. As the crux of this study seeks to determine whether socio-cultural influences relate to pupil motivation and achievement, it is necessary to also use quantitative research tools that assess both achievement and motivation. Hence, the principle quantitative methods employed in this study comprise (i) QCA Standardised Assessment Tasks (SATs) in Mathematics and English and (ii) follow-up questionnaires. Additional quantitative tools were designed to gain an understanding of children's socio-cultural worlds, their understanding of the importance and usefulness of curriculum subjects and school assessments, pupils' attitudes towards school and their home-life and how this impacts on their desire and motivation to achieve in school. These are described in section 3.6.

3.2.2 Qualitative Methods

As the research questions seek to explore the social reality of social and cultural influences on pupil motivation, the primary research tools employed in this investigation follow a qualitative nature of enquiry (as advocated by Silverman, 1993). This exploratory method of research was deemed to be most suitable as it enables the researcher to investigate and explain the underlying reasons and mechanisms behind the relationships and variables identified (Hammersley & Atkinson, 1982). The qualitative tools utilised in this study are intrinsically multi-method in focus and attempt "to make sense of, or interpret phenomena in terms of the meanings people bring to them which involves the studied use and collection of a variety of empirical methods" (Denzin & Lincoln, 1994; p.2). The principle qualitative methods comprise naturalistic classroom observations and interviews with teachers and children, to provide a more holistic understanding of the socio-cultural influences on children's differential motivation, thereby discovering the subjective meanings that children attribute to their behaviour. Additional research instruments have been devised to access the complex and multi-layered reality of life within the underachieving locale. Driven by the research questions, these qualitative instruments seek to interpret the events and contexts upon which the social 'actors' construct their social reality. In order to achieve this, a 'researcher-as-*bricoleur*' role has been adopted (Denzin & Lincoln, 1994). This entails flexibility and responsiveness in deploying and devising the necessary research methods, strategies and tools to complete the job.

3.3 Rationale for the design of the study

Following the socio-cultural assumption that cognitive development is embedded in a variety of contexts (individually; within the classroom context; within the school institution; and within the locale), instruments were designed to investigate the bridging of experiences and understandings brought from the child's out-of-school world to the inside-school setting. Whereas previous research into children's motivational practices and academic achievement (e.g. Sansone & Morgan, 1992) has concentrated predominantly on individual cognitive skills and abilities, there is a definite absence of research incorporating socio-cultural perspectives. More so, at the time of constructing the study, there were no previously designed research tools available to investigate this area of research, hence the majority of instruments were specifically designed to investigate underachievement by focusing on cognitive ability as it is embedded in the social and cultural environment.

The study was designed to determine whether school-aged children within this LEA (*N*=12,000) really are underachieving because of low academic ability, or whether the method of assessment (utilised nationally) is actually disadvantaging particular groups of learners, whom share and bring different 'things' from their socio-cultural environment. It may be possible that certain socio-cultural contexts can disrupt a child's transition from their outside-school-world to inside-school-world, thereby making the inside-school learning environment completely alien to them. Hence, this study is of paramount importance as it may reveal that forms of assessment are responsible for widening the gap between high and low achieving pupils and schools, rather than actual academic ability.

In designing the study, it was decided that SATs tests would be utilised to simulate the traditional formal method of assessment that is used by schools to judge performance and achievement. SATs tests themselves were selected as a research tool as they are standardised, highly recognised, traditional tests that children in Britain are familiar with taking. By using SATs tests, this study sought to determine what children in a low achieving locale are doing in the formal testing situation that is preventing them from achieving good grades in National Tests. Simulating the SATs testing situation may reveal the attitudes, perceptions and motivations that children bring to the testing situation. Using these tests and then questioning children immediately afterwards, provides the study with a powerful understanding of children's shared experiences of being tested within this low achieving locale. Research instruments were designed to build on and probe children's experiences of being tested, to determine the socio-cultural influences on individual motivation and achievement. By designing tools to 'get at' children's understanding and experiences of their social world (inside and outside of school) it might be possible to discover how their socio-cultural environment impacts on cognitive development. The current picture of the low achieving locale, painted by Government School Performance Data (based on SATs Assessments) is not a healthy one, with Coalshire placed firmly at the bottom of the League Table for Wales. However, this study intends to discover whether the picture created by national SATs data is different to the picture of the child created by socio-cultural methods.

In designing the study, it was decided that the research would be undertaken in the primary sector of education because most achievement research focuses on secondary education but there remains a need to investigate and tackle underacheivement in the early stages of education. The focus, therefore, centres on Year groups 6 and 2 as they are both the end-of-

Key-Stage year groups. This was deemed significant as the classes undertake National Testing (SATs in Year 6 and Teacher Assessments in Year 2). Therefore, the results of these actual assessments provide additional data to validate the research findings and offer a good comparison between the formal testing and the tests administered in the study. Natiaonal SATs data are useful in identifying schools within this underacheiving locale that surpass regional and national results, herewith known as higher achieving (HA) schools and schools that sit at the bottom of locale and national league tables, known as lower achieving (LA) schools.

English and mathematics curriculum subjects were selected for use in this study as they are the primary curriculum subjects that are taught and assessed in primary schools. Given more time, science could also have been incorporated into the study, or topic or theme work (i.e. non-academic work) could have been included to explore how children are differentially motivated and achieve differently across curriculum subjects. However, the depth of the socio-cultural exploration outweighed any benefits of increasing the breadth of the study, so this was not incorporated. The multiple levels of investigatin are outlined next.

3.4   Multiplicity of levels of investigation: Theoretical framing

This study is unique in that that the field under investigation (i.e. higher and low achieving schools in Coalshire) is explored on a variety of planes (Rogoff, 1993, 2005), thus offering a more complex understanding of the context of the locale. The first level of investigation is the society/community level of the underachieving *locale*. As school institutions are embedded in the community practice of the locale, it is paramount the the socio-cultural environment is thoroughly explored and examined.

Secondly, the *school* institution itself is a prime focus of research, as the schools participating in this study will fell into one of two categories: higher[2] achieving and low achieving. Inclusion of contrasting schools was believed to throw light on how and why some schools are able to achieve higher attainment results in National Tests than neighbouring schools cohabitning within the same socio-cultural environment. By outlining the schools and undertaking ethnographic research within each of the four institutions, it was possible to map out the specificities of successful and ineffective practices that contribute to each school's levels of achievement.

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[2] NB: 'higher achieving' is relative to schools within the locale, not National Performance Figures

Thirdly, all *classroom* activity is embedded within the school institution, hence it was necessary to explore how the rituals practised in one classroom helped the school gain higher results, whilst other classrooms in schools within a close proximity are failing to achieve the same levels of attainment because they are practising different, less effective rituals.

The final level of investigation occured at the *individual* level, thereby determining the significance of the dynamic socio-cultural influences upon a child's motivation. As learning activities are impacted by the social environment, the socio-cultural specificities of the classroom and out of school environment are probed and linked to each child's learning trajectory. Asking individual children about their own experiences allowed them to paint a picture of their own socio-cultural context. Whilst Government records can create a picture of the locale, by reporting employment, education, health, and crime statistics, individual pupil reports produce a more accurate account of the socio-cultural context within the locale. Exploring the research questions on the individual level (using a large sample) benefits the study, by determining the normative of the socio-cultural context, thus enabling the researcher to determine the shared experiences of children within this underachieving locale. As the nature of the study is complex in itself, exploring the research questions on a variety of levels further contributes towards the complexity of the investigation.

The multilayered research design is depicted in Figure 3.1. Methods appropriate to each plane of analysis, from the locale to the individual, were selected (as outlined in Figure 3.1 and described in detail in section 3.6) and the application of combined quantitative and qualitative methods adds to the uniqueness of this study.

By investigating motivation and achievement at the locale, school, classroom, and individual plane of analysis (Rogoff, 1998), the research design encompasses the socio-cultural theoretical stance that learning is embedded in multiple contexts across multiple planes.

Figure 3.1: Multilayered Design of Research Instruments

Sociocultural Experiences Task

Classroom Observations

Teacher Ratings

Research SATs

Post SATs Questionnaire

Documentary Evidence

National SATs Data

Class Records

Sorting Task

Picture Task

Interviews

Teacher Interviews

Teacher Assessments

Actual SATs Results
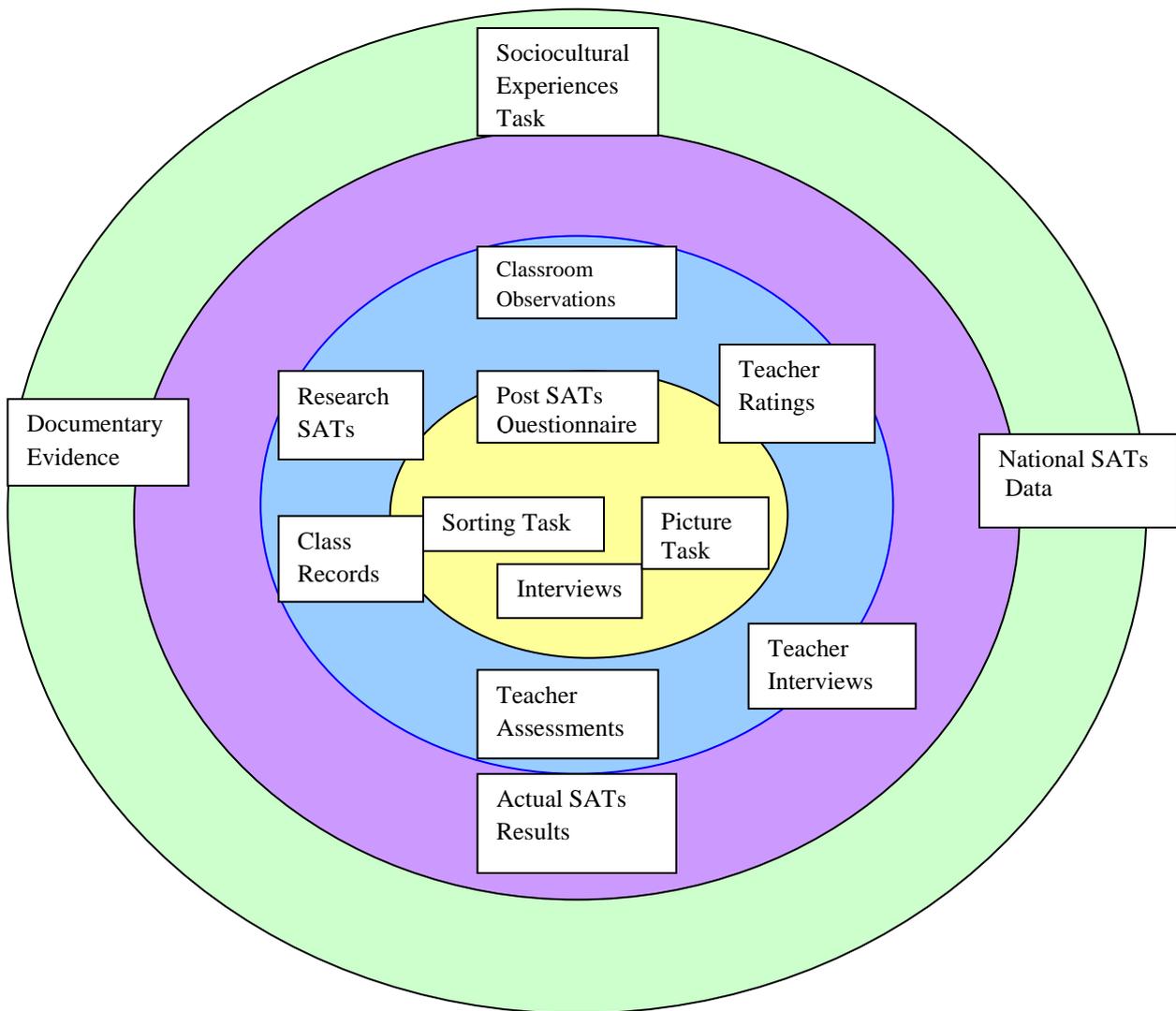
Key:

Locale (Underachieving)

School (Higher achieving and low achieving)

Classroom (Year 6 and Year 2 classes)

Individual (Central and peripheral pupils)

3.5 Sample

It has already been established that this thesis is concerned with understanding motivation within a socio-culturally *unique* underachieving locale. Thus, attempting to utilise the widely heralded gold-standard random sampling framework within this study was, therefore, not deemed to be appropriate as sampling for proportionality was not desired. Instead, a multi-level or, rather, multi-plane purposive sampling framework was employed. This form of non-probability sampling is not uncommon, particularly in qualitative research (Bryman, 2012), when sampling of areas and then participants is required. Although purposive sampling is widely critiqued for restricting wider generalisations to be made (Greenfield, 2002), it is superior to convenience sampling (Robson, 2011) and was considered necessary for use in this study. The sampling methods used for the four planes of analysis (i.e. plane one - locale, plane two - institution, plane three - classroom and plane four – individuals) are described below.

3.5.1 Sample plane one: Selecting the 'underachieving locale'

Driven by the aforementioned research questions, purposive sampling was used to identify the 'underachieving locale' at the onset of the study. The locale was initially selected on the basis of Rees *et al.*'s (2000) quantitative study of underachievement in South Wales. Additional exploration of Estyn (2002) and National Assembly for Wales (2002) school performance data confirmed that Coalshire was historically placed at the bottom of educational league tables. The locale in question was, therefore, empirically identified because it consistently fails, year after year, to achieve National Benchmark Figures, more so than any other Education Authority in Wales. Having selected Coalshire, the locale for research, high and low achieving schools within this Local Authority (LA) were evaluated for selection in the next sampling plane.

3.5.2 Sample plane two: Selecting the school institutions

Purposive sampling was, again, required when selecting the schools as higher and lower achieving institutions were specifically needed to enable the research questions to be answered. While the selection of schools should have been a relatively straightforward process, it ultimately was not; the account of school selection is provided here to explain how the participating schools were selected. The original proposal for the study asserted that two parallel Year 6 classes and two parallel Year 2 classes from two schools; one higher achieving (HA) and one lower achieving (LA) school would be selected for research. As the majority of

the schools in the area have expereinced significant outward mighration in recent years (as charted in Chapter 4, section A), schools were not large enough for parallel classes within the same year group, it was therefore decided that four schools would be selected for participation in the study. Thus, the sample frame for the study encompassed four primary schools, drawn from a total of thirty-four schools within the identified 'underachieving locale'. The decision to limit the study to four schools was based on the available resources and time constraints of the research. The four schools have many similarities, thereby giving a reasonable indication of the types of schools available within the locale. The inclusion criteria for schools required them to be LA maintained, mixed sex, English-medium schools that follow the National Curriculum syllabus. The exclusion criteria therefore included Welsh-medium schools, and any schools undergoing Estyn Inspections during the time of the research.

Initially, it was decided that schools would be selected according to their 2002 SATs results, as obtained from large-scale National Statistical Data for Schools in Wales. It was thought that this would be relatively easy to obtain from either the National Assembly for Wales (NAfW) or Estyn. However, after concerted effort, this proved to be futile. Although all school records in England are freely available from Ofsted (even published on the Ofsted website), Estyn did not make Key Stage 1 and 2 performance data freely available in the year preceding data collection. Even after numerous visits and telephone calls to the National Assembly for Wales and Estyn Headquarters, explaining the nature and potential importance of this study, the relevant statistical performance data were withheld.

In order to access performance data that would explicitly identify high and low achieving schools within the LEA, a different approach was sought. It was decided that the necessary data could be obtained by collecting and compiling data from individual Estyn School Inspection Reports. This was deemed advantageous as the reports would not only contain the performance data, but school-specific data, facilitating the matching of schools according to relevant criteria (i.e. size of school, percentage of free school meals (FSM), socio-economic status of catchment area etc.). However, after numerous trips to the four libraries in the county, it was found that only one quarter of the reports had been made available to the libraries, and many of those were outdated Local Authority websites indicated recent inspections were undertaken in some schools but such documentation was extremely difficult to locate). As it was deemed counter-productive to covertly contact the schools directly (posing as a potentially interested parent asking for inspection reports), this option was not

explored. Instead, Estyn were contacted again with the intention of locating the remaining three-quarters of the inspection reports. However, Estyn refused to give the researcher access to this data, commenting that the study 'was not significant enough to warrant the cost of sending the reports!' Even when offered payment for the reports, the spokesperson for Estyn argued that 'it would not be feasible to send out that volume of reports'.

In order to overcome the barriers faced in accessing the data, it was thought that a 'knowledgeable insider' might be able to assist and allow the researcher access to the much-needed performance data. It was decided that the Educational Advisor for the LEA would possess the necessary data needed to identify the closely-matched high and low achieving schools within the locale, and may also be interested in the nature of the study. After an initial meeting, explaining the aims of the research project, the Educational Advisor expressed an interest and agreed to analyse confidential statistical performance data and identify the (closely matched) high and low achieving schools. This advisor explained that he could not directly hand over the data mapping the hierarchy of schools' benchmark SATs figures, as permission had not been obtained from all schools. He did, however, agree to pick two closely matched high achieving, two closely matched mid-achieving and two closely matched low achieving schools from his records. The advisor explained that he would prefer to give a fair sample of schools in the locale, thus not exhibiting any bias or be held responsible for labelling particular schools as 'underachieving'. It was therefore agreed that the researcher would contact each of the six schools and meet with the six Head Teachers to explain the research and gather the relevant data from each school. This method would enable the responsibility to be shifted from the Educational Advisor to the researcher, who was able to identify the two higher achieving (HA) schools: North Higherbank and Highbury Park, and the two lower achieving (LA) schools: Lowerbridge and Fallowfield.[3] Within these four schools, two year groups were identified to participate in this study, as described in the next section.

3.5.3 Sample plane three: Selecting the classrooms

Within each of the four schools, children in Year 6 and Year 2 were selected for participation in the study, again working within a purposive sampling frame. Children in these year groups were specifically selected because they are all in the final year of each Key Stage (KS1 and

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[3] NB: For identification purposes, the pseudonyms used contain high/low references linked to the achievement status of the school.

KS2) which is when National Standardised Assessment Tasks (SATs) take place, thus providing additional comparative data to support the research findings. Initial deliberation concerning the potential developmental limitations of Year 2 children were resolved as these children were already being prepared for testing in school. Moreover, the specific instruments devised for this investigation were piloted to ensure their suitability for use with children aged 6-7 years.

3.5.4 Sample plane four: Selecting the individuals

All children within each of the eight classrooms (four Year 6 and four Year 2 classrooms) participated in phase one of the study (described in section 3.5.6). The sample composition is detailed in Table 3.1.   Phase two of the investigation demanded a more in-depth exploration of a number of 'focus children'. Each of the class teachers was asked to select eight children in their class; four they identified as the 'most involved' in learning and the four 'least involved' children, akin to Lave & Wenger's (1991) 'involved' or 'peripheral' participators in learning. Instructions given to teachers were deliberately vague, i.e. definitions of 'involved' were not given, so that teachers' own conceptions of involvement could be explord.

A sub-sample of 64 pupils across both year groups was, therefore, identified with pupils being nominated as either centrally involved or peripherally involved learners; hereafter referred to as central and peripheral participants. These children were selected to participate in more in-depth investigation; including pre-selected classroom activities to examine everyday classroom practice in literacy and numeracy to better understand pupil motivation from a socio-cultural perspective.

3.5.6 Overall sample of schools and pupils participating in the study

In total, 213 children participated in phase one of this study; 108 Year 6 pupils and 105 Year 2 children. In Year 6, there were 29 pupils at North Higherbank, 16 pupils at Highbury Park, 27 children at Lowerbridge and 36 children at Fallowfield. The Year 6 sample comprised 53.7% boys and 46.3% girls in total. In Year 2, the sample included 27 children from North Higherbank, 26 learners from Highbury Park, 30 children from Lowerbridge and 22 pupils at Fallowfield. In Year 2, 42.9% of the sample included boys and 57.1% were girls. Sample details for each of the eight classes are presented in Table 3.1 for Year 6 and Table 3.2 for Year 2.

Table 3.1: Sample of children in each Year 6 class

Year 6	North Higherbank		Highbury Park		Lowerbridge		Fallowfield		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Boys	12	41.4	11	68.8	15	55.6	20	55.6	58	53.7
Girls	17	58.6	5	31.3	12	44.4	16	44.4	50	46.3
Total	29	100	16	100	27	100	36	100	108	100

Table 3.2: Sample of children in each Year 2 class

Year 2	North Higherbank		Highbury Park		Lowerbridge		Fallowfield		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Boys	13	48.1	11	42.3	10	33.3	11	50	45	42.9
Girls	14	51.9	15	57.7	20	66.7	11	50	60	57.1
Total	27	100	26	100	30	100	22	100	105	100

Overall, 41.7% (*N*=45) of Year 6 pupils attended higher achieving (HA) schools and 58.3% (*N*=63) attended lower achieving (LA) schools. In Year 2, 50.5% (*N*=53) of children attended HA schools and 49.5% (*N*=52) attended LA schools. As Tables 3.1 denotes, the class size in KS2 varies considerably between schools. The largest variation can be seen in the Year 6 classes in the higher achieving schools. Fallowfield has 36 children in the class whilst Highbury Park has only 16 children. This can be explained by the size of the school (see Chapter 4). Highbury Park is the smallest of the four schools with 120 pupils on roll, there are 300 pupils at North Higherbank, and just over 200 at both Lowerbridge and Fallowfield.

In phase 2, the sub-sample of 64 central and peripheral 'focus children' (32 in each year group) comprised 6 central boys and 10 central girls in Year 6 and 5 central boys and 11 central girls in Year 2. The sub-sample of peripheral children contained more boys than girls; 9 boys and 7 girls in Year 6 and 11 boys and 5 girls in Year 2. Gender differences in teachers' selection of central and peripheral children are discussed further in Chapter 7, section 7.2. The sample details for each year group are presented in Tables 3.3 and 3.4.

Table 3.3: Sub-sample of focus children in each Year 6 class

Year 6	North Higherbank		Highbury Park		Lowerbridge		Fallowfield		TOTAL	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Central	2	2	0	4	2	2	2	2	6	10
Peripheral	2	2	2	2	2	2	3	1	9	7
Total	4	4	2	6	4	4	5	3	15	17

Table 3.4: Sub-sample of focus children in each Year 2 class

Year 2	North Higherbank		Highbury Park		Lowerbridge		Fallowfield		TOTAL	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Central	3	1	0	4	0	4	2	2	5	11
Peripheral	3	1	4	0	2	2	2	2	11	5
Total	6	2	4	4	2	6	4	4	16	16

3.5.7 Overview of the sample design

Figure 3.2 illustrates the sampling details within the four planes of analysis: locale, institution, classroom and individuals.

Figure 3.2: Overview of the design of the study
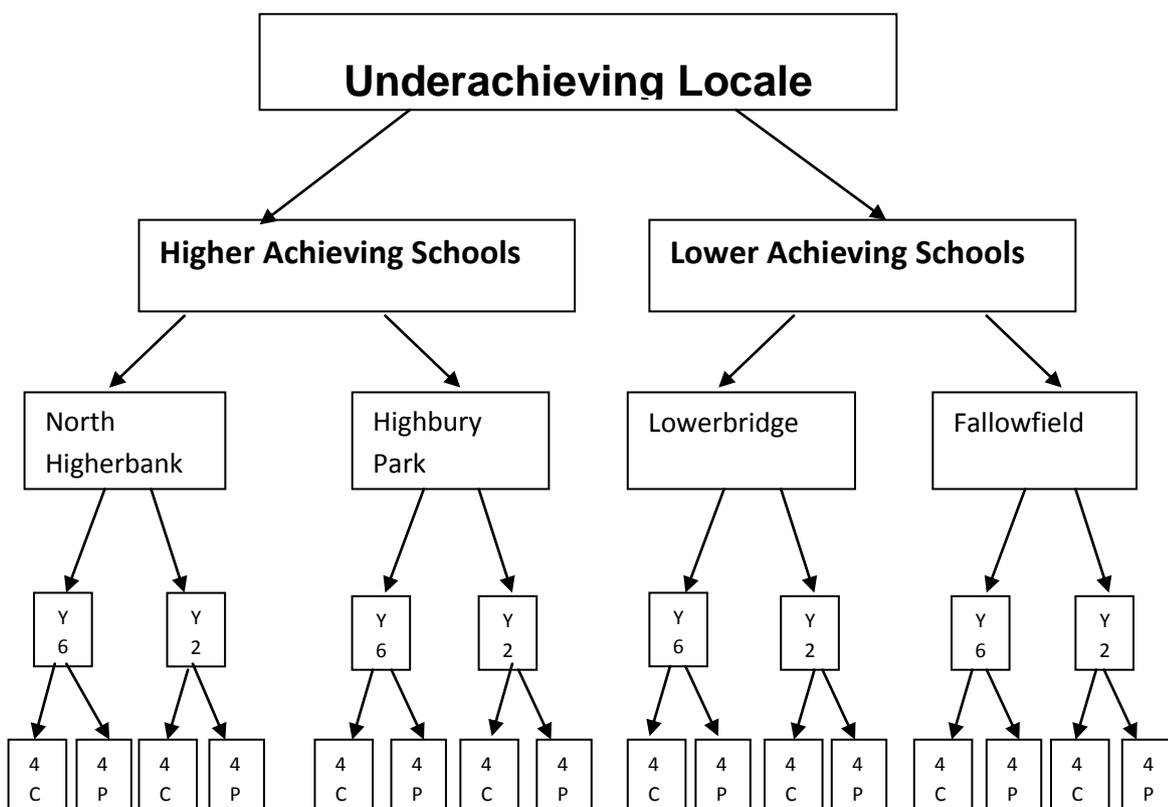
Fig. 3.3: Overview of Research Design

SAMPLE

One locale: *Empirically demonstrated to be 'underachieving'*

Four schools: Two higher achieving (HA) schools
                        Two low achieving (LA) schools

Eight classes: Four Year 6 classes
                        Four Year 2 classes

64 Focus Children: 32 'Centrally Involved' children (16 x Y6, 16 x Y2)
                        32 'Peripherally Involved' children (16 xY6, 16 xY2)

3.6 Research instruments

The research objectives (documented in Chapter 2, section 2.8) informed all facets of the design of the study. The research instruments used to investigate pupil motivation from a socio-cultural perspective within each plane of analysis are outlined in sections 3.6.1-3.6.4. The purpose of each research instrument within each plane of analysis is summarised at the end of each section (see Tables 3.5-3.9).

3.6.1 Investigation plane one – Locale

As previously noted in section 3.5.1, the locale was identified prior to the period of data collection using Rees et al.'s (2000) empirical work. However, additional data in the form of documentary evidence (outlined in section 3.6.1.1.) and national SATs data (described in section 3.6.1.2) needed to be explored to confirm the underachieving and socio-culturally unique nature of Coalshire locale. The social and cultural experiences of children (although completed by individual children) were investigated within this plane of analysis (section 3.6.1.3) to determine the common socio-cultural experiences situated in this unique locale.

3.6.1.1 Documentary evidence

A wide range of documentary evidence from *government sources* (BSA, 2001; Census, 2001; ELWa, 2005; LFS, 2004; NAfW, 2000; WAG, 2001), *national surveys* (DLS, 2003; ONS, 2004), *news reports* (Atkinson, 2006; BBC, 2002; Burson, 2006; Glaze & Owen, 2007; Hammond & Alford, 2006; Wright, 1998) and *educational documents* (Estyn, 2001, 2002, 2003a, 2003b, 2005, 2007, 2011, 2013) were drawn on in order to create a clear account of features of Coalshire locale. Although documentary sources can be critiqued for varying in terms of quality and reliability, they are nonetheless useful as readily available sources which, in this study, were drawn on to depict the nature of the locale. Being mindful of the potential weaknesses of documents as a source, Scott's (1990) four assessment criteria were considered when selecting documentary material, i.e.: the *authenticity* of the documents were checked (most documents were official state documents); the *credibility* of documents was considered, the *representativeness* of evidence was assessed and the *meaning* was attended to, to ensure that credible evidence was used in this plane of analysis. Although this study is primarily concerned with motivation to learn within educational settings, it was important that wider social and cultural issues were addressed, including: employment, housing, health and deprivation issues (as presented in Chapter 4, section A). These themes were used as a framework in searching for supporting evidence. As a non-native outsider to the locale, it was important to read widely and cite a range of sources to offer a balanced description of the locale.

3.6.1.2 National SATs data

National SATs data reported by the Welsh Assembly Government (NAfW, 2003, 2004; WAG, 2003a, 2003b, 2004, 2005, 2006, 2008, 2010, 2011) were analysed to identify Coalshire's underachieving status before, during and after the period of data collection. The actual SATs results, at locale level, were elicited from the reports and compared with all-Wales averages to depict the achieving status of this locale. The data provided by these Government sources were deemed to be credible, although the reliability of SATs tests as forms of assessments were questioned (this issue is discussed further in Chapter 5).

3.6.1.3 Social and cultural experiences task (CSCE scale)

The CSCE Scale was devised to access the specific experiences of children residing in this unique locale (refer to Appendix A). Children were asked to consider 85 items, covering a vast array of experiences (ranging from everyday leisure activities to experiences of other cultures – as outlined below), which were generated from a detailed pilot study[4]. This scale was found to have high internal consistency (Cronbach's α = .89). Children were required to specify the approximate time since they last engaged in each activity, if at all. For example, pupils articulated when the last time they 'went to the park' was as either (5) yesterday or sooner, (4) within the last week, (3) within the last month, (2) within the last year, or (1) longer ago or never. The more frequent the activity, the higher the score. This scale was completed in small groups to enable the researcher to check that all children understood the task requirements and to enable children to ask questions if unsure. Colourful stamper pens were used to make the CSCE scale more interactive and enjoyable for children to complete.

The 85 individual items on the CSCE were initially subjected to Principle Components Analysis (PCA[5]) to identify a smaller number of linear combinations of the original variables in a way that accounts for most of the variability found in this scale (Pallant, 2013). However, the factors identified using PCA lacked theoretical cohesion (e.g. 'went on holiday' and 'did colouring' were identified in one component) so items were grouped more cohesively as follows: (i) *place of interest* (including: park; beach; zoo; museum; fun-fair; mountain; town; cinema; theatre; ice skating; bowling; restaurant; pub); (ii) *transport* (including experiences of having been on an aeroplane, boat; train; bus; car; van; taxi); (iii) *family* (inquiring when children last saw grandparents; visited Auntie; saw Mam; saw Dad); (iv) *sedentary activity* (including TV; Sky; watched videos; watched DVD; played the Playstation; used a computer for games; used the internet; played on a Gameboy, did drawing; colouring; played cards; construction; Lego; dolls; played with dinosaurs; played with toy sharks; played with other toys); (v) *physical activity* (including use of a scooter; bike; go-kart; quad bike; motorbike; football; netball; kickboxing; tennis; rugby; hockey; swimming; (vi) *other activity* (asking children when they last played on the streets; played with a parent; played with a friend; helped Mam; helped Dad; went somewhere alone; went somewhere with a friend); (vii)

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[4] Year 6 children from a neighbouring school contributed to the development of the measure. Respecting the boundaries of the theoretical framework underpinning this research, it was necessary to conduct a pilot study in a school located within this unique region.
[5] PCA was selected over Factor Analysis as this psychometrically sound approach avoids some of the factor indeterminacy problems associated with factor analysis (Stephens, 1996 cited in Pallant, 2013).

school related learning (enquiring when children last visited the library; read a book; read a magazine; read with somebody; did homework; played a word game; played a number game; did writing for fun; used a computer for work; brought work into school; (viii) *school enjoyment* (asking when children last enjoyed English; enjoyed Maths; enjoyed Science; enjoyed school; enjoyed learning; enjoyed home); and (ix) *wider experiences* (including when children last went on holiday; went on a picnic; outing; went to England; went abroad; went to the doctors; visited the dentist; visited the opticians; went to the hairdressers). The reliability of each sub-scale was tested and revealed that the CSCS scale was still found to be reliable when items were grouped this way (α=.78). The purpose of the three instruments used to investigate the locale are summarised in Table 3.5.

Table 3.5: Summary of instruments used to investigate the locale

Instrument/Level	Purpose of Research Tool
Doumentary Evidence	Gather information to create informed picture of the locale
National SATs Data	Quantitative measure to assess position of locale according to National Results
Socio-Cultural Experiences Task (Appendix A)	Identify the shared sociocultural experiences of pupils within the underachieving locale

3.6.2 Investigation plane two - Institutions

Although the institutional plane of analysis was a critical element of this investigation, the research instruments employed to elicit data on this plane often overlapped with instruments used to research plane three - the classroom plane of analysis. This overlap is illustrated in Figure 3.1 in section 3.4. Greater attention was afforded to plane three as motivation cannot be fully understood without fully attending to the child's immediate social learning community. Thus, the teacher interviews and research SATs (which are drawn on to discuss the institutional plane of analysis in Chapters 4 and 5) are presented in section 3.6.3 Investigation plane three – Classrooms. However, school data including SATs data for each school were analysed to identify the higher achieving (HA) and lower achieving (LA) status of the schools participating in this study.

3.6.2.1 School data
Estyn school inspection reports were analysed for each of the four schools. The three main themes to emerge, which were used for comparative analysis were: school catchment and

composition, management procedures, links to the community and the internal structure of the school. The detailed sub-sections used within this institutional plane of analysis are presented in section 3.9.2 and Chapter 4, sections 4.15-4.25. In addition, standardised SATs results were collected for: (i) former pupils to ascertain which schools in the locale were performing better and worse than others (presented in Chapters 4 and 9), (ii) present pupils participating in the study (to evaluate children's differential achievement between the research (mock) SATs intervention and end-of-year actual SATs at each of the four institutions) and (iii) future pupils, needed to present a longitudinal account of underachievement in these four Coalshire schools (see Chapter 9). Additional school data was retrieved from school inspection reports, fieldnotes and photographs taken whilst collecting data in schools. Analysis of these instruments is presented in section 3.9 and the purpose of this instrument is summarised in Table 3.6.

Table 3.6: Summary of instruments used to investigate the institutions

Instrument	Purpose of Research Tool
School data documentation: Estyn school reports and school SATs data	Determine the success of the school in terms of pupils achieving expected SATs results; provided contextual data for all schools

3.6.3 Investigating plane three – classrooms

Classroom observations (section 3.6.3.1), *class data* (section 3.6.3.2), English and mathematics *research SATs tests* (section 3.6.3.3), *teacher ratings* (section 3.6.3.4), *teacher interviews* (section 3.6.3.5) and fieldnotes (section 3.6.3.6) were used to investigate the classroom plane of analysis. Each of these methods is outlined in turn.

3.6.3.1 Classroom observations
Naturalistic observations of classroom settings (seating arrangements, setting, material culture and discourse including forms of instruction) were undertaken. Observational methods are perceived to be the most successful way of investigating the school organisations involved in this investigation, as the research questions required the examination of the material culture and discourse of the school and the classroom. This includes forms of instruction, classroom setting, seating arrangements, streaming and setting of subjects and areas of curriculum. This method of gathering data perceives interactions, actions and behaviours and the way in which they are interpreted as central and therefore fundamental to this study. Observational methods

were employed during the exploratory phase of this research, in order to uncover, make accessible, and reveal realities and meanings used by pupils to make sense of their daily lives. This method of inquiry (whereby the researcher is actually *being* the research instrument) permitted the researcher to construct social explanations of pupil motivation by collecting quality, in-depth data pertaining to pupils' conceptions of reality that would otherwise be inaccessible to an outsider and might not be amenable through other large-scale positivistic methods (Robson, 1993).

There are numerous advantages of utilising observational methods; including its flexibility (Denzin & Lincoln, 1994), its pre-eminent ability to get at 'real life' in the 'real world', in addition to enabling the researcher to see actual behaviours and actions rather than relying on pupils' subjective interpretations of events. Moreover, this method of data collection allows the researcher to record behaviour as it is actually happening; therefore yielding data that pertains directly to typical behavioural situations (Merriam, 1988). It also offers the researcher scope to make literal, interpretive and reflexive reading, therefore exploring the setting on a variety of levels (Mason, 1996). Although observational methods were employed on the strengths of their merit, it must be noted however, that the researcher was conscious not to let the limitations of this method contaminate the data. For example, there may be a temptation to describe phenomena as the researcher perceives it to be, or would like it to be, rather than how it actually is (Hammersley & Atkinson, 1995). The researcher therefore acknowledged that observational biases and pre-conceptions, ideals and expectations of 'high achieving' and 'low achieving' schools should not be evident in the interpretation of the phenomena observed and recorded within the school organisations. In order to increase the validity of the observational research, the researcher was conscious of the effects of interpersonal factors and attentional biases. As Bailey (1996) highlights, there are myriad ways in which the researcher's status characteristics affect the field research. The researcher was, therefore, reflexive and acknowledged that her "personal history, biography, gender, social class, race (and) ethnicity" have therefore influenced and shaped the research (Denzin & Lincoln, 1994; p.3).

As advised by Hammersley & Atkinson (1995), the researcher's role within the organisation was shaped through the adaptation of dress and demeanour, so as to facilitate gaining the necessary data. In order to overcome attentional biases, considerable effort was made to distribute attention evenly across the classroom setting, to avoid attending to particularly extrovert individuals and failing to see the interaction of less forthcoming pupils. Reflexivity

was also exercised in acknowledging that the researcher's presence within the organisation might affect the behaviour and interactions of the pupils under observation (Hawthorne Effect). Although Robson (1993) argues that repeated presence within any setting soon goes unnoticed if the researcher is an 'unrewarding, minimal interactor' this was not practised, as interaction with the pupils was considered to be an essential element of the research. Although systematic observation would reduce the amount of time taken to synthesise, abstract and organise the observation data, this method was not deemed appropriate for this study as it lacks the completeness and complexity of informal methods (Robson, 1993). Informal methods (i.e. non-structured observational notes) were therefore adopted and the researcher played a passive, non-intrusive observational role in the research situation (Lee, 2000). The running record format used in this study, therefore, meant that there was no observation schedule to cross-reference as observation notes were recorded in a series of fieldwork diaries for each classroom.

3.6.3.2 Class data
Additional data, including various school documentation, pupils' end-of-year assessments and reports were included as a method of data collection. An eclectic mix of data were gathered, including records of children's date of birth, school attendance, receipt of free school meals (FSM) etc., *nfer* test results, SATs practice test results, actual SATs results and independent teacher assessments. Data was gathered for all children in the Year 6 and Year 2 classes.

3.6.3.3Research SATs tests
English and mathematics (mock) research SATs tests were used in this study to determine how class teachers mediate testing situations (documentes in Chapter 5) in the classroom plane of analysis. The specific research SATs instruments are described in detail in section 3.6.4.1 below as these tests were also used to investigate plane four – the individual plane of analysis.

3.6.3.4 Teacher ratings
This instrument was designed to establish teachers' social representations of the selected focus children, and establish whether similarities existed between the eight teachers' perceptions of central and peripheral pupils in their respective classes. This measure was found to be reliable (Cronbach's alpha=.95). This instrument required class teachers to rate each item according to a five-point Likert Scale (see Appendix F). For example, rating a child on how 'involved' (5) or 'passive' (1) they are, with (3) suggesting the child is neither involved nor passive.

Teachers also rated pupils on the following items: motivated – lazy; social – reticent; hardworking – makes minimal effort; is well behaved – demonstrates challenging behaviour; is a joy to teach – is difficult to teach; anticipate success for the child – anticipate failure; child is able academically - struggles academically; child is well suited to teacher's style of teaching – child is not suited to 'school life'; learning occurs outside the classroom for the child – no learning outside school (see Appendix F). This instrument also included the following questions: (1) What was involved in making your judgement for each group? (2) How would you describe each of these groups? (3) What characteristics/attributes did you consider? (4) How do you perceive the future success of the children in each of these groups?

3.6.3.5 Teacher interviews
Interview methods played a fundamental role in this study, as they offer the researcher access to vast storehouses of information (Ackroyd & Hughes, 1981) and yield rich insights into teachers (and children's) experiences, attitudes, feelings, aspirations, opinions and motivations (May, 1997). Following deliberation over which interviewing method to employ for this study, a semi-structured interview schedule was devised to interview teachers (see Appendix G) as it was determined that this standardised yet flexible interview method would best reveal data to answer the research questions. Ethnographic interview methods were initially considered as they permit greater freedom to use the language of the informant, thereby minimising the gap between the interviewer and the informant, which may consequently promote rapport and a development of mutual trust, thus allowing a freer flow of information (Spradley, 1979). The strengths of ethnographic interviewing methods were appealing as they reveal a depth of information virtually impossible to gather by any other method (Ackroyd & Hughes, 1981). However, the weaknesses of using this type of informal, conversational technique outweighed its advantages. In particular, it can be less systematic and comprehensive if certain questions don't arise naturally, which would have been problematic when wanting to compare the eight teachers' responses to certain questions. Moreover, the lack of structure from informal interviewing generates non-comparable data collected from different respondents (Cohen, Manion & Morrison, 2000). In addition, the simultaneous recording, transcribing, managing, storing and analysing data whilst collecting it (grounded theorising) (Charmaz, 2002) would not be feasible, given the volume of data needing to be collected within the time constraints. Thus, a semi-structured interviewing schedule was deemed to be the best tool for the job. This method permits many questions to be asked in a short amount of time, thereby generating a

greater breadth of data from each respondent and offers greater neutrality of the researcher's role, thus reducing interviewer bias, while still permitting a level of flexibility. Although the researcher took pre-determined questions (which reduce error inherent in interviewer variability (Bryman, 2001) into the interview setting, the semi-structured method enabled the researcher to deviate from the schedule when necessary, i.e. when teachers naturally answered two questions in one, it was not necessary to re-question the teacher, as might happen with formal structured interviewing methods, thus allowing the respondents greater freedom of expression and elaboration (Mason, 1996). Whilst still maintaining a semblance of structure, this approach still allowed the researcher to pursue interesting issues raised or clarify or amplify aforementioned points. The interviewer was, therefore, able to probe interesting and relevant issues further and draw upon previous statements to facilitate the elaboration of subsequent points. Layder (1993) suggests that probing and prompting is particularly beneficial when interviewing reticent participants who may need additional encouragement to express their experiences. Despite not being as standardised as structured interviewing methods, the semi-structured approach used in this study permitted comparability between responses, which May (1997) believes increases the reliability and validity of interviews to help ensure that any differences in the responses will be real rather than as a result of the interview situation. The questions asked in both the teacher's and children's interviews were predominantly open-ended in nature. These were deemed necessary, as closed-questioning limits scope for participants to express their own opinions (Bryman, 2001).

The teacher's interview schedule probed teachers on a variety of issues, including classroom management, behavioural management, assessment, the positive and negative aspects of their teaching jobs, their notion of underachievement and strategies for motivating less involved learners. Teachers were also asked about the social and cultural experiences and opportunities of the children in their respective classes (refer to Appendix G).

3.6.3.6 Fieldnotes

Fieldnotes were recorded throughout the period of data collection; spanning two academic years. Observations were recorded and *ad hoc* conversations with staff members, visitors, and children were noted. Field notes were written verbatim as they occurred at every available opportunity, and when it was not feasible to record observed data immediately, key words were noted and expanded upon at the first available opportunity (as recommended by Lofland & Lofland, 1995). Critical incidents, whereby particular events illuminated pupils' or teachers'

behaviour were noted. Reflections on reconstructions of conversations and descriptions of events, behaviour and activities were also written up as soon as was feasibly possible. Whilst fieldnotes are critiqued for being idiosyncratic, subjective, biased and lacking in precise quantifiable measures (Cohen et al., 2000) they are, nonetheless, a powerful tool in gaining insight into the specificities of classroom culture and practice.

Table 3.7: Summary of instruments used to investigate the classrooms

Classroom Observations	Observe specificities of classroom practices
Class Records	Obtain age/attendance details of each class
Research SATs tests (Appendices B-E)	Identify how teachers mediate testing situations
Teacher Ratings (Appendix F)	For the teacher to identify 4 central and 4 peripheral children in each class
Teacher Interviews (Appendix G)	Probe teachers views on variety of issues
Fieldnotes	To gain insight into the specificities of classroom practice

3.6.4 Investigating plane four - individuals

A variety of tools were specifically devised to investigate motivation within a socio-cultural framework at the individual plane of analysis, including: English and mathematics *research SATs tests* (section 3.6.4.1), English and mathematics *post-SATs questionnaires* (section 3.6.4.2), *interviews* with the 64 focus children (32 central and 32 peripheral pupils) (section 3.6.4.3), *picture task* (section 3.6.4.4) and sorting activity (section 3.6.4.5).

3.6.4.1 Research SATs
Official and traditional test papers were used as a starting point to uncover differential achievement. Key Stage 1 and Key Stage 2 Standardised Assessment Tasks (SATs) were considered to be the best measures to use as these official (QCA and DfEE, 2001) standardised compulsory tests are used by every Local Authority maintained school in England and Wales. The selected tests had previously been used by schools in England but not in Wales; it was important that the children in this study had not encountered these tests previously. The constraints of the study (mainly time) determined that only one strand of the English test could be utilised in this investigation. Thus, the reading comprehension test was deemed to be the

most suitable test to employ, chiefly because this paper assesses a greater scope of children's skills, and the writing paper and handwriting elements were subsequently discarded. The Year 6 and Year 2 English reading comprehension tests are outlined next.

Year 6 English Research SATs test: 'Ocean Voices' reading comprehension test

This reading comprehension test entitled *'Ocean Voices'* includes a 13-page booklet split into 5 sections (refer to Appendix B). The five elements include: (i) A *'Letter from the Editor'* of WildTrack Magazine, which welcomes readers to the first copy of the wildlife magazine and informs readers of the magazine's contents. The questions required children to choose the best word or group of words to fit the passage and put a ring around their choice. For example, 'The editor says that a future edition of WildTrack Magazine will be about: 'whales', 'foxes', 'earthworms', or 'oceans'. Children were asked to select from a list of statements the one that best represents the editor's views, as well as determining two different ways in which the editor encourages the reader to read the remainder of the magazine; (ii) The next section entitled '*On the Whale Trail'* is a written and photographic account of a trip to Canada, where the author describes her experiences of whale watching. This section ascertained the children's ability to chronologically order events (i.e. Lucy the author's account of whale watching). The first one is done for them: ____ goes back to the dock; ____ sees one whale swimming; ____ sets off on the journey; ____ sees several whales leaping; _1_ prepares for the journey. The test asks children to identify words/phrases with similar meanings, e.g. 'the start of an adventure' is akin to 'an intrepid explorer journeying into unfamiliar territory'. This part of the test provided the children with an opportunity to write extended descriptive answers (7 lines), such as: 'Towards the end of the trip, Lucy admits that she has a mixture of feelings about her experience. Explain her different feelings'; (iii) The third element is an article called *'The Blue Whale – Making A Big Splash'*. This is a factual article, giving a descriptive account of the Blue Whale and explains how it got its name, size, life span, diet and record-breaking facts. This section assesses children's capability to read factual information, pick out the salient details and understand the importance of visual presentation. The article contained a copy of the factual diagram and information, with arrows pointing to the introductory paragraph (written in bold) and two subheadings 'Baby Blue' and 'Record Breakers'. The children were asked: 'Why is this paragraph in bold print? And 'What are these subheadings for? Write two purposes'. Children were required to complete a table containing some facts about whales and were required to use the information in the article and label what was shown in the diagram (see Figure 3.4); (iv) The penultimate section is *'Whales in Danger – Why?'* -

an article explaining why many types of whales are endangered and in need of protection. This element requires children to comprehend the information provided in the short paragraphs to find the correct answers. For example, determine two ways in which people can help whales, and describe what 'treat with respect' means, and explain why they think the reporter used these words in this article; (v) The final section is a *'Dear Humans'* letter, written from a Blue Whale asking for peace in the world's oceans on behalf of the creatures in the sea. This section contains a four-paragraph letter from an endangered Blue Whale, asking humans to be kinder to all whales. Children have to decipher what reason the Blue Whale gave for writing the letter, as well as matching a summary of ideas in the letter to each paragraph, e.g. readers were instructed to draw lines to match the paragraphs to the main ideas. The first paragraph had been done for them, and was linked to 'the reason for writing'. They then had to order 'how humans have affected ocean life' (paragraph 2), 'the blue whale's request' (paragraph 4) and 'how whales feel about human activity' (paragraph 3). The final question to be completed was 'the editor's comments appear all through the magazine to introduce different sections. Children were instructed to write either (a) short answers (e.g. word or phrase), (b) several line answers (a sentence or two), (c) longer answers (full sentences explaining opinion), or (d) other answers (e.g. tick, lines, circle answer), depending on the space given in the answer booklet.

Figure 3.4: Extract from the Year 6 English reading comprehension test

Year 2 English Research SATs test: 'Getting to Know Dogs' **comprehension test**

'Mr Davies and the Baby' is a story about a naughty dog called Mr. Davies who followed a baby (see Appendix C). The story began by explaining that Mr. Davies stayed in his garden all day long, just eating his meals and sleeping in his kennel. The class teacher then read the practice questions relating to the text, which asked: *'Which words tell you that this is the beginning of a story?'*(Once upon a time) and *What did Mr. Davis do when it rained?* The children were asked to select an answer from the following options: ___*He ate his meals,* ___*He sniffed the smells,* _(√)_*He slept in his kennel,* or ___*He dug holes in the flower beds.* The children were instructed to progress through the comprehension exercise, attempting all the questions in this section and the final section 'What to do when you meet a dog'. The children were required to read the information about what you should do when you meet a dog on a lead, a stray dog and what you should do if you have a dog of your own. This section of the comprehension exercise aims to elicit an understanding from the children that: people should put a dog on a lead when they take it out, you should ask the owner before you touch somebody's dog, a stray dog is a dog running around without an owner, if you meet a stray dog you should stand still, wash your hands after stroking or playing with a dog, rules are set out as a list so each one stands out, and it's a good reason to put a dog on a lead to stop it chasing ducks and so it doesn't scare children. The mathematics research SATs tests used in each Key Stage are outlined next.

Year 6 Mathematics **Research SATs test:** The 17 page Year 6 mathematics test (found in Appendix D) covered a range of mathematical concepts, including subtraction (e.g. $45 + \_\_ = 110$); ordering (writing amounts of money in order of size, starting with the smallest amount); addition; multiplication; subtraction ($847 / 7 = ?$); time ($10.15 +$ one and a half hours $= ?$); decimals (decide whether 0.9, 0.06, 11/20 and 0.21 are greater or less than half); mirror imaging reflections of shapes/ symmetry; money (adding up coins); prime numbers; degrees of angles; probability; measuring shapes; measuring angles of shapes; fractions (find the equivalent to 3/5… ?/10, ?/15, 12/?); co-ordinates; graphical reading; percentages; pattern sequencing and area. An exemplar test question is presented in Figure 3.5 on the next page.

Figure 3.5: Sample question from the Year 6 mathematics research SATs test

This is the cost to visit the waxworks.

| Adults | £8.50 |
| Children | £4.50 |

On Friday morning **12 adults** and **20 children** visit the waxworks.

How much do they pay altogether?

Show your **method**. You may get a mark.

£ _____

10a
2 marks

Guide books cost **£1.50** each.

The waxworks sells **£24** worth of **guide books**.

How many guide books is this?

_____

10b
1 mark

Upon completion of each of the research SATs tests, children were required to complete a post-SATs questionnaire.

Year 2 Mathematics Research SATs test: This test comprised of 2 sections containing 34 items (refer to Appendix E). The first part of the test included 5 questions (and one practice question), which were read aloud to the children by their class teacher. The second part comprised 29 written questions (and one practice question). The practice question stated that 'Hannah has 10 candles burning on her birthday cake. She blows out 6 candles. How many candles are left burning?' Children were asked: (1) Write the next number in this sequence: Five, ten, fifteen, twenty …; (2) Find box c with the fruit in it. Look at the price list. Tim bought 2 fruits. He spent 20 pence altogether. He bought an orange for 11 pence. Tick the other fruit he bought; (3) Hold up a cylinder. What is the shape of the can I am holding? Look at the list of shape names in box d. I will read them to you: sphere, cylinder, cube, pyramid, cuboid. Tick the name of the shape I am holding; (4) Look at the five numbers. Which number is nearest to 46? Put a ring around it; (5) Look at the clock. Sam's school starts at 9 o'clock. Sam went to the dentist and got to school half an hour late. Draw the time Sam got to school on the clock.

3.6.4.2 Post-SATs questionnaires

In order to probe pupils' shared experiences of testing, all children (*N*=213) were questioned about their testing expereinces. The English questionnaires are presented first for Year 6 and Year 2 followed by the mathematics questionnaires for each year group.

Year 6 Post-English research SATs questionnaire

The post-English SATs questionnaire assessed whether children enjoy learning English and the reasons why they do or do not. The questionnaire asked each child to explain: (i) which questions they found particularly easy or hard and explain why; (ii) their opinions on whether they thought it was a challenging test or not; (iii) whether they tried really hard or simply gave up on the difficult questions; (iv) whether they had to rush to finish the test; (v) how they believe the test can be made more interesting; (vi) how well they believe they have done, and (vii) how well they think the teacher will think they have done (see Appendix H).

Year 2 Post-English research SATs questionnaire

The post English SATs questionnaire for Year 2 was based upon the questionnaire used for children in Year 6. The Year 6 questionnaire was closely followed, so as to offer a form of comparability between the responses of children at the end of each Key Stage. This questionnaire differed slightly in that it contained predominantly closed questions and required children to circle smiley faces or draw pictures rather than write their responses (as with the Year 6 questionnaire – refer to Appendix I). This was a key feature of the design of the questionnaire, as children aged 6-7 years may have limited writing skills. Most questions contained five smiley faces (indicating really happy, happy, neither happy nor unhappy, unhappy or really unhappy). All of the children in the class were instructed that they had to read and/or listen to the question as the researcher read it out and circle the face that best describes their feelings toward the question. For example, the first question asked 'did you enjoy this story?' and the children were asked to circle the faces accordingly. The remaining questions asked whether the children: found it easy; had to rush to finish; really wanted to finish all of the test; think they got the answers right; tried their best; teacher and friends will think they've done well; would like to read more about dogs; draw favourite part; read with anybody at home; who with; like reading books; what like reading about; if good at reading/spelling/writing stories; how often read at home; how many books they own; what activities enjoy doing at home; if go to any clubs; draw what they do in the holidays; if and where go on family outings; whether go on holiday; if have been to a different country; been on an aeroplane/boat/train; whether enjoy school. These latter questions were designed to

elicit children's broader social and cultural experiences to ascertain possible outside school learning experiences that children might engage in. This questionnaire was designed to probe each child's experiences, opinions and feelings towards English and English tests, thus, determining whether these contribute towards a child's motivational behaviour and consequently achievement (refer to Appendix I).

Year 6 Post-mathematics research SATs questionnaire

As with the post-English SATs questionnaire, this instrument was designed to probe the Year 6 classes on their opinions and feelings of the mathematics test. It was administered immediately after the research SATs test was completed (see Appendix J). Many of the questions were the same as the English questionnaire (to offer a valid comparability between the two curriculum subjects). Additional questions were asked to determine what factors motivate children to do well in school. Children were asked: what makes them keep trying when they cannot find the right answer; what makes them work hard in school; who encourages them to do well in school; asks whether they ever compete with their friends to get the best marks (and why); and whether children think it is 'cool' to work hard in school. These questions were designed to elicit children's attitudes to learning, in order to assess how this impacts on their actual achievement.

Year 2 Post-mathematics research SATs questionnaire

As with the Year 2 Post-English SATs questionnaire, the mathematics questionnaire was also based on the Year 6 questionnaire and comprised of five faces that the children had to circle to communicate their opinions (see Appendix K). The questions probed whether the children enjoyed doing the sums; found it easy; how much they wanted to finish it in time; think they've got the answers right; tried their best; think the teacher will say they have done well; finished all of the questions; want to do more work like this; favourite part; do any maths with anybody at home; who helps them do maths; if like maths; what they like best; if receive pocket money; whether save it; what spend pocket money on; if do any jobs at home for money; if ever do shopping; play number games; whether they think it is important to be good at maths (and why). This questionnaire was also designed to probe children's experiences, opinions and feelings towards mathematics and to determine their role on pupils' motivation.

These questionnaire methods were employed to access a variety of children's attitudes, perceptions, opinions and motivations. The post-SATs questionnaires permitted the researcher to reach a large sample of children, all exposed to the same questions. There are many

advantages in utilising this approach, including increased generalisability, validity and reliability of children's responses (Greig & Taylor, 1999). Questionnaires offer greater neutrality of the researcher's role than permitted with other techniques and can, therefore, reduce interviewer bias. Moreover, the standardisation, uniformity and non-directive sequence of questions asked are believed to reduce error due to researcher variability (Bryman, 2001). This method also ensures a higher response rate and permits greater comparability between responses. So as not to constrain children's responses, the majority of questions were open-ended, thus enabling children to express their own opinions and explain their feelings and experiences. An important caveat of this method is that some children may have limited levels of literacy and their interpretations of questions may vary, which will affect the validity and generalisability of the data. A solution to this was to read the questions out to the class and to explain the meaning to any child who didn't understand the questions.

3.6.4.3 Interviews with children

A semi-structured interview schedule was employed to interview the 64 focus children in this study (refer to section 3.6.3.6 for a full justification of this method and Appendix L for the interview schedule). This interview was primarily designed to probe pupils' differential learning experiences and to gain greater awareness of children's social and cultural expereinces of life in Coalshire. The interview questions included asking children how they think the English and mathematics tests could be made more interesting; how they felt when they had to do the test; whether they would have preferred to have known about the test beforehand or whether that would have been worse; if they mind doing tests (and why); how they normally feel when they have to do tests; if that affects how they normally do; why they think some children might really enjoy doing tests whilst others do not; *whether they think they will be well prepared for the SATs; *what sort of preparation work they will do; whether they practice spellings at home; *how well they predict they will do in their SATs (levels for English, Maths and Science); which of the subjects they prefer; how much homework they do each week; whether anybody helps them with homework; if they ever do any school-type work outside of school (excluding homework); which aspects of school they enjoy; which aspects of school they dislike; if they could be in charge of school, how would they change it to make it better for children. *(NB: *denotes questions only relevant for Year 6 children).*

Children were also guided through a range of questions relating to aspects of home and school life, to ascertain each child's description of their own socio-cultural context and perceptions of

their own academic ability. The same interview schedule was utilised for both Year 6 and Year 2 pupils. The initial part of the interview involved asking children questions about their family situation; a typical day for them; the type of school work they do at home; who encourages them to do well; reasons for wanting to achieve in school; hobbies and interests; reading preferences; socio-cultural experiences; interests shared with family and friends; aspirations for the future; typical features of the school day; and positive and negative aspects of school life (see Appendix L).

The primary concern when designing the interview schedule was the age of the respondents (aged 7-11 years). A fundamental concern, therefore, was the clarity of questioning, as children may have a limited language comprehension. Children's interpretations of questions may also vary unless they are worded simply and asked in a coherent manner. The questions were therefore concise and incorporate child-appropriate language in order to facilitate a universal understanding of the questions posed. The sequence of questions was relatively short and brief and framed in a logical sequence with simple 'which' questions preceding more complex 'why' questions.

3.6.4.4 Picture task

To identify children's recognition of abstract academic concpets inside and outside school, a picture task was devised. This task involved a two-sided A3 sheet comprising eight sets of three pictures illustrating a variety of English and mathematics, inside and out-of-school activities. Each set of pictures contained one maths and two English activities (and *vice versa*) and one inside and two outside activities (and *vice versa*). The children were instructed to tick two boxes (from three) that they felt were most similar and write the reason on the line beneath each set of pictures (see Appendix M for details). Thus, there was a range of options, where it was evident that the two most similar activities were mathematics or English or inside school activities, or out-of-school activities. These non-obtrusive measures are considered to be advantageous, as valid and replicable inferences can be made from data to their context (Krippendorff, 1980 cited in Robson, 1993). When used in conjunction with other methods, they may be also used for triangulation purposes (Robson, 1993).

3.6.4.5 Sorting activity

In order to assess whether pupils could differentiate between 'in school' and 'out of school' mathematics and English tasks, a sorting activity was created. This activity contained 25

picture cards with images of typical mathematics and English related activities (see Appendix N). These images, specially drawn by a nationally recognised artist[6], were designed to include content from the English and mathematics test (e.g. plants for sale from the maths research SATs test). The cards incorporated a mix of activities that occur either inside school or outside school. Originally, 51 picture cards were used in a pilot study whereby 29 Year 6 children were asked to select 7 cards that best represented a mathematics group, English group, in-school group, out-of-school group and a category that best represented 'none of these groups'. As many of the cards overlapped, i.e. could be chosen by one child as representing English and another child as representing in-school, a total of 25 cards were finally chosen for the actual study. The original numbers assigned to the cards were used throughout the study. The images used in this sorting activity were: (i) *English 'in school'*: Girls doing spelling test; Boy writing in exercise book; Children reading in corner; Girl reading to teacher; Girl selecting book in library; Teacher reading 'big book'; Girl reading book; (ii) *English out of school*: Children reading poster/timetable on bus*; Boy at book sale*; Man reading newspaper in the park; Woman filling in bank form; Man working in office; Girl reading eye chart in opticians; (iii) *Maths 'in school'*: Children doing practical maths at desk; Children learning about the planets; Girl playing with counting cubes; Boy doing maths on computer; Girl measuring path with tape measure; Children measuring box in DT. *Maths 'out of school'*: Boy with calendar**[7]; Toy shop*; Plant sale*; Boat hire*; Tickets to waxworks*; Taxi driver; Darts.

Table 3.8: Summary of instruments used to investigate the individuals

Instrument	Purpose of Research Tool
Research SATs (Appendices B-E)	Use traditional method of testing as starting point to uncover differential achievement
Post-SATs Questionnaires (Appendices H-K)	Probe pupils' shared experiences of testing
Interviews with children (Appendix L)	Probe pupils' differential learning experiences and sociocultural environment
Picture Task (Appendix M)	Identify children's recognition of abstract academic concpets insode and outside school
Sorting Activity (Appendix N)	Assess whether pupils can differentiate between 'in school' and 'out of school' mathematics and English tasks

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[6] Gary Beven reached national acclaim for his exact replica of Michaelango's (1512) Sistine Chapel painting in English Martyrs Church in West Sussex.

[7] * Denotes pictures taken from KS1 Mathematics SATs paper. ** denotes pictures from KS1 maths test.

3.7 Pilot study

Pilot studies are deemed to be imperative in ensuring that 'all necessary questions have been asked, all unnecessary questions have been omitted, and the layout and design is straightforward and consistent so that it is clear what the informant is being asked to do" (Hall & Hall, 1996; p.21). A pilot study was therefore undertaken whilst the process of negotiating access to the schools in the 'underachieving locale' took place. One school previously identified as 'mid-achieving' (as explained in section 3.5.2) voluntarily agreed to participate in the pilot study, to enable the researcher to practice classroom observations, pre-test the research instruments and interview the children to probe their learning, social and cultural experiences. This school identified by the Educational Advisor for Coalshire was selected because it was positioned in close proximity to the four participating schools so pupils' were familiar with teaching approaches and practices endorsed by Coalshire. Furthermore, children's social and cultural experiences were considered to be similar to those of the pupils participating in the main study. The pilot study was beneficial in providing the researcher with insight into daily practices, localised discourse and unfamiliar terminology which was subsequently used when revising the research instruments. For example, children in this locale refer to go-kart racing as 'Gambo racing'. Becoming familiar with the unfamiliar enabled the researcher to better understand life as a Coalshire insider before finalising questionnaire and interview questions.

This pilot study was essential as it provided opportunities for the researcher to identify unforeseen caveats in the research instruments and remedy any problems encountered during the pre-testing stage (Oppenheim, 1992). Children were asked to critically comment on the research instruments and offer suggestions for improvement. The pilot study was particularly useful as it revealed that children were not able to cope with the higher Level 3 English reading comprehension test (entitled 'Moon Power'); even the children identified as 'most able' by the class teacher disengaged during this test. The class teacher confirmed that he would not give the higher paper to his class and, consequently, this test was dismissed. Children coped very well with the remaining research tools and instruments that were retained for use in the main study. Additionally, the pilot study enabled the researcher to become *au fait* with methods of transcribing and analysing interview data and field notes. The procedural details for the pilot study are outlined in the next section.

3.8   Procedure

While this chapter has utilised the four planes of analysis to report sampling and methods of investigation, this framework is not required to report the procedure, which is instead presented in chronological order. Firstly, the underachieving locale (i.e. Coalshire) was identified. Its underachieving status was confirmed via additional analysis of documentary evidence. The two higher achieving (HA), two mid-achieving (MA) and two lower achieving (LA) schools were then identified with the help of a knowledgeable insider, i.e. the educational advisor for Coalshire (explained in section 3.5.2). Schools were contacted via letter and access was negotiated. Schools were reassured that the study had been approved by Cardiff University, that ethical issues had been fully considered and that the researcher was in receipt of a clear CRB (now DBS) check.

Meetings with head teachers then took place. Four of the schools agreed to participate (the two HA and two LA schools), one MA school agreed to host the researcher for the pilot study and one MA school declined to participate due to a forthcoming Estyn school inspection. All schools were given consent letters to send to parents but all Head Teachers declined to forward them on, stating that parents are happy for the school to act in *loco parentis* and decide on their behalf if children participate in educational research. Estyn school inspection reports, policies, class registers etc. were attained from each of the four schools during the initial visit to identify the final sample size and to help the researcher gain greater insight into the features of each school. The instruments were devised and approved by two academic supervisors.

The pilot study took place in the mid-achieving school, which was positioned within the vicinity of the two HA, and LA schools. As indicated in section 3.7, children in this school were required to undertake the research SATs tests and feedback on their experiences. Research instruments were modified in light of feedback from class teachers and pupils in the mid-achieving pilot school. Copies of all instruments were then made for each child across the four schools (*N*=213). Upon completion of the pilot study, the main study commenced, as outlined next.

This section provides a procedural overview of the investigation as more detailed procedural accounts are provided for each instrument in Chapters 5-9; this was deemed necessary when exploring multiple instruments within each socio-cultural plane of analysis. One week was spent in each of the eight classrooms undertaking naturalistic observations in order to learn

classroom practices, rituals and structures. Following this, the English research SATs tests were administered to Year 6 children (as described in section 3.6.4.1) by the class teachers unless the teacher opted out. Teachers' mediation of the class tests were closely observed and documented (refer to Chapter 5 for full details). Each child was given a reading booklet and an answer booklet. The children received introductory instructions for the English task. They were informed that they would receive help at the beginning of the test, but strictly told that they must work on their own for the test and that collaborative work was prohibited. The children were shown the contents of the reading booklet and the class teacher then read the contents page and the first page including the example question. The children were then instructed to follow the text as the teacher read it aloud. They were given time to write their answer and were then encouraged to share their practice responses with the class. The teacher confirmed the correct answer and instructed the class to read the story and answer the questions in the corresponding answer booklet. They were encouraged to refer to the story whenever they need to, to answer the questions. Children were given the English post-SATs questionnaire to complete after the English research SATs test (usually immediately following morning break-time).

The mathematics research SATs were then administered to Year 6 children (usually on the following day) and teachers' test administration practices were recorded. Children were instructed that they were allowed to answer one practice question with the teacher and then they must work alone. The teacher allowed the children to answer the practice question before the answer was discussed. As with the practice oral question, time was spent helping the children understand the format, what they should do, and where they should write their answers. They were informed that there would be a variety of types of question in the test, differing in format to the practice question. Each class teacher wrote the following words on the board and read them through with the whole class before the written part of the test began: *cupfuls, containers, centimetres, kilograms, kilometres, weigh, sequence, potatoes, triangular, circular, difference* and *borrowed,* to ensure that each child fully comprehended the language used in the test. The teacher asked them to read each question, work out the answer and then write it in the space provided in the booklet. Emphasis was given to the importance of carefully reading what was being asked, rather than simply guessing. The children were asked to put up their hand if they needed any help with reading the questions (although no assistance was given for reading numbers or symbols). The teacher encouraged the children to use the space in the answer booklet to work out any answers. They were told

that any mistakes should be crossed out and were encouraged to move onto the next question if they could not answer a particular question and go back to the difficult ones later on. The teacher highlighted that the children may not be able to complete all of the questions, and encouraged them to try as many as they could. The children were able to take as long as they need to finish all of the questions they could, and check their answers when they had finished. In accordance with the test instructions, class teachers instructed children that they had 45 minutes to complete the test, and if they could not do one of the questions, they should go on to the next one and come back to it later if they have time. The children were explicitly told to go back and check their work if they finished before the end of the time allowance. They were encouraged to write any workings out in the answer booklet as they may get a mark for it. Children then completed the mathematics post-SATs questionnaire. Upon completion of all Year 6 English and mathematics tests, the process was repeated for children in Year 2. Year 2 were told that they may receive help with reading the written section of the test but no assistance would be given in explaining mathematical concepts or helping them work out the answer. Each child was given a test booklet and the teacher ensured that they all had the resources they needed to complete the test. The children were given a brief introduction to the test and were informed that the practise questions would be read aloud to them and that the first question was an unassessed practice question, thus unlimited time was spent ensuring that the children understood this question. Each of the practise questions was read twice, with a short gap left in-between. The children were instructed to put up their hand if they needed to have the question read aloud. There was no time limit on the test, so the length of the test depended entirely on the speed of the class. The teacher emphasised that the children had to work out the answers on their own, without calling out and clarified that any mistakes had to be erased or crossed out. The KS1 post-SATs questionnaire was completed after each of the SATs tests.

Upon completion of the research SATs tests and post-SATs questionnaires, children were required to complete the picture task (refer to section 3.6.4.4) by identifying the two pictures across eight sets of three images that they considered to be most alike. Children ticked their two choices for each of the eight questions and wrote their justification for each choice. Children were then asked to complete the sorting activity (described in section 3.6.4.5). Children were given a set of 25 picture cards (comprising inside and outside school English and mathematics activities) and were asked to sort them into groups, however they wanted to.

No assistance was given to the children during this activity. When some children asked the how they should sort the cards, the researcher reiterated that the cards can be sorted however the child wants to as there is no right or wrong answer. Once the cards had been arranged into categories, the researcher made a note of the cards in each group (according to the number on the back of each card). Each child was then asked why the cards in each pile were grouped that way, and to explain what each pile was about. Generally, children just labelled the group according to an activity (i.e. 'school work', 'reading' or 'doing numbers'). Once the categories had been recorded, the cards were rearranged and the child was asked to sort the cards a second time. Pupils were told 'it's entirely up to you how you sort the cards' in response to questions about how to organise the categories. At the end of the second sort, each child was asked: (1) which sort was easiest to do and why, (2) how easy they found it to sort the cards into different groups, and (3) why they placed certain cards together. On completion of this task, children were instructed to keep their grouping/category ideas to themselves and not share their answers with any friends, as this would contaminate the data and affect the validity of the children's responses.

Within the same week, children were asked to complete the CSCE scale to identify their social and cultural experiences (outlined in section 3.6.1.3). Children were instructed that if they had never taken part in a particular activity, they must leave that row empty and not tick any of the boxes. Children completed this activity in small groups in a space outside of the classroom. The researcher ensured that every child understood the instructions before the children were allowed to commence the activity. Each of the 85 items was read out, to overcome any literacy difficulties and ensure that all children understood each item. Each child was encouraged to be as honest as possible in ticking the frequency of each activity and also to ask questions if at all uncertain.

Upon completion of these specially designed instruments, children were interviewed about their English and mathematics testing experiences and their broader social and cultural experiences (see section 3.6.4.3). The interviewer explained the interview process in child-friendly language. This process was then repeated for children in Year 2.

The final stage of data collection involved revisiting schools once the actual end-of-year English, mathematics and science national SATs had taken place. Teachers provided SATs data for all Year 6 children (and teacher assessment data for all Year 2 children). Copies of all

children's end-of-year school reports were also made and each of the eight class teachers were interviewed (refer to section 3.6.3.5). Teachers and children were thanked for their involvement in the study and contact details were left at each school should staff need to contact the researcher. Finally, management and analysis of all instruments took place; as outlined in the next section.

3.9   Data management and analysis

The management and analysis of the comprehensive data collected in this study is presented according to the four planes of analysis; from the locale to the individual. First, however, the following coding was used to convert written variables into numerical data on SPSS. Each of the pupils was given a unique identifier from 1-213 in order to be able to convert the data set back to its original format following various analyses. The following contextual variables were then identified: (i) schools were identified as: 1-North Higherbank, 2-Highbury Park, 3-Lowerbridge, 4-Fallowfield. The next variable in the data set was (ii) the achievement status of each school (1-HA, 2-LA); (iii) Year group (1-Year 6, 2-Year 2); (iv) Gender (1-Boy, 2-Girl); (v) Pupil status (1-Central, 2-Peripheral, 3-Remaining class). Following these nominal data, continuous data were input for the English and mathematics research and actual SATs tests, while ordinal data were input for the CSCE and rating scales (outlined in the next section).

3.9.1   Locale

Documentary evidence: As noted in section 3.6.1.1, the authenticity, credibility, representativeness and meaning of document sources were considered (Scott, 1990) prior to being excluded. It was not deemed necessary to employ rigorous content analysis, for example, when working within this plane of analysis as the focus of this study remains on the individuals within their embedded social and cultural environments. Creating a holistic account of wider locale issues, as depicted using a range of credible heterogeneous sources, was thus considered the priority.

Widely available national *SATs data* were analysed to determine whether empirical support could be found to confirm Coalshire's underachieving locale status. This involved reviewing SATs results in English, mathematics and science for 2000-2005 and core subject indicator (CSI) results for 2000-2013 to provide a longer-term view of Coalshire's underachieving

status. Simple analyses were required; namely identifying and documenting differences between locale (Coalshire) and national (Wales) percentages in the number of pupils achieving national benchmark figures in Key Stage 2 (i.e. Level 4) and Key Stage 1 (i.e. Level 2). These data are presented in Chapter 4 (section 4.2). The mean Coalshire and all-Wales numerical scores (in the form of continuous data) were input into SPSS and Paired Samples T-Test analysis was undertaken to confirm that significant differences exist across all subjects (English, mathematics, science and CSI) in both KS2 and KS1.

The *Children's Social and Cultural Experiences* (CSCE) scale scores were input into SPSS and the data set checked to ensure accuracy. There was no need to reverse any scores. The reliability of the CSCE scale was checked (using Analyze, Scale, Reliability Analysis options on SPSS) for the scale overall, revealing high reliability (Cronbach's α=.89). Principle Components Analysis (PCA) was performed to identify the variables accounting for most variability in the scale but as outlined in section 3.6, the absence of theoretical unity required the items to be organised thematically (refer to section 3.6.1.3 for full details), to include: place of interest, transport, family, sedentary activity, physical activity, other activity, school related learning, school enjoyment and wider experiences. The reliability was re-examined following these revisions (α=.78) in the same way. Mean scores were calculated and compared for each school (using Analyze, Descriptive Statistics, Frequencies, Mean options on SPSS) and for central and peripheral pupils separately. Mode scores were also calculated to produce histograms for each of the 85 items for each category for schools and for central and peripheral children. This analysis was necessary to depict a comprehensive account of children's social and cultural experiences at the individual plane of analysis (refer to Chapter 9) and, ultimately, to illustrate at the locale level, children share similar experiences living in this unique locale.

3.9.2 Institution

School data in the form of Estyn School Inspection reports and school SATs data attained from WAG documentation were analysed to depict the institutional culture (as presented in Chapter 4, section B) and performance of each of the four schools (documented in Chapter 9). A thorough reading and re-reading of the school inspection reports revealed four main themes and numerous sub-themes, which were recorded and applied using thematic analysis. These four broad areas were: (i) school catchment and composition (see section 4.15-4.17), (ii)

management procedures (including school mission statements and institutional resources – see section 4.18-4.20), (iii) links to the community (including parental support and movement across school boundaries, shown in sections 4.21-4.21), and (iv) the internal structure of the school (refer to section 4.22-4.25).

Additional analysis of visual displays is presented in the institutional plane of analysis. This was warranted because as *homo significans* (meaning makers), individuals interpret signs (in a largely unconscious way) by relating to familiar systems of conventions (Chandler, 2007). This study looked to social semiotics, which is not considered a pure theory but a form of enquiry (van Leeuwen, 2005) to provide a framework for analysing signs, texts and signifying practices within the institutions and classrooms participating in this investigation[8]. Within the institutional plane of analysis, the visual displays around the school were investigated as potential forms of communication and the messages identified referred to: (i) knowledge production, (ii) notions of boundary and (iii) materials (refer to Chapter 4, section 4.24).

School performance data for all schools for the actual SATs for the year of data collection and the following year's SATs results were analysed as documented in 3.9.1 but at the institutional rather than locale level; i.e. the percentage of pupils in each school achieving the benchmark level were compared with all-Wales averages (refer to section 9.1). Separate analysis comparing children's performance on the research SATs (explained in the next section) with their end-of-year actual SATs was undertaken using mean scores and differences were recorded. As explained in the previous section, paired samples t-test analyses were performed to identify school differences in English and mathematics and differences in the performance of central and peripheral children.

3.9.3 Classroom

Classroom observations: The eight week-long naturalistic and unstructured observations, which were not constrained by checklists and coding schemes (McKechnie, 2008), generated a wealth of qualitative data to be managed and analysed. Although classroom observations were primarily undertaken to enable the researcher to become familiar with the respective institutional and classroom practices, and were initially considered as an additional rather than

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[8] It is not within the scope of this thesis to discuss and differentiate between Saussurean semiology and Peircean semiotics. Instead, this study adopts the view of semiotics as an umbrella term to embrace the whole field (Chandler, 2007).

primary method of data collection, the data generated by the observations was invaluable. Thematic analysis was considered to be the most suitable analytical method as it not only permitted maximum flexibility in identifying categories from the voluminous observation notes (spanning 12 notebooks) but was useful for identifying common elements across settings. The codes identified were: *Class teachers' instructional approach*, including: (i) teaching experience; (ii) instructional approach; (iii) approach to prepare children for SATs testing; (iv) attitude to teaching; (v) evidence of praise; (vi) expectations communicated to pupils; (vii) pace of lessons; (viii) level of feedback provided; (ix) opportunities for outside learning, (x) evidence of outsiders being utilised to enhance pupils' learning experiences (xi) whether or not the class teacher resides in Coalshire which may reveal whether or not they understand and draw from the immediate social and cultural context within which children are situated. *Teacher-pupil interactions*, including: (i) evidence of respect, (ii) pupil behaviour, (iii) noise levels, (iv) humour, (v) relationships, and (vi) community created by the class teacher. *Management of classroom space and movement*, including: (i) seating - rows or groups, (ii) grouping - ability, friendship or other, (iii) positioning - whether influenced by pupils' behaviour (iv) classroom environment - features, (v) resources - pupils use of school or own resources, (vi) movement around the classroom, and (vii) atmosphere created by the class teacher (as presented in Chapter 4, section C).

Class data: The eclectic mix of class data were quantitative in nature, i.e. school attendance (%), free school meal entitlement (yes/no), earlier test results (%) etc., all of which were coded and input into SPSS and analysed in the individual plane of analysis (see section 3.9.4).

Research SATs tests: Although the research SATs tests were primarily used within the individual plane of analysis (see section 3.9.4 for full scoring and analytic details), classroom level analysis was also required. Here, SPSS was used to calculate the mean percentage (i.e. Analyze, Descriptive Statistics, Mean) of pupils in each Year 6 and Year 2 class whom achieved the expected benchmark in English and mathematics. Paired samples t-tests were conducted to identify pupils' differential performance across school subjects.

Teacher ratings: The numerical (ordinal) data produced by the 10-item teacher rating scale used by teachers to rate the 64 central and peripheral children in this study were input into SPSS. The 5-item Likert scale was scored in descending order: 5 for most involved to 1 for least involved. All items were positively worded so reversal of items was not required.

Participants' status and gender was noted and Pearson's Chi-Square Test of Independence was computed (i.e. Analyze, Descriptive Statistics, Crosstabs) to determine whether teachers associate gender (boy=1, girl=2) with central (=1) and peripheral (=2) learners. Mode scores (out of 5) were also calculated for each of the 10 items for central children and peripheral children to produce comparative histograms. Independent samples t-tests were performed to compare the means of each group. This process was repeated to identify year group differences, and higher and lower achieving school differences. The qualitative data produced by teachers' written responses justifying their pupil nominations and teachers' written accounts of each group of learners was subjected to thematic analysis. The dominant themes for teachers' explanations of children's involvement were based on: (i) individual, (ii) context and (iii) pedagogy, which were, classified as either positive or negative comments. Thematic analysis of teachers' predicted future success identified 5 main themes: (academic factors, employment, personal factors, pedagogy and neutral – refer to section 7.3.3).

Teacher reports: Thematic analysis was needed to analyse the vast quantity of data produced by the 46 focus children's end-of-year school reports. Reading and re-reading the reports facilitated the generation of initial codes, which were collated into potential themes (as discussed in section 7.6). These themes included: (i) ability, (ii) motivation, (iii) social constructs, and (iv) personal constructs. Tables were used to compare the differences for central and peripheral children.

Teacher interviews: Thematic analysis (TA) was, again, employed to analyse the eight teacher interviews. It is evident that thematic analysis is the preferred method of analysing and interpreting the qualitative data in this thesis. Although TA is critiqued for having less kudos than grounded theory, IPA or discourse analysis (Braun & Clark, 2006 cited in Robson, 2011) and for limiting data to description over interpretation, thematic analysis was employed due to its flexibility across different data sources, its ability to provide a means of summarising large volumes of qualitative data (which was essential in this complex study) and because TA produces data that would be accessible to the schools in the final summary report (Robson, 2011). Moreover, the researcher is confident in utilising this accessible approach. Five themes emerged from the teacher interviews: (i) inside child characteristics, (ii) parental support, (iii) social and cultural experiences, (iv) curriculum and (v) sense of belonging.

Fieldnotes: Due to the vast volume of data generated by the wide range of other methods, fieldnotes were not systematically analysed using recognised analytical frameworks. Instead, fieldnotes were read and re-read and extracts of *ad hoc* conversations were selected to supplement data presented from other methods.

3.9.4 Individual

Research SATs tests: The research SATs tests were marked according to the accompanying QCA 2001 marking criteria contained in the test packs. For the English tests, one mark was awarded for all correct short answers (word or phrase), up to 2 marks were given for correct several line answers, and 3 marks were awarded for answers whereby the child had given a thorough and detailed explanation of his or her opinion. The maximum score for the KS2 English test was 50 while the KS1 maximum score was 27. Incorrect or unacceptable answers were given a mark of 0 and no half marks were awarded. The QCA English and mathematics Test Mark Scheme was referred to when assessing the content of each answer, and children were not penalised for poor quality of writing, expression or grammatical construction in either test. QCA guidance was also followed to identify children's Levels for English and mathematics. A Level 4 (i.e. the expected benchmark) was awarded for English scores of 18-31 and Level 5 for scores of 32-50 on this assessment. Scores ranging from 11-17 were awarded a Level 3. Level N was awarded for English scores lower than this. The maximum score for the KS2 mathematics test was 40. To achieve a Level 4 in this maths test, pupils need to answer 18-30 questions correctly, or 31-40 to gain a Level 5. Scores from 7-17 received a Level 3, a score of 6 was awarded a Level 2 and scores below this were awarded Level 1. Once the Year 2 English test papers had been marked, each child's score was Levelled, in accordance with the QCA 2000 Key Stage 1 guidelines, which are as follows: Level 2 not achieved 0 – 6; Level 2C achieved 7-17, Level 2B achieved 18-22 and Level 2A achieved 23-27. [QCA guidelines advocate that children who score very highly on this test and achieve well in the writing task and spelling test are usually considered for assessment at Level 3, although this was not adhered to in this study]. The KS1 mathematics test was marked according to the QCA 2000 Mathematics Test mark scheme. The maximum score for the KS1 mathematics test was 36. Numeric answers were accepted in word or number form unless otherwise stated. Each child's score was calculated and a Level grade allocated accordingly. For example, No level (0-4); Level 1 (5-7); Level 2C (8-13); Level 2B (14-18); Level 2A (19-24); or Level 3 (25-36). The maximum KS1 mathematics score was 36 marks.

Once marked, test scores were input into SPSS and analysed using t-tests to identify differences in children's performance in the English and mathematics tests (see Chapter 5, section 5.5) and HA and LA school differences were examined using mixed between-within subjects ANOVA. The percentage of pupils achieving each Level in English and mathematics was also calculated for central and peripheral children (refer to Chapter 8, section 8.2). Paired samples t-tests were also performed as the individual level (for central and peripheral children) and multivariate analyses (MANOVA) computed to identify HA and LA school differences.

Questionnaires: All closed questions on the English and mathematics questionnaires were coded as nominal data (e.g. 1-Yes, 2-No). Questions that required children to produce continuous data (i.e. estimated scores on tests or report number of books they own) were input into SPSS as reported. Questions with multiple responses were also coded in nominal form, e.g. genres of books (1-fiction, 2-non-fiction, 3-science fiction etc.). Descriptive statistics were analysed to identify pupils' responses to the questions as percentages. Chi-square analysis was employed to identify differences in the responses of children identified as 'achievers' (=1) (i.e. those who secured the expected benchmark in the research SATs tests) and 'underachievers' (=2) (i.e. those whom failed to reach the benchmark level). Chi-square analyses were repeated to identify HA (=1) and LA (=2) school differences in children's responses.

Picture task: For the first phase of analysis, children's responses to the eight sets of three pictures were coded as: 1-English, 2-mathematics or 0-neither (if the child failed to identify academic concepts). Children's written justifications were coded into numeric form to identify percentages of pupils recognising similar categories. The next phase involved re-analysing children's responses and awarding 1 if the child identified academic concepts correctly, i.e. questions 2, 5 and 6 were identified as English questions while questions 1, 2 and 4 were mathematics questions. If children identified the correct subject *and* identified the correct 2 (out of 3) cards, they were awarded 1. If they failed to meet these criteria, a score of 0 was awarded. Children who scored 1 were identified as having recognised abstract academic concepts. The percentage of children across schools who recognised abstract concepts were computed using descriptive statistical analysis. This was repeated to identify central and peripheral children's recognition of academic concepts.

Sorting activity: The groups identified by children in both sorts were coded into nominal data and input into SPSS. The total number of sorts was calculated for each of the 213 children and analysed according to school year group and status (i.e. central or peripheral). Hierarchical cluster analysis was undertaken (performed separately for each sort) for each classroom in Year 6 and Year 2 and then for central and peripheral children, with a tree cut off point of 5 (refer to section 8.4.2 for details). The sorting group names provided by children were then coded according to the following frame: 1-abstract academic concept (akin to Vygotsky's scientific concept), 2-surface features (including use of objects or unrelated activities) and 3-other, including attempts at using narrative to link otherwise separate activities. Children's verbal justifications were analysed thematically and illustrative extracts were presented in tabular form to support the English and mathematics clusters identified in the dendograms. Inferential statistical analysis, in the form of one-way between groups MANOVA was performed to identify classroom differences and then repeated to identify differences in central and peripheral children's ability to recognise abstract academic concepts. T-tests were then conducted to identify HA and LA school differences.

Interviews: The 64 children's interviews were arduously transcribed and significant time was taken reading, re-reading and re-reading again the 120,000 words of data produced by this method. Assistive technology (NUD*IST) was initially applied, however, the researcher resorted back to manual analysis in order to *know* the data better. Thematic analysis (as described in section 3.9.3) was also employed for children's interviews. The prominent themes focused on children's responses to the tests (i.e. enjoyment of the testing material, perceived effort expended, belief in own ability, perceived use of English and mathematics in future, experiences of outside school English and mathematics, views on learning, school, teachers and tests, academic confidence and future ambitions (as documented in Chapter 8, section 8.1).

3.10 Ethical considerations when researching children

Ethical considerations are a fundamental component of this field research as they permeate every aspect of the study. Educational and psychological ethical guidelines and codes of conduct (BERA, 1992, 2004; BPS, 1996, 2009) were adhered to throughout this study in order to protect the wellbeing of those involved. Key ethical considerations relating to: potential risks to participants and working with vulnerable populations; voluntary informed consent;

confidentiality and anonymity issues related to privacy; participants' right to withdraw; deception; the giving of advice; and debriefing were carefully considered from the outset of the study (as outlined below) and were regularly reviewed during the period of data collection and write-up to ensure that the researcher's responsibilities to the participants, research sponsors and educational community were upheld (BERA, 2004).

Risks associated with researching vulnerable populations: As this study involved working closely with school pupils, the researcher was aware that in addition to the normal difficulties experienced during fieldwork, there may be extra problems when working with children (Powney & Watts, 1987). Although there is limited guidance from professional bodies regarding ethical considerations for children and adolescents, this study has striven to maintain high ethical standards to "ensure that the interests of participants in research are safeguarded" (BPS, 1996; p.1). Particular attention was paid to the cautionary advice from Lindsay (2000; p.3) that "we cannot assume that research subjects simply co-operate with the researcher for a short period of their lives and then move on unchanged". In order to minimise such risks, the researcher established trust and rapport without establishing firm relationships with the children, thereby minimising the effect of the researcher's departure from the classroom after a lengthy immersion in the field. Some children seemed genuinely disappointed when the research process reached completion.

As children are considered a vulnerable population (BPS, 2009), the researcher ensured that protocols were in place to protect pupils from potential risks to their psychological wellbeing and any risk of distress. For example, the research instruments used in this study were designed, piloted and found to be developmentally appropriate materials that children enjoyed which did not place unduly high cognitive demands upon them, thus reducing the potential risk of stress or anxiety caused by not being able to complete the tasks. The researcher was, however, aware from the start that some children may feel that their responses would be judged or that children may worry if incorrect responses were given either in the written tasks or oral interviews. To counter such concerns, the researcher ensured that all children were clearly told about the purpose of each task, who would see the child's work (mainly the researcher and supervision team) and children were given reassurance that no individual would be identified in any way. The researcher also demonstrated sensitivity when undertaking research activities that required children to talk about their outside school worlds, acknowledging that this might be challenging for some children whom experience difficult life

situations. The dignity and autonomy of all participants (including children, teachers and wider school staff) were respected throughout the research process and all participants understood their right to opt out of tasks as well as their right to withdraw from the study; this was explained before participants were asked to voluntarily consent to take part.

Voluntary informed consent: Informed consent is a key ethical consideration as "subjects of research should be allowed to agree or refuse to participate in the light of comprehensive information concerning the nature and purpose of the research" (Homan, 1991, p.69). As this research involved testing, observing and interviewing primary children (aged 7-11 years), it was imperative that the children's privacy and welfare were continually safeguarded. Those consenting to the children's participation in the study were therefore *fully* informed of *all* pertinent aspects of this study, including: the nature and purpose of the research; the role played by participants; the procedures involved; any anticipated risks and benefits; the voluntary nature of participation; the children's right to refuse to answer certain questions and withdraw at any time; the procedures used to protect confidentiality and anonymity; in addition to any plans for dissemination (Homan, 1991; Bailey, 1996; Arksey & Knight, 1999; and de Laine, 2000). It was deemed essential that the Head Teacher and class teachers acting in *loco parentis* when consenting to participation fully understood this information (Cohen, Manion and Morrison, 2000). Although this study focused on children under 16 years of age, Head Teachers explained that the written consent of each parent and guardian was not necessary, as the school was able to act in *loco parentis* under the existing parental agreements in place at each school.

Although the children's involvement in this research was initially mediated by the institutional gatekeepers, children themselves were also asked to consnet to their participation in all aspects of the study as the researcher beleived that children deserve the right to opt in and out of research. Verbal assent was renewed for each activity as the researcher does not view informed consent as a one-off agreement but as a process requiring renewed negotiation, particularly when working in the field for an extended period of time. Renewed consent was achieved by explaining "as fully as possible, and in terms meaningful to…[children] what the research is about" (BSA, 1994; p.2). For example, age-appropriate, child-friendly language was used that was consistent with the children's understanding, which permitted children the freedom of choice to participate. Ultimately, this ensured that the child's rights were not

diminished by the child's age or the power and status differentials between children and adults.

Right to withdraw: In accordance with BERA (2004) and BPS (2001) guidelines, the researcher recognised the rights of participants to withdraw from the study at any time. Both children and teachers were advised of this right at the start of the study when providing voluntary informed consent. Participants were also advised of their rights to opt out of tasks at any time without the need to provide a reason. The researcher was conscious of the power differential between herself and child participants and was mindful not to use language that could be interpreted as coercion. Participants were further reminded of their right to opt out of the study during the final debrief which preceded the researcher's exit from the field. Participants were also informed that they could remove personal data before the end of term by notifying their class teacher, all of whom agreed to contact the researcher in such eventuality. Although participants were reminded of their right to withdraw on an ongoing basis, none chose to do so.

Privacy and confidentiality: The importance of maintaining confidentiality to protect the privacy of participants was well understood by the researcher as 'an obvious way in which participants can be harmed is by failure to honour promises of confidentiality' (de Vaus, 2001; p.87). In accordance with the Data Protection Act 1998, the researcher was aware that all data obtained from and about participants needed to be kept confidential unless otherwise agreed in advance (BPS, 2009). Maintaining confidentiality proved to be an ongoing challenge when trying to delineate the unique nature of this underachieving locale whilst seeking to maintain privacy at the locale, institutional and individual level. The fine balance between providing an accurate socio-cultural-historical contextual account (as detailed in Chapter 4, Part A) without including information that clearly identified the locale and participating schools was, at times, difficult and subsequently addressed within academic supervision meetings. Head Teachers and class teachers were made aware from the start that the focus of the study was on children's motivation and underachievement within an underachieving locale and all consented to potentially identifiable information being included in the final thesis, with the reassurance that every effort would be made to protect the identity of the locale and participating schools (all Head Teachers shared Estyn and other school documentation to help contextualise this unique locale). The researcher did, however, acknowledge that there is always the potential for readers to look up the ONS, Estyn and Census sources in a bid to locate the locale. Steps were

therefore taken to omit any identifying information in the references cited, e.g. Estyn School Reports and news web sources used have been made more general so that the reader is taken to the home page rather than the specific page for the locale or school. This was deemed necessary to prevent the participating schools and individuals being identified.

Limits of confidentiality: Although the researcher strived to maintain confidentiality at all times, all participants were nonetheless made aware of the limits of confidentiality, i.e. that the researcher would need to inform the class teacher should any child disclose that they or other children are at risk of harm. This was explained in developmentally appropriate langue to ensure that all children were aware of the limits of confidentiality. In anticipation of any potential disclosures, discussions took place with Head Teachers at the start of the study to establish the safeguarding procedures and protocols for each school in relation to potential confidentiality dilemmas. All Head Teachers provided school policy documents on Safeguarding and Health and Safety etc. to read prior to starting data collection so that the researcher was clear from the outset what to do should any confidentiality issues arise, which, thankfully, they did not.

Anonymity: Developmentally appropriate language was also employed to inform participants that they would remain anonymous in the final report, which would predominantly contain group-level data. Participants were told that where individual data excerpts are reported, a pseudonym would be used at individual, institutional and locale level to protect the identities of those involved in the study. The researcher identified pseudonyms for the the locale (i.e. Coalshire), for school staff (based on characteristics of the teacher's personality and to identify their school, e.g. Mr Humour at Highbury Park School), and for children (to reflect their participant status as a central or peripheral learner and their school, e.g. Paddy Hunter was a peripheral learner at HP – refer to p.xxi for a full list of the pseudonyms used in this study). These pseudonyms were used when writing fieldnotes and when analysing qualitative data while numeric identifiers were used for each participant to aid quantitative data analysis. The researcher also permitted children to choose their own unique pseudonym, which was used when children identified themselves during the child interviews and when writing their names on research instruments. A list documenting children's actual names, numeric identifier and preferred pseudonyms was kept separately from the instruemtns to ensure that chidlren could not be identified from their associated data. This proved to be a critically wise decision when the researcher expereinced a potential ethical dilemma and significant setback during the

period of data collection when a large volume of interview data and written tests were stolen from her car when stopping *en route* home from Coalshire (as outlined in section 3.13.2 on p.111). Although valuable data were lost, and the researcher learned a valuable lesson regarding the importnace of keeping data safe in accordance with the Data Protection Act 1998, the researcher was reassured that the identity of the children, teachers, schools and locale were at least protected as pseudonyms had been used and there was no identifying information included in the bags of stolen data. This experience prompted the researcher to seriously question other potential ethical dilemmas in relation to confidentiality and protecting the privacy of participants in addition to wider ways of keeping data safe and secure. For example, following this event, the researcher started saving data and thesis documents on multiple password protected storage devices and ensured that paper docuemtns containing participants' persoanl data (e.g. copies of class registers and list of names and associated pseudonyms) were kept in separate locked storage.

Deception: There was no need for any deception or subtefuge in this study. The research aims were made clear from the initial discussions with gatekeeps through to the end of study.

Giving advice: In adhering to BPS (2001) ethical guidance, the researcher was aware that she was not in a position to give educational psychology advice as she was not qualified to do so. Incidentally, the experienced teachers in this study did not seek such advice from the researcher. There were, however, occasions when school staff wanted to further their own knowledge about motivation and underachievement and the researcher was able to signpost relevant and appropriate literature. Should any ethical dilemmas have arisen in relation to this issue, the protocol in place was to discuss the issue with the researcher's academic supervisor.

Debriefing: At the end of the study, the researcher explained to the pupils in each class that the study was complete and that the researcher would not be returning to their school. The broad aims of the study were re-visited using child-friendly language and the children and teachers were sincerely thanked for their valuable contributions in helping the researcher with her work. As previously outlined, the participants were reminded of their right to retrospectively withdraw from the study (by contacting the researcher via the class or Head Teacher). BERA and BPS ethical codes of practice and guidelines were referred to and observed during the thesis write-up phase to ensure that the wellbeing of participants continued to be protected.

3.11 Field relations

It was anticipated that Head Teachers may be reluctant to consent to the research being undertaken in their school if they perceived the researcher to be assessing the quality of teaching within the school, making comparisons with neighbouring schools, or identifying the schools in public reports and documents. In order to abate these concerns, schools were assured that the study was predominantly concerned with the motivation of the individual children selected for participation. Furthermore, the researcher guaranteed that pseudonyms would be used to ensure that the school, children and teachers could not be identified in the research. The schools were given an outline of the aims of the study and the intended research practices and were offered a summary of the research findings on completion of the data analysis. Over the 18 month period of data collection, the researcher built good relationships with the eight class teachers. All teachers were supportive of the study and readily gave their time to discuss observations, answer questions and enquire how the study was proceeding. Some teachers called on help with teaching activities, some head teachers asked the researcher to work as a supply teacher during times of need and others included the researcher in invitations to school trips. Although unintentional, the positive relationships aided the experience and quality of data collection as teachers freely communicated their views, concerns and often-humorous observations that helped contextualise observations made within the classroom.

Field relations with children were equally as positive. As a qualified primary school teacher with over a decade of experience of working with children in a variety of voluntary capacities at the time of data collection, it wasn't difficult to engage with children at their level and establish a good rapport with the children participating in this study. Having reflected on fieldnotes taken during the early weeks of classroom observations, it was surprising how quickly children adapted to the continued presence of an unknown adult in the classroom and accepted the researcher as a member of the learning community. While some children clearly viewed the researcher in a teacher capacity; often referring to me as 'Miss' and asking for help with academic tasks, it became evident part way through the period of data collection that other children viewed me in a different capacity. For example, during one morning break-time assisting with yard duty at Lowerbridge Primary School, Year 6 children were openly sharing that they had tried alcohol and cigarettes and asked if I had. The adult oriented response must have prompted these children to question my age and they were incredulous when my age was

disclosed, as they had believed I was a teenager from the local comprehensive school! This experience prompted me to reconsider how I had been introduced to children in each of the schools and to ensure that all children were clear about my role within the classroom, to protect children from unintentionally over-disclosing information that they otherwise might not had they been clearer about the researcher's role. Overall, children responded surprisingly well to the volume of research instruments they encountered; none of the children refused to participate and children occasionally asked when they could do more tasks. On reflection, this was perhaps because they were used to undertaking scholastic assessments in class and the additional research instruments were novel and perhaps intriguing to them. Some children openly said they were pleased for the opportunity to leave the 'boring classroom work' to participate in sorting and picture activities in another school space.

3.12   Reflexive researcher

When undertaking research using a socio-cultural framework, it is necessary to consider not only how children are shaped by the social and cultural contexts they are situated in, but also how social and cultural influences, inlcuding that of the researcher, impact on the research process. In attempting to be a reflexive researcher, it is necessary to consider that all knowledge is a fusion of subject and object (Kincheloe, 1991). Within this study, the researcher recognised that she was not a neutral actor engaged in a specific scientific enterprise (Frost & Stablein, 1992) and, instead, acknowledged that she as the researcher and the researched simultaneously influenced one another (Berg & Smith, 1988). While reflexivity is not a substitute for utilising theory (Holloway & Jefferson, 2000), awareness of the self in this study was considered as a prerequisit for more effective research methods, increasing understanding of how social forces and research convictions shape definitions of knowledge and inquiry. In particular, it was important to be cognisant of the potential impact of status differentials between the researcher and the children participating in the study. The researcher considered the importance of dress, i.e. dressing respectfully in accordance with how other non-teaching adults dressed in schools, without ameliorating the power imbalance between the adult resercher and child participants, which may have happened had overly smart 'power dressing' taken place. While there were no physical differences in terms of the researcher's ethnicity (almost all participants were Caucasian) or gender (most children were taught by female teachers), the researcher had to consider that her middle-class expereinces of private schooling may have impacted on the research process, particulalry during the

classroom observations in phase one. Whilst being reflexive, and attempting to remain as neutral as possible, the researcher scrutinised fieldnotes and observation notes to ensure that subjective assumptions were avoided and objective material was recorded (despite this being challenging at times). Also, despite having lived in Wales for many years, the researcher has maintained a clear Southern English accent which differntiates her from the local Welsh dialect used by the participants in Coalshire. While accents cannot and should not be amended, the impact of this was considered and attempts were made to try and view and discuss children's worlds from their perspective, rather than that of the researcher. For example, local phrasing for key words was used, e.g. in referring to a child's mother as 'Mam' and grandfather as 'Grancha'. Although terminology like this was initally foreign to the researcher, it was learnt during the pilot study and used throughout the research process; this was considered important in conveying the message to children that the terminology they use to describe the world as they see it mattered. Final reflections on the research process question the over-ambitiousness of this thesis in terms of the volume of data collected. Although the range of instruments have enhanced the quality of data collected within each plane of anlaysis, it has, inevitably, impacted on the timescale of the research process.

3.13 Research timeline

This complex socio-cultural study required considerable thought and planning during its initial preparatory stage. A broad overview of the research process is provided next.

3.13.1 Year 1 - Preparatory stage

During the first year of PhD candidature, when the Pg.Dip Research Methods qualification was completed, the following steps were taken:

(i) Attempts were made to *gather school performance data* from Estyn publications to identify the higher achieving (HA) and lower achieving (LA) schools for the sample plane two (as described in section 3.5.2);

(ii) Following difficulties experienced in step (i), the Educational Advisor for Coalshire was contacted to help identify the HA and LA schools and following these meetings, North Higherbank, Highbury Park, Lowerbridge and Fallowfield *schools were identified for the research sample*;

(iii) The *designing of the research instruments* took place during the first year of study. QCA was contacted and the SATs tests were chosen. The post-SATs English and mathematics questionnaires were constructed; an artist was contacted to

create the images for the sorting activity and picture task (based on the content of the English and mathematics tests) and the children's CSCE scale was devised.

(iv) Having successfully identified the HA and LA schools in step (ii), n*egotiating access to schools* took place towards the end of the first year of study.

3.13.2 *Year 2 - Data collection stage*

(v) Once the research instruments had been devised, access to the mid-achieving school (identified in section 3.5.2) not required for participation in the main study was negotiated for the *pilot study to take place*. This involved two weeks of classroom observations, completion of the English and mathematics research SATs tests and all remaining instruments. Feedback from the pilot study informed changes made to the research instruments.

(vi) *Classroom observations* in the Year 6 classes commenced during the autumn term of 2003. One week was spent in each of the four schools over a one-month period. Detailed naturalistic observation notes were taken in each classroom during this time. Copies of school policies, class registers and additional fieldnotes were recorded.

(vii) Year 6 *teacher nominations of central and peripheral children* took place during the observation period in each classroom.

(viii) *Classroom observations* in the Year 2 classes followed the period of Year 6 observations. Again, one week was spent in each of the four Year 2 classrooms. Policies, school information and fieldnotes were also recorded.

(ix) Year 2 *teacher nominations of central and peripheral children* took place during the observation period in each classroom.

(x) *Research SATs testing* in Year 6; the English tests were completed first, followed immediately by the post-English SATs questionnaire. The mathematics SATs test and post-SATs questionnaire were completed the following day. All Year 6 English and mathematics research SATs tests were completed within 10 days of one another.

(xi) *Research SATs testing* in Year 2; the English tests were also completed first, followed by the post-English SATs questionnaire. The mathematics SATs test and post SATs questionnaire were completed the same week.

(xii) *Year 6 data collection – remaining instruments*: all Year 6 children (N=108) completed the picture task, sorting activity and CSCE scale were completed over a two week period.

(xiii) *Year 2 data collection – remaining instruments*: all Year 2 children (*N*=105) completed the picture task, sorting activity and CSCE scale over a fortnight period.

(xiv) *Interviews with 32 Year 6 children* – Children were interviewed about their experiences and perceptions of school, learning, English, mathematics and testing, in addition to their broader social and cultural experiences, over a two week period.

(xv) *Interviews with 32 Year 2 children* – Individual semi-structured interviews using the same interview schedule outlined in (xii) took place with Year 2 children over a two week period.

(xvi) Following the unfortunate incident of data being stolen from the researcher's car, schools had to be revisited and data recollected from year 6 children during the summer term, namely interviews.

(xvii) At the end of the academic year, actual Year 6 SATs test data were collected from each school and Year 2 Teacher Assessment data were gathered for KS1 children.

(xviii) End-of-year school reports were photocopied for all focus children (*N*=64). Any missing data were followed up to complete the data set.

(xix) Teacher interviews took place at the very end of the academic year. Teachers were asked to reflect on the focus children's experiences over the academic year and consider progress made by children from the period of the research SATs to the final end-of-year actual SATs.

3.13.3 *Year 3 – Coding, analysis and follow up*

(xx) *Transcription of interview data* – over 120,000 words of interview data were transcribed in the autumn term of 2004.

(xxi) *Coding of data* for Year 6 and Year 2 children's (*N*=213) responses to the picture task and sorting activity took place during the spring term of 2004.

(xxi) *Inputting numerical data onto SPSS* – Children's responses to the research SATs, post-SATs questionnaire and CSCE scale were coded and input into SPSS during the 2004 academic school year.

(xxii) *Schools were revisited to recapture Year 2 data stolen in 2003*. The time constraints of the previous academic year prevented data being recaptured from Year 2 children as Year 6 children had to be prioritised as they were leaving primary school at the end of the previous academic year. Year 2 focus children were re-interviewed in 2004.

(xxiii) Year 2 interviews were transcribed and analysed.

3.13.4 Year 4 onwards – Write-up

(xxiv) Extensive *reviewing of the literature*, focused on critiquing traditional cognitive models of motivation.

(xxv) *Methodology* write-up.

(xxvi) *Extensive writing and re-writing of empirical chapters* – dealing with the, at times, overwhelming complexity and volume of data (in conjunction with various health issues) took considerable time. Empirical chapters were re-written and revised numerous times.

3.14 Summary

This chapter has documented the complex multilayered design of this study and described the development of the research instruments and analytic tools used. Attention has also been paid to ethical issues; a fundamental concern in any research study involving children. It was important to highlight the research instruments utilised within each plane of analysis; the locale, institution, classroom as the remainder of this thesis is framed by these planes. Having outlined the methodological framework and analytical decisions made in designing this complex study, attention now turns to the empirical chapters. The following chapters afford insight into the social and cultural context in which Coalshire learners are embedded (Chapter 4) at the level of the locale, institutions and classrooms. Chapter 5 outlines the ways in which teachers mediate academic assessments while Chapter 6 delineates how individual children respond to school tests. Teachers' representations of central and peripheral learners in their classes is explored in Chapter 7 while the socio-cognitive resources that central and peripheral learner's use in academic contexts is presented in Chapter 8. The final chapter presents longitudinal data (Chapter 9) to complete the socio-cultural account of this underachieving locale.

CHAPTER 4   RESEARCH SETTING: COALSHIRE

4.0   Introduction - Plane of analysis: Locale

This chapter will firstly explore the plane of analysis at the level of the locale. It will attempt to map some of the underachieving features of Coalshire by addressing a range of geographical, historical, social and cultural contexts in which learning takes place (Wertsch, 1991). In order to depict a clear sense of the issues that contribute towards Coalshire's uniqueness as a locale, data have been drawn from national and regional Welsh Assembly Government (WAG) documentation, ESTYN inspection reports and empirical research conducted in Coalshire in recent years. This thesis will argue that achievement measures from standardised tests should be firmly placed in context, particularly with regard to low achievement. The perennial poor educational performance of specific locales can only be fully understood when attention is paid to broader, interconnected, problems of deprivation, economic decline, unemployment, housing and health issues which may contribute to low achievement for particular populations. It is widely acknowledged that place, in terms of social, economic and ecological situatedness is important (Swayze, 2009) and is interrelated with educational outcomes Lupton (2004). The geographical and remoteness of Coalshire's ex-mining community, therefore, needs to be acknowledged.

4.1   Geographical features

In terms of geographical features, Coalshire is a small unitary authority situated along the divide between industrial and rural regions in Wales. Topographically, Coalshire boasts 109 square kilometres of hill and moorland scenery across a number of deeply incised and roughly parallel valleys intersected by southerly flowing rivers. The population is chiefly dispersed within a smaller number of towns built along the contours of each valley. These towns are somewhat constrained by the existing built environment. With a population of approximately 70,000 inhabitants (49% male, 51% female) residing within 650 square kilometres, Coalshire has one of the smallest resident populations of the 22 unitary authorities in Wales (Census, 2011). This locale has a populace five times the number of citizens per hectare compared with the Welsh national average (Census, 2001, 2011). According to the Office for National Statistics (ONS, 2006), many of the visible industrial scars that have historically dominated the region are disappearing due to land reclamation schemes.

However, the corollary of heavy industrialisation and more recent regeneration schemes can be observed in a landscape predominantly devoid of trees. Understanding place is central to full appreciation of the interconnected problems of low achievement in specific locales.

4.2   Empirical support for Coalshire's 'underachieving locale' status

This research setting was specifically selected as longitudinal SATs data (NAfW, 2003) demonstrate that Coalshire consistently maintains the lowest position on educational league tables for all curriculum assessments, including separate English, mathematics and science results and for core subject indicator [CSI] results. CSI measures identify pupils achieving expected benchmarks, i.e. Level 4 or above in KS2 and Level 2 or above in KS1 in the three core subjects: English, maths and science. Separate and CSI data support Coalshire's 'underachieving locale' status. The first three tables (Tables 4.1-4.3 below) demonstrate comparative pupil achievement in English, maths and science for Coalshire and all-Wales results between 2000 and 2005 to provide a broader context of differential achievement in the years preceding and following data collection. KS1 results were based on Teacher Assessments (TA) from 2001, following the abolition of KS1 SATs testing in Wales in 2000. KS2 SATs assessments (TT) were used until 2004 replaced thereafter by teacher assessments.

Table 4.1: Percentage of KS1 & KS2 Pupils Achieving Expected English Target Level

Year	*KS1 Wales (TA)*	*KS1 Coalshire (TA)*	*Difference*	*KS2 Wales (TT)*	*KS2 Coalshire (TT)*	*Difference*
2000	82*	78*	-4	74	63	-11
2001	83	79	-4	78	70	-8
2002	83	78	-5	80	73	-7
2003	82	72	-10	79	69	-10
2004	83	73	-10	79	70	-9
2005	84	76	-8	79**	73**	-6

*SATs tests (TT) assessments were used in 2000 for KS1 before teacher assessments (TA) became mandatory
**Teacher assessments (TA) replaced KS2 SATs assessments in 2005.

The Government set target for pupils to achieve Level 4 or above in English for 2003, the first year of data collection, was 76%. Only 69% of KS2 pupils in Coalshire achieved this level; 7% less than government targets and 10% less than the Welsh average. KS1 children continue to perform less well than the Welsh average with a 10% difference in 2003 and 2004.

Table 4.2: Percentage of KS1 & KS2 Pupils Achieving Expected Maths Target Level

Year	KS1 Wales (TA)	KS1 Coalshire (TA)	Difference	KS2 Wales (TT)	KS2 Coalshire (TT)	Difference
2000	88*	84*	-4	69	58	-11
2001	89*	85*	-4	74	66	-8
2002	88	83	-5	73	66	-7
2003	87	79	-8	75	65	-10
2004	87	79	-8	78	69	-9
2005	87	79	-8	79*	73*	-6

*SATs tests (TT) assessments were used in 2000 for KS1 before teacher assessments (TA) became mandatory
**Teacher assessments (TA) replaced KS2 SATs assessments in 2005.

The KS2 Welsh average maths results for 2003 meet government set targets of 75%; Coalshire falls below this target with a 10% difference. The gap between KS1 pupils in Coalshire and the Welsh average steadily increases each year.

Table 4.3: Percentage of KS1 & KS2 Pupils Achieving Expected Science Target Level

Year	KS1 Wales (TA)	KS1 Coalshire (TA)	Difference	KS2 Wales (TT)	KS2 Coalshire (TT)	Difference
2000	87	86	-1	81	71	-10
2001	88	85	-3	82	74	-8
2002	88	84	-4	86	82	-4
2003	88	84	-4	88	81	-7
2004	89	82	-7	89	86	-3
2005	89	84	-5	86*	81*	-5

*SATs tests (TT) assessments were used in 2000 for KS1 before teacher assessments (TA) became mandatory
**Teacher assessments (TA) replaced KS2 SATs assessments in 2005.

The expected target for KS2 science for 2003 was 83%. On average, pupils across Wales exceeded this objective. However, pupils in Coalshire narrowly missed it with 81% of pupils gaining a Level 4 or above in the science SATs. The difference between the Wales average and KS1 pupils in Coalshire appears to steadily increase from 2000 onwards.

These tables highlight the incongruent results for this locale when compared with national averages; pupils in Coalshire consistently fall below the national average in English, mathematics and science over a 6-year period in both KS1 and KS2. Whilst it initially

appears that primary schools in Coalshire are improving each year, these patterns exist across all-Wales attainment figures; the achievement gap between this locale and the rest of Wales remains.

The following table documents the proportion of pupils achieving the expected level or above in English, mathematics *and* science; the benchmark figure known as CSI (Core Subject Indicator) over an extended period; from 2000 to 2011. Table 4.4 confirms that pupils in both Key Stages in Coalshire consistently fall below Welsh average CSI figures year after year. Note how the KS2 gap is first reduced in 2005; the year that teacher assessments (TA) replaced standard assessment tests (SATs).

Table 4.4: Percentage of KS1 & KS2 Pupils Achieving Expected CSI Target Level

Year	*KS1 Wales (TA)*	*KS1 Coalshire (TA)*	*Difference*	*KS2 Wales (TT)*	*KS2 Coalshire (TT)*	*Difference*
2000	80	75	-5	63	50	-13
2001	81	77	-4	68	58	-10
2002	80	75	-5	68	60	-8
2003	79	69	-10	70	59	-11
2004	80	71	-9	72	62	-10
2005	81	72	-9	74	68	-6
2006	81	70	-11	58	47	-11
2007	80	71	-9	74	70	-4
2008	81	73	-8	76	69	-7
2009	81	75	-6	77	70	-7
2010	82	75	-7	78	69	-9
2011	83	76	-7	80	73	-7
2012*	80	79	-2	83	78	-5
2013*	83	81	-2	84	80	-4

* Following the implementation of a revised Foundation Phase curriculum (formerly KS1) for children up to 7 years, the results for 2012 and 2013 include performance data on Language, Literacy and Communication (LLC), Mathematical Development (MD), and Personal, Social Development, Wellbeing and Cultural Development (PSDWCD).

It is evident that government and LEA initiatives to reduce the attainment gap have not been particularly effectual prior to 2012; with a demonstrable attainment gap between children in Coalshire compared with the Welsh average across both Key Stages. Over this extended period, pupils in Coalshire consistently lag behind the Welsh national average. Statistical differences between mean Coalshire and national attainment figures in the core subjects (CSI) can be found in Table 4.5. Since the implementation of the revised Foundation Phase in

2011-12 for children up to 7 years, performance indicators appear to reveal a narrowing of the gap.

Table 4.5: Statistical exploration of differences between Coalshire and all-Wales Attainment KS1 and KS2 English, Maths, Science (2000-2005), and CSI (2000-2011)

Subject	Region	Range of Scores	Mean	Std.	t	df	Sig.
English KS1	Coalshire	72-79	76.00	2.90	-5.59	10	**.000****
	Wales	82-84	82.83	.75		10	
English KS2	Coalshire	63-73	69.67	3.67	-4.78	10	**.001****
	Wales	74-79	78.00	2.74		10	
Maths KS1	Coalshire	79-85	81.50	2.81	-5.16	10	**.000****
	Wales	87-89	87.67	.82		10	
Maths KS2	Coalshire	58-73	66.17	4.96	-3.39	10	**.007****
	Wales	69-79	74.57	3.61		10	
Science KS1	Coalshire	82-86	84.17	1.33	-6.41	10	**.000****
	Wales	87-89	88.17	.75		10	
Science KS2	Coalshire	71-86	80.50	5.01	-2.32	10	**.043***
	Wales	81-89	86.00	2.76		10	
CSI KS1	Coalshire	69-77	73.25	2.80	-4.90	10	**.000****
	Wales	79-83	80.75	1.06		10	
CSI KS2	Coalshire	47-70	62.92	8.37	-4.08	10	**.000****
	Wales	58-80	71.50	6.46		10	

** p=<.01, *p=<.05

Statistical analyses of these differences can be seen in Table 4.5 where independent samples t-tests comparing the mean SATs results for Coalshire with the all-Wales results for reveal statistically significant differences in both Key Stages for English (p<.001), mathematics (p<.01), science (p<.05) and CSI (p<.001). Comparison of the means for Coalshire and Wales further confirm that pupils in this locale are falling significantly below the Welsh average in every single element of testing; with an 8.6 point mean difference for the CSI results in KS2 and 7.5 point difference in KS1.

Tables 4.1-4.5 above provide empirical support for Coalshire's 'underachieving locale' status. KS1 and KS2 SATs results confirm that Coalshire, although striving to improve, consistently falls short of expected levels, as set by central government and the Welsh Assembly Government. Initially, it appears that primary schools in Coalshire have managed to make improvements in KS2 English, maths, science and CSI results between 2000 and 2005, although no such improvements are witnessed in KS1. However, whilst the KS2 results

seem to be encouraging, the same pattern can be witnessed for the all-Wales results, suggesting that either the assessments have been getting easier or that teaching is more effective year on year throughout the country. It must be noted that Coalshire has not managed to achieve the same percentage results as Wales for any of the assessments over this period. Estyn (2011) recognise the 'steady improvements' made in KS2 since 2004 but echo the sentiments of the Estyn (2007) inspectorate concerned with the continued poor performance in KS1, arguing that underachievement in the early years of education remains a significant area for improvement for this local authority. Coalshire needs to continue to improve in order to reach the average standard achieved across Wales. In sum, schools within Coalshire perennially fall below the all-Wales results in every subject, in both Key Stages for every year; not just in the year preceding data collection, when the 'underachieving' locale was identified. Estyn (2013) further report that educational outcomes in Coalshire remain unsatisfactory; "even when high levels of deprivation are taken into account; performance is well below average...performance is among the worst in Wales" (p.4).

4.3   Underachievement transcending key stages

Similar patterns are evident throughout Coalshire for each of the Key Stages. In KS3, 45% of pupils achieved the expected level in CSI in teacher assessments; the lowest in Wales (ONS, 2004). Analogous patterns can be found with 44% of pupils achieving A*-C at GCSE level; the second lowest results in Wales and also at A Level with 50% of pupils achieving A-C grades; the lowest levels recorded in Wales in 2003 (ELWa, 2005). This pattern is consistent from 2005 onwards, with an average of 12% fewer students achieving A*-C in GCSE English and mathematics than the Welsh average. Moreover, the proportion of learners (less than 1 in 4) studying at Higher Education is also the lowest in Wales (ELWa, 2005; Palmer, 2011). This pattern transcends across job related training and adult and continuing education learner figures, which also remain the lowest in Wales (NafW, 2003; ELWa, 2005).

4.4   Educational resources

The limited resources available to schools could further exacerbate the poor levels of educational performance in this locale. The 2002-2003 total revenue budgets for Coalshire's Education Department was almost £43 million (Estyn, 2003). Despite the Education Department securing the largest budget within Coalshire Council (accounting for almost 40% of the total revenue), schools in this LEA were the worst performing in the country.

Coalshire authority has previously spent £500 less per pupil than other Welsh authorities (BBC, 2000). In 2002-2003, Coalshire issued 82% of its £31.2m local schools budget to its schools, placing it among the bottom of the Welsh schools budget table. With a budget of £2674 per pupil (the largest in Wales), Coalshire is the only unitary authority to have a deficit of -£0.1m (NafW, 2003) with 20 of the 34 primary schools recording negative reserves by the end of 2003[9]; an overall deficit of £11 per pupil. Furthermore, schools in Coalshire spend 6 pence less for each primary school meal than the Welsh average of 51 pence (Atkinson, 2006). Blook (2002) reasons that when it comes to exam grades, LEAs in Wales get what they pay for and limiting school budgets merely serves to substantially lower levels of attainment compared with neighbouring authorities. Absenteeism statistics for Coalshire are also among the worst in Wales for 2003 ('Pupils' Attendance Records' NAfW, 2004) and the proportion of pupils (1 in 4) qualifying for free school meals (FSM) is among the highest in Wales[10] (Estyn, 2003). It is worth noting that Estyn's (2013) report on the quality of Coalshire's education provision deemed resource management to be unsatisfactory, stating "the authority cannot currently demonstrate that this budget is being used effectively to meet the needs of learners" (p.11).

4.5   Qualifications and skills

Local Authority documentation readily acknowledges that Coalshire has a low skills base and poor levels of educational attainment with some of the worst levels of qualification among adults in Wales, thereby constraining the ambitions, opportunities and aspirations of people (ONS, 2006; Census, 2011). Coalshire has the highest proportion of working age population with no/low qualifications; there is immense need to raise the qualification levels of the population to facilitate access to employment opportunities. The potential for indigenous growth in this region is restricted and further inward investment, particularly in quality jobs, is therefore deterred. The Local Area Labour Force Survey (2004) indicates that 30% of Coalshire's residents have no qualifications, which are the highest figure in Wales; 12% above the Welsh average and twice the British average. By 2011, the proportion of 16-74 year olds in Coalshire with no qualifications had risen to 36%, compared with a Welsh

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[9] NB: this deficit only applies to primary schools

[10] Pupils are entitled to FSM if their family receives Income Support, Income based Job Seekers Allowance, Child Tax Credit if annual salary <£13,320 and not in receipt of Working tax Credit from 6 April 2003 (National Statistics, 2004).

average of 26% (Census, 2011). The National Assembly for Wales (2010) report that Coalshire remains at the bottom of qualifications and skills league tables.

The qualifications profile of the region indicates a low skills base as only 10% of the workforce has gained qualifications at NVQ level 4 and above, which is less than half the Welsh and British average. Similarly, the proportion of individuals achieving NVQ level 3 (23%), NVQ Level 2 (41%) and NVQ level 1 (58%) lags approximately 20% behind the British average at each stage[11]. ELWa (2005) reveals that 1 in 25 school leavers do not gain any qualifications, continue education or enter into work based learning schemes. These figures explicate the high levels of literacy difficulties experienced by many in this locale. Literacy benchmark figures published by the Basic Skills Agency (2001) identify Coalshire as having the poorest literacy skills with 33% of occupants classified as having low/very low literacy skills and 38% with low/very low numeracy skills. ELWa (2005) cite the Future Skills Wales (2003) Survey, revealing that 23% of employers reported a significant gap between the skills employees possess and those required to meet employers' current basic objectives. A summary of Coalshire's distinguishing features can be found in Table 4.6 at the end of Section A.

Having established the 'underachieving' status of the locale and highlighted educational concerns apparent in Coalshire, it is now necessary to explore the situatedness of this locale. Merely examining educational performance tables and extrapolating findings in isolation only serves to provide unsatisfactory explanations of underachievement and fails to appreciate the complexity of learning within a social world. As this thesis is set within a socio-cultural theoretical framework, differential patterns of achievement within this underachieving locale need to be considered in light of the specific social and cultural features unique to this area. The following sections aim to provide a sense of Coalshire's broader historical, political, economic, social and cultural influences.

4.6 Population

Coalshire's population has steadily declined since the 1920s with considerable outward migration witnessed in recent years; school closures have consequently increased as the population diminishes. Almost 3500 inhabitants (5%) migrated out of the area between 1993

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[11] NVQ 1; fewer than 5 GCSEs A-C. NVQ 2: 5 or more GCSEs. NVQ 3: 2 or more A Levels. NVQ 4: HND, Degree and Higher level or equivalent.

and 2003 (ONS, 2004), a further 1.3% moved out of the locale in subsequent years (Coalshire Council, 2007), with anecdotal evidence suggesting that these numbers are continuing to rise (Jones, 2009b). The number of pupils attending school between 1997 and 2002 has depleted by 12%. There are now 12 fewer primary schools at the end of this 10 year period; a direct result of closures and amalgamations. Estyn (2007) report a further reduction in schools in future. Coalshire is continuing to experience an insufficient inflow of people and therefore maintains an increasingly ageing population. The current population is predominantly white with 99% born in the UK (Estyn, 2003). Very few residents speak Welsh as a first language (1.5%) compared with the Welsh average of 20% (Census 2001, 2011). The marital status of residents in Coalshire is closely aligned with the Welsh average (Estyn, 2003).

4.7 Coalshire's proud past: From boom to bust

According to John Wright, MP for the locale, Coalshire is an historic constituency, steeped in great political tradition. The predominantly working class population of Coalshire developed from the introduction of major industry, with local towns thriving from 200 years of heavy steel industry and iron production in the region. By the mid-nineteenth century, Coalshire was proud to possess the most important iron-working centre in the world, however, as Wright (2005) denotes in his key parliamentary speech, the mines were smashed up by the Tories in the 1980s. Nonetheless, Wright expresses his sentiments for his people by emphasising that the spirit of Coalshire has not been crushed and it still remains warm. Wright further illuminates the great socialist and trade union values that remain among his people, who "believe in our fellow human beings, we believe in a sense of community and we have a warmth that extends to all about us" (p.1). Despite previously being described as an area with a "proud past" Coalshire is more commonly depicted as an area with a troubled present (Barry, 2010). An influx of media attention has publicised the disappointing educational attainment statistics, increasing levels of unemployment and crime and depressing health statistics. Close inspection of Census (2001 and 2011) data reveals that Coalshire is struggling to combat myriad societal and economic conflicts; further compounded by poor communication links, which severely limits opportunities to travel outside the locale for employment. The following sections will draw from government-funded research to construct an enlightening portrait of current levels of employment, education, health, deprivation and housing within this locale.

4.8   Housing

Coalshire is often portrayed as a depressing area in which to live and has been identified as one of the worst ten places to reside in Britain (Hammond & Alford, 2006). The lowest average property values are also found here, making it one of the cheapest regions in Britain to buy a house. The aforementioned outward migration and increasingly ageing population has resulted in increasingly void properties within estates. This has not only affected the aesthetic nature of the locale but has subsequently resulted in increased vandalism and arson in the area. Poor housing conditions have also been linked to health problems (Skapinakis et al., 2005) with identified causal links between deprivation and health (Wright, 1998).

4.9   Deprivation

Deprivation exists in abundance in Coalshire, however it is measured: in terms of low pay, high unemployment, bad housing or even low levels of car ownership (MP Wright, 1998) and this "poverty image" needs to be shaken off. The 2004 Prosperity Figures expose Coalshire, and Wales as a whole, to remain firmly rooted at the bottom of the UK economic league table (Jones, 2006). The Welsh Index of Multiple Deprivation (WIMD) (NafW, 2004) has been widely used to assess levels of deprivation across Wales (e.g. CRC, 2006) with this composite index based on direct measures of deprivation (Skapinakis et al., 2005). Poverty is, however, more than just a lack of money; it is a lack of opportunities, security and empowerment (Aylward cited in Brindley, 2006). A range of Indexes of Deprivation assessing social and material deprivation (e.g. the Townsend Index, Carstairs Index and Breadline Index) each reveal the same outcome: higher than average deprivation in Coalshire (Census, 1991, 2001; ONS, 2011; DfE, 2012)[12].

Unlike countless authorities experiencing pockets of deprivation, Coalshire encounters significant economic and social deprivation throughout the entire region. According to the National Assembly for Wales Index of Multiple Deprivation, 88% of electoral wards in Coalshire qualify among the 25% most deprived wards in Wales, with 63% awarded

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[12] The Townsend Index is calculated from unemployment, car ownership, housing tenure and overcrowding census data. The Carstairs Index identifies male unemployment, overcrowding, social class and car ownership. The Breadline Index is based on the characteristics of households and individuals from the results of the Breadline Poverty Survey in 1990 with weighted component variables (i.e. houses not owner-occupied, no car, lone parent, social class, unemployment and long-term limiting illness).

"Communities First" status and *all* electoral wards fall within the 40% most deprived in Wales (Estyn, 2003). By 2011, 13 of the 16 wards were Communities First areas (CYPP, 2011). Prior to the commencement of this study, particular estates within this local authority were identified as statistically among the most deprived electoral wards in Wales (Sturge, 2002). Socio-demographic indicators reveal Coalshire's high levels of deprivation; including very low levels car ownership - 43% of households have no car (Audit Commission, 2002). Coalshire County Borough Council has qualified for £1.2 billion European Structural Fund Assistance earmarked for the surrounding region for a seven year period, 2000-2006 (Draft Local Strategy, 2003) to assist with economic, social and environmental generation. In fact, Coalshire received over £500,000 in Objective One funding in 2003. This region of Wales qualified for a second seven-year period of top-level European aid as it is reported to be poorer than the former Eastern European communist country of Slovenia, and Cyprus (Shipton, 2006).

4.10 Health

This locale is frequently identified as one of the poorest communities in Wales, with Coalshire's population recording some of the worst health statistics not only in Wales but in Britain and Western Europe (Census, 2001, 2011; ONS, 2011). More than one quarter of Coalshire's population (27%) suffers from long-term illnesses (Audit Commission, 2002, Census 2011). When compared with authorities throughout Wales, Coalshire records the highest proportion of residents with mental health problems, physical health difficulties and limiting long-term illnesses with particularly high rates of cardiovascular disease, diabetes, respiratory problems, some cancers, musculoskeletal and mental health problems (OOS, 2006). In addition, it has among the highest proportion of permanently sick and disabled people in Wales (Estyn, 2003) and there remains a counterminosity of health services in this region (Wright, 2005). ONS (2006) further highlights that this local authority records the most elevated levels of teenage pregnancies, underage conceptions and low birth weight babies in Wales. Almost a quarter of the working age population have a disability although in 90% of cases this is not limiting (ELWa, 2005; p.4). Almost 1 in 10 residents report their health as "not good" and 10% more report long-term disability and illness affecting daily activities and work than the UK average (Census 2001). Only 65% of Coalshire residents report good health; 14% less than the UK average (ONS, 2011).

Life expectancy is at its lowest in Coalshire, with residents more likely to smoke and binge drink and less likely to meet government guidelines on exercise and fruit and vegetable consumption (Brindley, 2006). A survey by the Sports Council for Wales has exposed Coalshire for reporting the lowest score of regularly active primary school children – 26% less than the Welsh average (Burson, 2006), caused by a lack of resources. Alarmist newspaper headlines further fuel concerns announcing that "deprivation is causing a generation of boys to die at least six years before boys born in more affluent areas" and "a boy born in Coalshire will be lucky to reach 74 compared with 80 years for boys living in Chelsea". These figures serve as a "sobering reminder that wealth still dictates lifespan, even at the start of the 21st century" (Brindley, 2006; p.28). In Coalshire, "the health inequality determinants – the way people feel, their physical and mental health, smoking, obesity, body mass and inactivity" – are all worse than the Welsh average (Brindley, 2006; p.28).

4.11   Employment

Coalshire concedes one of the worst unemployment rates in Britain (Census, 2001, 2011; DfE, 2012), with long-term unemployment figures well above the UK average and among the highest in Wales (Estyn, 2003; CYPP, 2011). The area has suffered major economic difficulties over a number of years and Coalshire continues to struggle from the dramatic decline in traditional industry and subsequent hard times. The closure of the largest remaining industrial site in 2002 has significantly contributed to unemployment as 500 workers lost their income; the immediate impact of which was felt by the whole community (Wright, 2005). A "disproportionately higher proportion of the unemployed in the local area qualify for JSA" (ELWa, 2005; p.4) and this locale tops the list of unemployment claimant figures (Glaze & Owen, 2007). According to Census data (2001, 2011), only half of Coalshire's population are employed, one quarter are permanently sick or economically inactive, 15% retired and the remaining tenth are looking after a family/home or students. Economic activity and employment rates in this county are lower than other unitary authorities (Audit Commission, 2002). One in five men and one in four women are disengaged from the labour market, claim state benefit and do not want to seek employment, compared with 1 in 6 individuals living in Wales (ELWa, 2005). The Local Labour Force Survey (2004) confers 10,000 people (24%) report not wanting a job in the future. National employment figures unveil a reluctance to engage in self-employment, the lowest rate in Wales at half the national average, i.e. 15% (Audit Commission, 2002). Moreover, female levels of economic activity and unemployment are especially low in this county (OOS, 2006). These very low rates of

economic activity are a major concern. Estyn (2003) acknowledges the true extent of the problem is not even revealed by published unemployment figures, further proposing that the real level of unemployment in Coalshire is over three times the claimant count. In Coalshire, 17 unemployed claimants chase each job vacancy, compared with a Welsh and UK average of five per job (GMB, 2012).

Coalshire records the second lowest earnings in Wales, due in part to the dominance of lower-order service sectors and low value-added manufacturing (OOS, 2006). In 2005, the average gross weekly full-time earnings in Coalshire were £351 compared with an average of £416 in Wales and a £476 average in Britain (ELWa, 2005). A significant pay gap continues to exist between Coalshire and the rest of Wales (NAfW, 2010). ELWa (2005) suggest that "given the scale of this pay gap, the urge to relocate elsewhere must be compelling for those whose circumstances do not tie in to the local area". Yet, as Walkerdine, Fairbrother & Jimenez (2007) identify, relocating to find work presents its own difficulties, as workers are reluctant to move away from the safety of their own community. In 2000, 35% of Coalshire residents had a gross annual income less than £10,000 (CACI, 2000) and by 2006, less than 40% of employed workers in Coalshire earned the National average of £22,500 (OOS, 2006).

4.12   Impact of unemployment

With an absence of industry and quality jobs, Coalshire is commonly referred to as a locale with widespread "social exclusion" and "deprivation" which Wright (2005) argues is nothing more than a euphemism for what lies beneath these labels, i.e. "poverty". The ramifications of uncharacteristically high levels of unemployment extend to available learning opportunities in the region. Post-16 participation rates in this locale are lower than anywhere else in Wales suggesting that companies will not come in because the people with skills are not there; resulting in a lack of training in high-tech skills that would attract other companies (Jones, 2006). Rees et al. (1997) suggest that the education and qualification problems have been further exacerbated by the significant deterioration in learning opportunities available to men in particular as employment in nationalised industries has collapsed. Fewer people are offered the initial and continuous training opportunities, resulting in supervisory and managerial jobs once available to workers in traditional industries. Inward investment is somewhat improbable until companies are assured that these problems have been resolved and employees hold necessary qualifications and skills.

4.13 Summary of locale features

Within the plane of analysis of the locale, empirical longitudinal support for the underachieving status of the locale has been identified; revealing an average 8.6% disparity between Coalshire and all-Wales Key Stage 2 attainment figures. Similar patterns have been found throughout the key stages, from KS1-KS4, with Coalshire securing the lowest positions in educational league tables. Furthermore, participation in FE and HE is the lowest in Wales for individuals in this locale. Analysis of local features reveals the incontestably unique nature of Coalshire, in terms of its: declining population, depressing housing, health and crime statistics, significant deprivation and infrastructure/geographical constraints that limit opportunities for its inhabitants to work in neighbouring locales. Coalshire's evidential low skills base and levels of qualifications, coupled with limited job opportunities caused by the relentless decline in traditional industry, have resulted in soaring unemployment figures (see Table 4.6 for summary overview of locale features) which, within a socio-cultural framework, cannot be ignored. This thesis will therefore argue that underachievement and broader school performance can *only* be fully understood when attending to these wider social and cultural contexts.

Table 4.6: Summary of Coalshire's Unique Features

Unique Features	Coalshire
Geographical	Industrial and rural divide, hill and moorland scenery
Population	Rapid outward migration, declining population, <1% ethnic minority groups, 97% EFL
Historical	Perennial cycles of economic recession, proud past but troubled present; perceived as depressing place to live
Communication Links	Limited rail transport, inefficient transport network - restricting employment opportunities outside locale
Housing	Predominantly terraced, among the cheapest property prices and worst areas to live in the UK
Deprivation	Abundant economic and social deprivation. Amongst most deprived regions in Wales
Health	Among worst health statistics in Wales, the UK and Western Europe for mental health, physical difficulties, long-term illnesses and mortality rates. Least active children in Wales
Employment	Suffering from decline in traditional industry, and among worst unemployment rates in Britain
Education	Poor levels of educational performance. LEA experiencing financial deficit. High numbers of pupils qualifying for FSM
School Performance	Among lowest performance results in Wales at all levels; from KS1 to HE
Qualifications/Skills	Low skills base, high levels of literacy difficulties

In sum, education cannot be divorced from place, history of place and the participating transition of industrial to post-industrial economy; these set the context within which pupils grow up. The data presented in this chapter suggest the intergenerational transmission of low achievement because worklessness and poverty seem to be evenly spread across this locale, unlike other locales that have pockets of deprivation. However, education doesn't appear to follow this pattern. This intergenerational transmission is based on year-on-year SATs results in KS2 and teacher assessments in KS1, which demonstrate that some schools perform better than others. It is therefore necessary to identify what specifically schools are doing to counter this pattern. The cultural features of schools that might mitigate against this background of deprivation will be explored in the next section.

4.14   Introduction - Plane of analysis: Institution

Having recognised that the intergenerational transmission of underachievement within education is not evenly dispersed across the locale, this section seeks to identify what makes a difference between schools. This might explain why some schools do well year on year in comparison to others who do not, when the broader social and cultural context is seemingly equal. This section will map the school culture in each institution by focusing on four broad features including (i) the catchment area and pupil composition in each school; (ii) the management procedures of the school and staff, including the school's mission statement and resources; (iii) links to the community, including parental support and movement in and out of school across school boundaries, identifying which schools have regular contact with parents. This section will explore cultural bridging (Rogoff et al., 2001) and seeks to identify which schools understand the circumstances of these children's lives, attending to whether or not teachers reside in the locale and are familiar with and recognise the social and cultural environments of these pupils. The final section (iv) will investigate the internal structure of the school, including exploration of the visual relays and artefacts to identify the messages pupils are receiving from the material culture of their school environment about belonging within the school culture. The school curriculum will also be highlighted with particular attention paid to Estyn's assessment of the quality of teaching in each school. This section will end with a comparison of institutional features at the two higher achieving schools (North Higherbank and Highbury Park) and the two lower achieving schools (Lowerbridge and Fallowfield) to identify whether particular aspects of school culture helps explain the differential academic performance of schools in the same locale with shared historical, socio-political and cultural limitations.

A variety of data sources are drawn from to identify the school cultures of the four participating schools, including Estyn school inspection reports, fieldnotes, teacher interviews and *ad hoc* discourse with head teachers (refer to Chapter 3 for further details of methods employed here). Examination of the internal organisation and wider social milieu of each school may explain what, if anything, about the school culture makes a difference to pupils' academic success. Prior to examination of the school features, it is important to note that North Higherbank and Highbury Park were previously identified as higher achieving schools (refer to Chapter 3 for details) with 95% and 100% of pupils respectively achieving Level 4 or above in the 2002 SATs assessments. Analysis of longitudinal SATs data confirms that these schools consistently outperform other schools in the locale. Further analysis identified

Lowerbridge and Fallowfield as lower achieving schools; sharing the lowest positions in Coalshire's school performance league tables. These empirical data not only lend support to variation found within this 'underachieving' locale, but also provide a sense of objectivity. Coalshire Education Authority confirmed the performance status of these schools. Maintaining focus at the institutional plane of analysis, the next section provides a brief summary of the key features of each school.

4.15   School features

North Higherbank Primary comprises junior, infant and nursery departments and is situated within spacious grounds; the sprawling 1930s brick construction is surrounded by tarmacked playgrounds and large playing fields. The junior and infant departments were previously adjoined but managed by separate head teachers until the departments amalgamated in 2001. The interior is visually stimulating and offers an aesthetically pleasing learning environment (Estyn, 2005). **Highbury Park Primary** caters for infants and juniors and is positioned within a modest garden area and a hard surfaced play area. The flat-roofed 1950s brick building was formed by an amalgamation of separate infant and junior schools twenty-five years ago. The interior is visually stimulating and offers an ordered yet attractive learning environment (Estyn, 2001). **Lowerbridge Primary** has separate buildings for juniors, a large 1970s prefabricated building, and a Victorian building for the infants. The juniors and infants were separated in the 1950s and the whole school was transferred to a new building in the 1970s whilst the old Victorian building was renovated. On completion, the infant department returned to the existing site whilst the junior department remained. The junior school has spacious grounds; a large playing field, courtyard and playground. The infant school has a modest tarmaced play surface and surrounding grass area. Both schools provide a bright and welcoming learning environment (Estyn, 2003b). **Fallowfield Primary** was purpose-built at the start of the millennium to accommodate the amalgamation of two long-established district schools. It has modest tarmaced play areas with shared access to local playing fields. The interior is cream/green throughout; the learning environment is contemporary and colour-coordinated but not visually stimulating (Estyn, 2002).

Table 4.7: Summary of School Features

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Grounds.	Spacious	Modest	Spacious	Modest
Access to Playing Fields.	Yes	Yes	Yes	Yes
United Junior and Infants.	Yes	Yes	No	Yes
Number of Head Teachers.	1	1	2	1
Learning Environment.	Visually Stimulating	Visually Stimulating	Bright and Welcoming	Contemporary yet Bland

It is noteworthy that Fallowfield, the new school, is the only institution not to have a visually stimulating learning environment.

4.16 Catchment

The way achievement is measured, via test scores, cannot be disassociated from the socio-cultural resources the child brings to school so it is important to look at the families children originate from. **North Higherbank** draws pupils from mixed socio-economic backgrounds; from both private and local authority housing. A significant minority are identified as economically disadvantaged with the majority as neither advantaged nor disadvantaged (Estyn, 2005). The catchment area at **Highbury Park** is also mixed; families reside in local authority, housing association and privately rented or owned properties. The immediate catchment area is said to be economically disadvantaged (Estyn, 2001). Pupils at **Lowerbridge** live in an economically and socially disadvantaged area (Estyn, 2003b); accommodation is either local authority, rented or owner occupied housing. **Fallowfield** also draws from a mixed socio-economic catchment; ¾ are identified as economically disadvantaged and ¼ as neither prosperous nor disadvantaged. Families either live in 'social housing', local authority, privately rented or owned accommodation (Estyn, 2002).

Table 4.8: Summary of Catchment Area

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Housing	Local Authority and Private	Local Authority, Housing Association and Private	Local Authority and Private	Local Authority, 'Social Housing' and Private
Economically Disadvantaged	Minority	Majority	Majority	Majority

North Higherbank is the only school considered by Estyn Inspectors to have a minority of pupils with economically disadvantaged status. However, school staff disagree as this school draws from the same catchment as Highbury Park, previously identified by Estyn as having a majority of economically disadvantaged pupils.

4.17   Pupils

North Higherbank accommodates approximately 300 pupils. All speak English as a first language with no recorded Welsh speakers and few pupils from ethnic minority heritage. Pupil numbers continue to steadily decline, due to outward migration; there are fewer than 30 pupils in the single and mixed year group classes. 19% of pupils receive free school meals (FSM); 23% of pupils are identified as having special educational needs (SEN), and 13% of Year 6 pupils have some degree of SEN. **Highbury Park** has approximately 120 pupils on roll. All are English speaking and there are no ethnic minority pupils. The school has both single and mixed year groups. Class sizes are small; all have fewer than 30 children some year groups have only 16 children. 26% of pupils are entitled to FSM; 16% of pupils in the school have SEN but 38% of Year 6 pupils have statemented SEN. **Lowerbridge** has approximately 335 pupils in total; 200 in the junior school and 135 in the infant school. All are English speaking, there are no children from ethnic minority groups in the junior school and 5% of infant pupils descend from traveller families. Class sizes are small, with fewer than 22 per class in the infant school. 48% of pupils are in receipt of FSM (51% in the infant school); 50% of pupils in the junior school have SEN whilst 17% in the infant school have recorded SEN. In total, 37% of pupils have recognised SEN and 20% of Year 6 pupil have SEN. **Fallowfield** caters for approximately 225 pupils. All pupils are English speaking and there are no ethnic minority pupils. All pupils are educated within single year group classes. Some classes are very large, exceeding 30 pupils per class; Year 6 has 35 children on the register but 36 in the classroom. 40% of pupils at Fallowfield have FSM; 37% have identifiable SEN of which 33% are in Year 6.

Table 4.9, overleaf, confirms that Highbury Park is the smallest of the four schools, as reflected in the small Year 6 class size. All schools are English speaking with no ethnic minority students. Mixed age classes are only found in the higher achieving schools.

Table 4.9: Summary of Pupil Data

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Pupils	300	120	335	225
EFL %	100	100	100	100
Ethnic Minority %	0	0	0	0
Classes	Single + Mixed Age	Single + Mixed Age	Single Age Group	Single Age Group
FSM %	19	26	48	40
SEN -School %	23	16	37	37
SEN Year 6 %	13	38	20	33
SEN Year 2%	7	12	10	14
Pupils Year 6	27	16	29	36
Pupils Year 2	27	26	29	22

Both entitlement to free school meals (FSM) and proportion of pupils identified as having special educational needs (SEN) appear to be differentiators between the higher and lower achieving schools. Approximately twice as many children at the lower achieving schools (Lowerbridge and Fallowfield) are eligible for free school meals (M=44%) compared with children at the higher achieving schools (M=23%; North Higherbank and Highbury Park). A significant difference was found for the comparative proportion of children with SEN in the higher achieving schools (M=19.5, SD=4.95) and the lower achieving schools (M=37 SD=0.00) schools; $t(2)=-5.00$, $p = .04$.

4.18 Management and staff

NAfW (2003) reports suggest that strong leadership, efficient management and a cohesive team of staff are central contributors to successful schools in Wales. Research suggests that the internal culture of the school is vulnerable to changes implemented by management so it may be interesting to get a sense of the managerial procedures in the higher and lower achieving schools. This insight is gained through analysis of Estyn school reports and ethnographic work in each school.

The Head Teacher at **North Higherbank**, Mr Night, offers a 'purposeful, clear-sighted, effective leadership and management' (Estyn, 2005). He is highly respected by the 16 'well-qualified, high calibre' teaching staff and 2 nursery nurses (NNEBs). He maintains the loyalty of his staff and has built a cohesive and effective senior management team (SMT).

The school has successfully managed to build a committed and supportive governing body. Both Mr Night and the Year 6 teacher and deputy head, Mr Nowledge, are in their early 50s. Mrs Humble, the head teacher at **Highbury Park**, is also the class teacher for Year 4. She demonstrates 'very good leadership' (Estyn, 2001) and has established a cohesive and dedicated team of 7 teaching staff and one support staff member whom maintain high standards in their work. The school has an actively involved supporting governing body. Mrs Humble is in her early 50s whilst Mr Humour, the Year 6 teacher and deputy head is aged late 40s. The head teacher at **Lowerbridge**, Mrs Leader, was commended by Estyn (2003b) for her self-evaluation and planning for improvement. The school has a highly committed SMT and staff are focused on improving teaching and learning. The governing body are becoming actively involved in the life of the school. There are 17 teaching staff, 5 support staff and 5 nursery nurses across the junior and infant schools. Mrs Leader is in her early 50s whilst the Year 6 teacher and deputy head, Mrs L'Enthuse, is in her late 40s. Mrs Friend, the head teacher at **Fallowfield**, is recognised by the inspection team for successfully combining the cultures of the pre-existing schools into a new vibrant one and is committed to raising standards (Estyn, 2002). The 8 teachers and 7 nursery nurses were identified as working hard to 'overcome significant difficulties inherent in opening a new school to establish a unity of purpose' (Estyn, 2002, p.14). Her leadership is described as 'caring' and good overall. Mrs Friend is in her late 40s and Mr Fairly, the Year 6 teacher and deputy head, is in his early 50s.

Table 4.10: Summary of Staff and Management

		North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Leadership of Head Teacher		Effective	Very Good	Commendable Planning	Committed to Improvement
HT*	**Name**	Mr Night	Mrs Humble	Mrs Light	Mrs Friend
	Sex	Male	Female	Female	Female
	Age	Early 50s	Early 50s	Early 50s	Late 40s
Y6 T*	**Name**	Mr Nowledge	Mr Humour	Mrs L'Enthuse	Mr Fairly
	Sex	Male	Male	Female	Male
	Age	Early 50s	Late 40s	Late 40s	Early 50s
	Role	Deputy Head	Deputy Head	Deputy Head	Deputy Head
Y2 T*	**Name**	Mrs Noble	Mrs Hinspire	Miss Lovejoy	Mrs Funlead
	Sex	Female	Female	Female	Female
	Age	Early 50s	Early 40s	Mid 20s	Mid 40s
No. of T* Staff		16	7	17	8
No. of S* Staff		3	1	8	7
Total Staff		**19**	**8**	**25**	**15**

*HT – Head Teacher *T – Teacher *S – Support

Each school seems to have different sets of priorities as captured through the headings in Table 4.10. There are no clear staff and management differences between the higher and lower achieving schools. Further investigation of the school culture can be accomplished by considering the school ethos and motto.

4.19 Ethos and school motto

Schools are faced with pressure to forge a distinctive identity and examining what they choose to highlight in their school motto may reveal something about the culture of each school. **North Higherbank** is identified as offering a warm, friendly atmosphere, a calm, happy, caring and supportive learning environment where pupils feel secure and respected (Estyn, 2005). The school motto is to: *'instil in each other a sense of belonging'*. Pupils demonstrate excellent attitudes towards learning and their behaviour is described as outstanding. All staff maintain high expectations and pupils respond well to firm, friendly discipline. A positive reward system is evident throughout the school; pupil achievement is explicitly celebrated in assemblies. The overtly Christian ethos of the school is recognised as encouraging and promoting positive values and attitudes (Estyn, 2005). **Highbury Park** offers its pupils a comfortable and happy family atmosphere where warm, friendly and supportive relationships can be found throughout the school. The school motto is to: *'provide a comfortable, happy environment where not only the content but the context of learning is of utmost importance, combined with the social interaction which pupils may not have experienced'*. Its unified team of caring staff maintain very high expectations and implement firm yet friendly discipline which pupils respond very well to (Estyn, 2001). Pupils display excellent attitudes towards learning and staff use positive reward systems to promote constructive behaviour. There is a strong Christian ethos throughout Highbury Park; whole-school daily worship takes place where pupils' self-worth is fostered and achievements are celebrated.

Lowerbridge offers a happy, supportive and orderly environment where teachers use a calm and consistent approach to encourage courtesy and harvest warm and friendly relationships (Estyn, 2003b). The school motto emphasises *'striving for success'* and *'proudly moving forward together'*. Pupils exhibit good attitudes towards learning and staff maintain high expectations regarding pupil behaviour and consistently apply an explicit reward system; granting privileges to foster positive behaviour and implementing sanctions when pupils

display anti-social behaviour. Pupils' contributions are valued and the school aims to promote positive self-image and esteem. Although local clergy often take assemblies there is no overtly Christian ethos. The environment at **Fallowfield** is described as caring and supportive where pupils can feel happy and secure (Estyn, 2002). The school motto is to: *'do it the Fallowfield way'* which involves *'doing things our school will be proud of, take care of the school and other people's property, follow respect for one another and work to the best of our ability'.* Good behaviour is promoted and encouraged. Achievement is recognised and pupils demonstrate a good level of respect and good attitudes towards learning. The 'Gopher' reward system used throughout the school ('go-for-it' points) encourages pro-social behaviour. Loss of privileges and other sanctions are employed when school rules are broken. There is no explicit Christian ethos although local clergy regularly take assemblies on moral issues. The school aims to provide a high standard of education with continuing improvement.

Table 4.11: Summary of School Ethos and Motto

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Atmosphere	Warm, Friendly	Happy, Family	Supportive, Orderly	Secure, Happy
Ethos	Christian	Christian	Behaviour	Behaviour
Expectations	Very High	Very High	High	High
Relationships	Caring, Supportive	Caring, Supportive	Warm, Friendly	Caring, Supportive
Behaviour	Outstanding	Very Good	Very Good	Good Respect
Attitudes	Excellent	Excellent	Good	Good
Reward System	Explicit	Explicit	Explicit	Explicit
Motto	Belonging	Social Context	Success	Respect

All schools are recognised by Estyn Inspectors as having explicit reward systems and caring or warm relationships with pupils. Although the inspections were undertaken by different members of Estyn staff, the higher achieving schools (North Higherbank and Highbury Park) are recognised as having slightly higher expectations of their children who are found to have better attitudes to learning and school life than pupils in the lower achieving schools (Lowerbridge and Fallowfield). An overtly Christian ethos is found among the higher achieving schools only.

4.**20   Resources**

As identified in section 4.4, research suggests that well-resourced schools are more likely to support children's learning experiences (Higgins, 2003). This section will draw from Estyn school reports, teacher interviews and ethnographic work to explore if there are any differences in resource allocation in each school. **North Higherbank** makes good use of the local environment as a resource (Estyn, 2005). It has a good supply of learning resources which are easily accessible and well organised. The school has considerable fiscal constraints which are thwarting the procurement of new resources; the KS2 library would benefit from new stock and the ICT suite requires upgrading. In order to stay within budget, Mr Night has had to cut one teaching assistant (TA) position and one teacher will be made redundant within the academic year. At **Highbury Park**, resources are used effectively, including the locale and staff (Estyn, 2001). There is a good provision of learning resources and equipment is bought with School Improvement Project (SIP) money awarded to the school. Mrs Humble highlighted no obvious resources constraints throughout the period of data collection.

Lowerbridge is not recognised for making effective use of the locale as a resource (Estyn, 2003b). It possesses satisfactory resources in the junior school and good resources in the infant school. It makes effective use of school resources and support staff. Mrs Light did not articulate specific financial constraints at any time. **Fallowfield** is not identified as using the locale effectively as a learning resource (Estyn, 2002). First class resources are, however, found throughout the new school building; the ICT suite is 'second to none' (Estyn, 2002). Mrs Friend readily communicated concern over financial difficulties as teachers were granted pay-rises immediately prior to the school amalgamation. Because insufficient money remained in the pot, staff were subsequently moved to one year contracts, with one teacher potentially made redundant by the end of the academic year if money is not found. To give a flavour of the extraordinary situation some head teachers are subjected to, the following extract details Mrs Friend's concerns:

> "We're chasing pots of gold, the money just doesn't exist. If we send half of one class to play Dragon Rugby, we have to find £25 to pay the coach and £75 to pay the supply teacher for half a day so it costs us £100 for one hour of rugby every two weeks. If we save money by not getting a supply teacher then we cut the costs. It's certainly not ideal as we're pulling the nursery nurses out of their timetable but we cannot afford to keep spending money on supply teachers. The nursery nurses are good girls and they do a good job. All I'd like is for one week where everybody is in

their own classroom and everything runs smoothly, but it just doesn't happen! In no other business do you have a raffle to get money for things. If a door goes on the council estate, you ring a man to fix it but if you need something in school you have to have a raffle. We didn't get enough Tesco Computers for Schools vouchers so we've had to write begging letters to parents. That's not how it should be. Jane Davidson says that there's enough money being poured into education but the money goes to the LEA who decides which department it goes into and we do not get any but I must say I am grateful for the support I get from the LEA. I cannot afford to give the pupils with SEN the support they actually need. The financial assessor described me as a bit of a "Del Boy" but you have to be as there's not enough money to go around. We hire out some rooms to local clubs. For example, the obesity club hire one of the community rooms and pay £10 a session. So at the end of the day, we have £100 to spend on resources" **[Mrs Friend, Head Teacher, Fallowfield Primary].**

Table 4.12: Summary of School Resources

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Resources	Good	Good	Satisfactory	Excellent
Effective Use	Yes	Yes	Yes	Yes
Locale Resource	Yes	Yes	No	No
£ Constraints	Yes	No	No	Yes
Consequences of Limited Funds	2 Future Redundancies	N/A	N/A	1Yr Contracts, Redundancy

All schools make effective use of the resources they have but the higher achieving schools are considered by Estyn to be better resourced and make better use of resources within the locale than the lower achieving schools.

4.21 Links to community

Schools function within the local community yet great variation is found among schools regarding the relationships they have with members of the wider community. The following section draws from Estyn Inspection reports to offer outsiders' perspectives on each school's links with the community. Fieldnotes taken throughout the period of data collection supplement the views of the Estyn team.

North Higherbank has successfully established outstanding links with the community. It boasts very strong links with other schools, both primary and secondary, businesses and

institutions, employees and agencies in the Education Business Partnership (EBP). Teachers have undertaken placements in industry to enhance curriculum provision. Pupils have been taken to different retail, commercial and industrial working environments to raise their awareness of the world of work. The school has successfully prepared pupils to play an active role in the life and work of the community (Estyn, 2005). Pupils regularly participate in a range of cultural, civic, charitable and environmental projects. They have travelled outside the locale on outdoor pursuit centres, school trips to historical, cultural and geographical sites of interest, sporting competitions and choral competitions at the Royal Albert Hall. Pupils are offered a range of extra-curricular activities, including rugby, football, netball, judo, athletics, cycling, country dancing, and music. There is no breakfast club. A number of visitors regularly frequent the school, including ex-miners, vicars, heads of business, police, health teams, senior school representatives, and local business people, all of whom bring expertise and knowledge into the school.

Highbury Park has successfully established very good links with the community and other schools. The curriculum is enriched by the wide range of links, partnerships and sponsorship arrangements with industrial and commercial organisations including heavy industry, electronics firms, transport, professional football clubs and higher education institutions (HEIs). Staff have undertaken placements in industry to bring new knowledge into the school arena. The school makes effective use of the local community facilities, including the library, leisure centre and radio station (Estyn, 2001). Pupils support the community by hosting sports activities and the choir gives regular concerts in the community. The school organises regular trips beyond the boundaries of the locale and family participation is pro-actively encouraged. These include visits to outdoor pursuit centres, the Centre for Alternative Technology (CAT) in North Wales; Premiership football matches at Liverpool, Aston Villa, and Arsenal; and to International sports fixtures at the Millennium Stadium. Pupils are offered a range of extra-curricular activities including sporting (netball, football and rugby); musical (band, orchestra, and choir); and folk dancing. There is no breakfast club. The school welcomes regular visits from senior school staff, clergy, emergency services, health speakers, poets, artists, musicians, actors, professional sports men and women, and individuals from outside agencies.

Lowerbridge is said to be making progress in establishing partnerships with industry, business and commerce in the locality (Estyn, 2003b), with teachers having undertaken

relevant industrial placements that have enriched curriculum provision. Pupils do not regularly serve the community in sporting or musical events although they have travelled outside the locale on school trips to a theme park, science museum, outdoor pursuit centres and to the seaside. Within the locale, excursions to the library, dentist, local farm and sporting events have taken place. The school has recently established links with a partner school in Scandinavia. The school offers limited extra-curricular activities to its pupils; a drama club was established in 2002 once the school secured NOF (New Opportunities Fund) funds, and a dance club has just been started as part of the school's healthy eating/fitness drive. There is no breakfast club (Estyn, 2003). Visitors to the school include members of the clergy, health teams, sports coaches, poets, local advertising companies, emergency services and education welfare officers (EWOs). A number of effective strategies, enhanced by the EPB and TEC (Teaching and Enterprise Council) have been implemented to raise the industrial and economic understanding of pupils and to offer them an insight into the world of work. Through the Young Enterprise Scheme (YES), pupils are gaining valuable knowledge of the changing nature of business and employment in Wales.

At **Fallowfield**, links with the community are not fully developed. The school is developing partnerships with industry and beginning to forge links with local companies, clergy, agencies, emergency services, EWOs, road safety representatives, local advertising agencies and social services. Links with the secondary school are satisfactory (Estyn, 2002). Staff have not undertaken any placements in industry. Pupils serve the community by singing at British Legion remembrance services and to residents in sheltered accommodation. The school participates in fundraising for local and national causes. Pupils have experienced life outside the locale at a theme park and during a visit to a utilities company in Cardiff. Pupils are offered a range of lunchtime and after school extra-curricular activities, including rugby, football, netball, Welsh folk dancing, art, computer club, safe cycling, maths magic, young writers and rock club. The school offers a breakfast club. Visitors to the school include artists, art groups, poets, sports coaches, local advertising companies and members of the clergy.

The summaries provided in Table 4.13, below, provide a snapshot of the communication, relationships and interaction each school has established with various members within the locale. The higher and lower achieving schools have links with the community yet the 'very strong' links, as identified by Estyn Inspectorate, with the community and secondary schools

are identified in the higher achieving schools (North Higherbank and Highbury Park) and not in the lower achieving schools (Lowerbridge and Fallowfield). Similarly, the diverse range of skilled members of the community entering Highbury Park is noteworthy; pupils here are being exposed to, and made aware of, more varied social and cultural worlds of others. These schools are offering pupils a taste of life beyond their immediate boundaries. Further analyses of pupils' social and cultural experiences, from school trips reported and observed during the period of data collection, reveals additional higher and lower achieving school differences.

Table 4.13: Summary of School Links to Community

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Community Links	Very Strong	Very Strong	Making Progress	Not Developed
Secondary School Link	Very Strong	Very Strong	Making Progress	Satisfactory
Industry Placement	Yes	Yes	Yes	No
Outside Locale Experiences	Social Educational	Social Educational	Social Educational	Social Educational
Serve Community	Yes	Yes	No	Yes
Extra-Curricular	Wide Range	Wide range	Limited	Wide Range
Breakfast Club	No	No	No	Yes
Outside Visitors from:				
- Business	√	√		
- Industry	√	√		
- Emergency Services	√	√	√	
- Clergy	√	√	√	√
- Health Team	√	√	√	
- High School	√	√		
- Artists		√		√
- Musicians		√		√
- Actors		√		√
- Poets		√	√	√
- Sports Coaches		√	√	
- Advertising		√	√	

The following tables illustrate a marked disparity in the outside-school experiences of pupils at the higher and lower achieving schools. This is evident both within the locale (Table 4.14) and outside the locale (Table 4.15).

Table 4.14: Summary of School Trips within the Locale

Within Locale	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Educational	√	√	√	√
Social	√	√	√	√
Cultural	√	√		
Historical	√	√		
Political	√	√		
Geographical	√	√	√	√
Environmental	√	√		
Industrial	√	√		√
Physical	√	√	√	√
Religious	√	√	√	

The pattern revealed in Table 4.14 suggests North Higherbank and Highbury Park provide a greater range of opportunities than Lowerbridge and Fallowfield, although the subjective nature of these data cannot be ignored. Whilst all schools provide visits to educational (e.g. local library), social (e.g. theme park), and geographical (e.g. river) locations, only the HA schools repeatedly exposed pupils to cultural, historical and political sites of interest.

Table 4.15: Summary of School Trips outside the Locale

Outside Locale	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Educational	√	√	√	
Social	√	√	√	√
Cultural	√	√		
Historical	√	√		
Political	√	√		
Geographical	√	√	√	√
Environment		√	√	
Industrial	√	√		√
Physical	√	√	√	
Religious	√	√		

Similar disparities between schools emerge for outside-locale school trips (Table 4.15) where the higher achieving schools (North Higherbank and Highbury Park) appear to offer greater opportunities to pupils to experience aspects of life both within and beyond Coalshire. These schools are physically taking pupils beyond their immediate boundaries, thus providing diverse experiences for many pupils; whom may not otherwise encounter such opportunities. Children in the lower achieving schools do not appear to receive the same cultural, historical, political or religious out-of-school experiences as children in the higher achieving schools.

4.22   Parental support

Teachers often refer to parents and how they bring up their children when attempting to explain differential achievement in their own classes. A strong body of evidence underscores the role of parents in influencing pupils' achievement related cognitions, behaviour and subsequent achievement outcomes (e.g. Ames & Archer, 1987; Ames, 1992; Beveridge, 2004). Exploring parental support within the institutional plane of analysis is essential, particularly as achievement goals, expectancies and values in the achievement context become manifest through daily interactions with primary caregivers outside school (White, Kavussanu, Tank & Wingate., 2004). Teacher interviews and Estyn data sources are drawn on to reveal the perceived parental support and contact between the school and the wider community.

At **North Higherbank**, parents form an integral and active role in their children's education. The school works hard to maintain its links with parents. Parents have ready access to Mr Night, the head teacher, through his open door policy. Attendance at teacher-parent consultations and SATs evenings are very good.

> "The parents here are very supportive of the kids and things going on in school. Parents want their children to achieve and if we have a SATs evening for example, it is very well attended. We talk of a triangle and each of the angles of the triangle is a parent, the school and the child. The three have to work in harmony together in order to maximise the child's potential" [**Mr Nowledge, Year 6 Teacher North Higherbank**].

Parent realise the importance of education and work in conjunction with teachers to support children's learning at home.

> 'There's a mix of middle and working class parents who realise the importance of education. If the value of education is communicated to pupils it becomes evident in the amount of support they receive…homework is not an issue here as parents support the school policy and ensure that homework is returned' [**Mr Nowledge, Year 6 Teacher North Higherbank**].

There is an effective PTA organisation and uptake is good. Parents support the home-school reading agreement and the school encompasses parents resulting in a sense of belonging to the wider school community.

At **Highbury Park**, parents are very actively involved; they have a strong partnership with teaching staff; the school works hard to maintain these links. Mrs Humble, the Head Teacher, offers an open door policy:

> "Getting parents in to school has never been an issue as parents are warmly welcomed and participation in school and extra-curricular events is warmly received. Parents regularly attend sporting occasions with their children, both watching school fixtures and international events such as the 'Six Nations Under 21s' events. Parents and teachers sing from the same hymn sheet and school values are generally reinforced at home"[**Mrs Humble, Head Teacher, Highbury Park**].

Parents are familiar with the structure and practices of the school community and the importance of education is realised and supported at home. The PTA is very active and parents report a sense of belonging to Highbury community. Parents are kept abreast of school activities through the fortnightly 'Crew News' magazine. Mr Humour identifies parental support and making children proud to belong to the school as the two main contributing factors in eradicating barriers to learning:

> "Even though the school is in a very poor area, you are probably in the poorest area in Coalshire. Nobody works around here, but the parental support is fantastic. I've worked in so called posh schools where parental support isn't as good as it is here" [**Mr Humour, Year 6 Teacher, Highbury Park**].

The school's home-school reading scheme is widely supported and parents regularly get involved in joint parent-child activities organised by the school. The following fieldnotes provide one such example:

> Preparations are being made for the annual school Gambo [go-kart] racing event. "This event has been enjoyed by many parents 'back in the day' but is sadly no longer encouraged due to the fanatic proponents of "ridiculous 'ealth and safety restrictions" (Mrs Humble, Head Teacher). Staff at Highbury Park appreciate the importance of preserving such traditions as pupils are able to actively learn a variety of skills whilst working collaboratively with parents, siblings and other members of the community. Pupils are encouraged to form teams, design and build a Gambo with their friends and family members in preparation for the big race day (see Figure H3). This activity further serves to unite pupils, siblings, parents and the school together with a common goal; to win the prestigious Gambo prize, thus strengthening school-home relationships. Many of these parents attended Highbury Park Primary themselves as children, as did their parents. The school is proud of being an important institution within the community and attributes its success with home-school links to the history shared by parents and the school [**Fieldnotes, 06/03**].

Staff at **Lowerbridge** recognise the importance of parental support in 'striving for success' and work hard to establish effective partnerships with parents (Estyn, 2003b, p.17). Parental involvement is also identified as limited (Estyn, 2003b) and Mrs Light reports how "we cannot get them in for love nor money". Some parents value the ready access they have through the head teacher's open door policy. Mrs L'Enthuse struggles to build partnerships with parents who do not value education "there is no continued back up from parents so it does have a negative impact on us" and:

> "Although some children have an idea from the home that education is important and the parents have high expectations of them, a lot of parents just do not care at all. As long as the children just come to school from 9 until 4 and then stay for after school clubs if possible we're the babysitters as long as they are out of the way" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

Problems arise when pupils receive conflicting messages from figures of authority in their home and school contexts:

> "As much as we try to give them the message that they can achieve, they go home and ten minutes later, Mum or Dad has said something to knock them back again so it makes a difference to them" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

Teachers readily express issues with conflict between messages given by the school and those that pupils receive from parents at home. Teachers at Lowerbridge attribute the struggles they encounter with poor pupil behaviour to a clash in parental and school values. Whilst the school operates a zero-tolerance attitude to bullying and aggressive behaviour, this message is not supported at home. Teachers persistently convey to pupils that hitting other children is not the way to express emotions but, as Mrs L'Enthuse expresses:

> "The same children go home and their parents tell them 'you must whack 'em if they annoy you, you've gotta defend yourself' so who are they going to believe? Us who they see for a few hours a day, or their parents who they spend most of their time with? They know, if we say 'well your behaviour isn't acceptable, we do not like what you are doing, we are going to have to have your parents in to talk about it', they know that Mam and Dad will clip 'em round the ear and say 'you've gotta behave in school' that will be the end of it. There is no continued back-up so it does have a negative impact" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

Although school newsletters are sent home to parents and the school operates a home-school homework and reading agreement, uptake is low. Attendance rates at parents' evenings are also very low and those most in need of attending do not show:

> "We've sent out more than 60 letters to parents inviting them to parents evening and despite reminders, we've only had 7 replies" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

The school does recognise the need to involve more parents in the life and work of the school and is working diligently to achieve this. Only a very small number of parents provide help in the school and the school has no PTA.

> "Because of the type of housing, the parents not being in work, not valuing education and not transmitting the right messages to pupils who learn that they do not have to work to get what they want. Parry Lawrence is a prime example: his dad 'acquired' a laptop for him last week and he's off to Disney World, Florida in the summer holidays, despite him not having worked for years!" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

Ad hoc discourse during the period of data collection indicated that other staff members concur with Mrs L'Enthuse's sentiments; home-school relations were difficult to establish and maintain at Lowerbridge.

Fallowfield's Head Teacher, Mrs Friend, acknowledges that "schools that have the best improvements are really at the heart of the community. This school is good ata getting people and parents in to the school and the school belongs to them. They have a sense of ownership". Despite this recognition, the school experiences extreme parental apathy and conflicting attitudes between teachers and parents. The school recognises that any sense of community evident in the former separate schools was lost when the schools merged:

> "Many children do not enjoy a great deal of parental support. We send a Year 6 bulletin out to parents explaining what their child is studying in each subject; some of the parents want you to tell them each week what page to look at. Huh! I tell the children that they need to learn outside school; they need to read at home to consolidate what they have learned in school. The problem with this school is parent apathy. They just seem happy with the school taking their kids off their hands for six hours a day. Those parents with traditional mining backgrounds realise the importance of education and have grown up with the notion of education being an escape route out of the situation they are in. The other problem is that those who have bettered themselves and got a good education and a degree are still not able to get jobs so it's no incentive really. It's a lose-lose situation" [**Mrs Friend, Head Teacher, Fallowfield**].

Staff work hard to encourage parents into the school although the school's open-door policy restricts parents' access to the Head Teacher between 9.00-9.30am. The high-security

facilities at Fallowfield further restrict and potentially deter parental access to teachers. According to Mr Fairly, the Year 6 teacher, parents reluctantly enter the school only when problems arise; this reticence is ascribed to parents' negative schooling experiences.

> "They're more than happy to come in and shout if something is wrong but that's the only time you'll see them. Unfortunately it's these parents that you need to see the most, not parents like Carol Francis's mum who is a teacher and supports her unequivocally. In a school like this, teachers are reaching out for parents to come in. Besides actually dragging them off the road, I do not know what else we can do really because we are trying to share what we are doing. Everyone here has organised some sort of event where we have asked parents to come in. Sports day is fine because it doesn't challenge them but when you are actually going to challenge them you get some problems. I think the way ahead with parents is to get them in on a social gathering rather than take them head on and say 'we're going to tackle subject problems'. It's best to get them in here first. Be friendly with the parents and say 'we'll work together and not against each other' [Mr Fairly, Year 6 Teacher, Fallowfield].

The school has established a PFA (Parents and Friends Association) and piloted a home-school diary policy although only 1/3 of parents signed up to it and a minority of parents sign pupils' homework books. Throughout the period of data collection, it was very apparent that staff at Fallowfield struggle to effectively engage with parents. A summary of the key differences at each institution can be seen in Table 4.16. Data for partnership with parents, access to Head Teacher, PTA and improvement of links have been taken directly from each school's Estyn report. Interviews with staff and fieldnotes were used to complete the remaining categories.

Table 4.16   Summary of Parental Support at Each Institution

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Partnership	Very Good	Very Good	Poor	Poor
Access to HT	Open Door	Open Door	Open Door	9-9.30 am Restricted Access
Value School	Majority	Majority	Minority	Minority
PTA	Yes	Yes	No	No - PFA
Home-School Agreements	Effective	Effective	Limited Response	Limited Response
Belonging	Yes	Yes	No	No
Bridging	Newsletters	Magazine	Letters	Bulletin
Striving to Improve Links	Yes	Yes	Yes	Yes

There are clear differences in terms of parental support at the higher and lower achieving schools. North Higherbank and Highbury Park, the higher achieving schools, enjoy strong partnerships with parents, the majority of whom are said to value the education provided by the school. Teachers at these schools report having supportive parents who are actively involved in their children's learning and parents meetings are well attended. Partnerships with parents at the lower achieving schools are less favourable. Meanwhile, teachers at Lowerbridge and Fallowfield, the lower achieving schools, report extreme parental apathy and unsupportive parents that 'you can't get in for love nor money'. Teachers at these schools express concern over both low attendance rates at school events and the conflicting messages children receive from teachers and parents regarding the value of education. Unlike the higher achieving schools, Lowerbridge and Fallowfield struggle to foster effective communication and collaboration with parents. It is particularly noteworthy that Fallowfield has strongest school boundaries in the form of high fencing, security systems preventing individuals from entering the school and very restricted access to staff. With a buzzer that is sometimes not heard, parents are not readily able to enter the school.

4.23   Visual displays

Exploration of the visual displays within schools may be one way of identifying the messages conveyed by schools that pupils become aware of. The material culture of the school is important; an aesthetically pleasing and inviting school environment may enable pupils to develop a sense of belonging. For example, the content of visual displays may communicate the school's celebration of children's work, reveal a focus on the curriculum or emphasise the importance of academic achievement. Visual displays also reveal whose interests are represented: the school's or the children's broader everyday interests. The degree of control over how the classroom culture is organised can also be revealed through analysis of visual displays. It is therefore useful to explore the degree of autonomy pupils had over the aesthetics of their classroom and the surrounding corridors. Many researchers have analysed visual displays to give an indication of differences in school cultures (e.g. Ivinson, 1998; Bernstein, 2000; Daniels, 2001). The following photographs illustrate the internal material cultures of each institution. For each institution, six displays have been selected, intended to illustrate as much of the available material culture within each school. Each is labelled with the corresponding initial of each school; i.e. N for North Higherbank, and numbered 1-6 to aid analysis.

North Higherbank Displays

The displays adorning the walls throughout the school incorporate use of ICT, are abundantly colourful and textured, incorporate children's work, are predominantly curriculum orientated and are constructed by teachers. No outside-school experiences are displayed.

Fig. N1: William Morris art work

Fig. N2: Literacy

Fig. N3: Beach
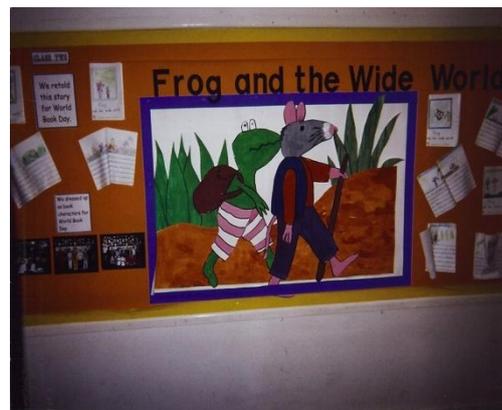
Fig.N4: Story

Fig. N5: Teddies

Fig. N6: Insects

Highbury Park Primary

ICT is widely used in the displays, there is an abundance of colour and texture, and the displays incorporate pupils' work and extra-curricula activities. There is a clear focus on children's outside-school experiences. Pupils are given responsibility for constructing the displays.
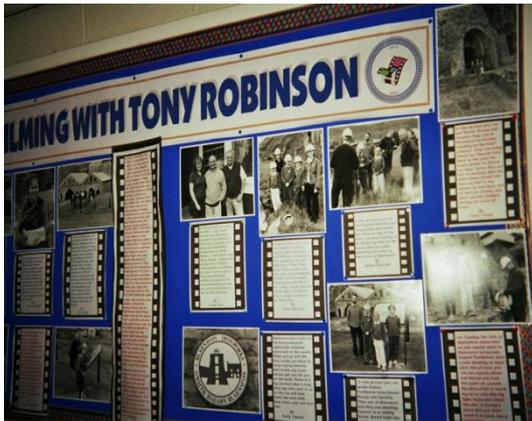
Fig. H1: Filming with Tony Robinson

Fig. H2: Filming with Ben Fogle
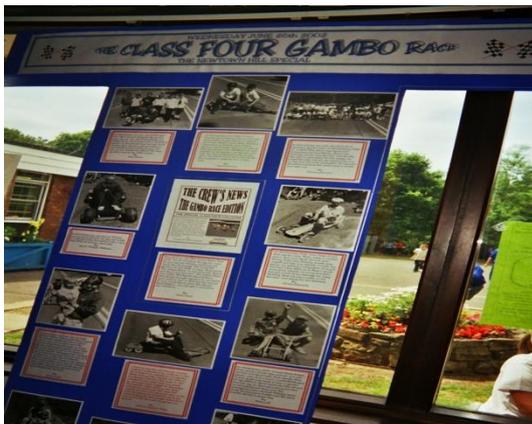
Fig. H3: Gambo racing

Fig. H4: Hydraulics

Fig. H5: Alternative Technology

Fig. H6: Awards

Lowerbridge Primary

ICT is employed, displays are colourful, the focus remains on pupils' work and extra-curriculum focus (namely drama), and there's an emphasis on achievement and striving for success. None of the displays incorporate children's outside-school experiences and all displays are constructed by teachers.

Fig. L1: Rules

Fig. L2: Pupils of the week

Fig. L3: Oliver musical

Fig. L4: Oliver

Fig. L5: Science
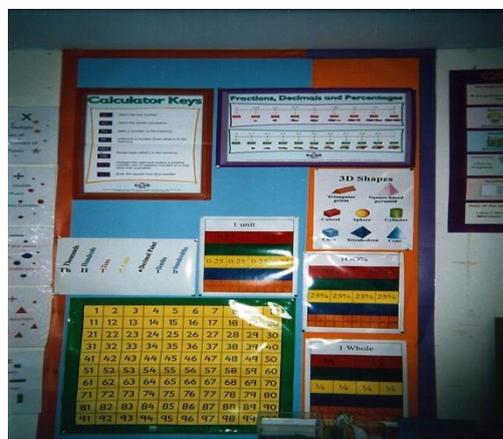
Fig. L6: Mathematics

Fallowfield Primary

There is limited use of ICT, displays are colourful, and the displays are predominantly art-focused rather than containing curriculum or extra-curricular content. There is no reference to pupils' outside-school experiences. Displays are constructed by teachers.

Fig. F1. F1: African art

Fig. F2: Art work

Fig. F3: Historical art

Fig. F4: Art work

Fig. F5: Art work

Fig. F6: Insect art

4.24 Analysis of displays

Educators often place unnecessarily heavy emphasis on the aesthetic nature of visual displays whilst underestimating their power as objects of reference for pupils; in serving as a bridge to other symbol systems. Pupils may progress from identifying signals from the displays to symbols to be employed in everyday learning activities. Having briefly illustrated the visual material presented within each school, focus should now turn to exploring the meaning imbued within the visual culture of each school. Key dichotomies are employed to exemplify key institutional differences. These dichotomies follow a child-centred approach for knowledge production (teacher - child, Tables 4.17 and 4.18), notions of boundary (inside - outside, Table 4.19), and materials (school - everyday artefacts, Table 4.20). There are 6 photographs for each school; each labelled with a corresponding school initial and number. Each photograph was analysed and recorded according to these 4 dichotomous categories.

Table 4.17: Knowledge: Child - Teacher Focus

	Children's Knowledge	*Teacher Knowledge*
North Higherbank	N1 N2 N3 N5	N4 N6
Highbury Park	H1 H2 H3 H4 H5 H6	
Lowerbridge	L4 L5	L1 L2 L3 L6
Fallowfield	F1 F2 F3 F5 F6	F4

Table 4.18: Production: Child - Teacher

	Produced by Child	*Produced by Teacher*
North Higherbank	N1 N2 N3 N5	N2 N4 N6
Highbury Park	H1 H2 H3 H4 H5 H6	
Lowerbridge	L4 L5	L1 L2 L3 L6
Fallowfield	F1 F2 F3 F5 F6	F4

Table 4.19: Boundary: Inside - Outside School

	Inside School Activities	*Outside School Activities*
North Higherbank	N1 N4 N5	N2 N3 N6
Highbury Park		H1 H2 H3 H4 H5 H6
Lowerbridge	L1 L2 L3 L4 L6	L5
Fallowfield	F2 F3 F4 F5	F1 F6

Table 4.20: Material: School - Everyday Artefacts

	Use of School Materials	*Everyday Artefacts*
North Higherbank	N1 N2 N3 N4 N5 N6	
Highbury Park		H1 H2 H3 H4 H5 H6
Lowerbridge	L1 L2 L3 L4 L5 L6	
Fallowfield	F1 F2 F3 F4 F5 F6	

Tables 4.17-4.20 reveal that each school prioritises pupils' work as the key focus, as would be expected, although there is no evidence of pupil knowledge in half of the selected displays at Lowerbridge. Similar patterns are found with the production of content on display, although teachers mostly present their own work at North Higherbank. Before exploring the messages these displays are transmitting to pupils in school, it is worth attending to the wider context of these displays; teachers at North Higherbank have created colourful displays along the corridors of the nursery and infant department, in addition to displays produced by the children themselves. When exploring boundaries, most displays communicate the importance of inside-school material rather than bridging to everyday outside-school activities.

Parallel patterns are found in the analysis of the material artefacts. North Higherbank and both lower achieving schools utilise only school materials in communicating meaning to pupils through school displays. However, notable differences are observed at Highbury Park. Analysis of the visual displays demonstrates support for the child-centred approach adopted by the school. Here, emphasis is placed on pupils' learning through active engagement; all displays were constructed by pupils, everyday artefacts are incorporated into the school setting and the displays bridge between pupils' inside and outside school worlds. Within this community of learners, the displays communicate an emphasis placed on everyday activities such as football matches (Fig. H4), Gambo building and racing (Fig. H3), and working with film crews and TV presenters such as Tony Robinson (Fig. H1) and Ben Fogle (Fig. H2). Pupils are encouraged to engage learning activities within these contexts. A general snapshot summary can be found in Table 4.21 below; although simplistic, it does illustrate message systems evident at Highbury Park that are absent in the other institutions.

Table 4.21: Summary of Visual Displays

	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Own Work	√	√	√	√
Bright colours	√	√	√	√
Outsider 'expert' Input		√		√
3-Dimensional	√	√		
Non-Art.	√	√	√	
Tools Utilised Applied in Maths	√	√	√	√
Motivational	√	√	√	
Pupil Input.	√	√	√	√
Outside Classroom Activity	√	√		
Artefacts from Home		√		
Non-Curriculum	√	√	√	√
Identity – Classroom		√		
Outside School Activity		√		

As Daniels (1989) identified, visual displays serve as tacit relays of pedagogic practice. Analysis of the displays in this study reveals distinct differences between Highbury Park and the other three schools with regard to the way in which the grammar of pedagogic practice is indirectly revealed and relayed to pupils through visual representations. At Highbury Park, knowledge production is exclusively child-focused, the displays cross school-community boundaries and include only outside school activities and everyday artefacts are incorporated, instead of usual school materials found in the displays at the other schools. Highbury Park also appears to be the only school to consistently celebrate the child and give autonomy to pupils. There are no distinct differences in the visual relays between the higher and lower achieving schools.

4.25 The curriculum

Emphasis thus far has been placed on the message systems communicated to pupils through the material culture of each school. It has not been within the scope of this chapter to sample in-depth curriculum subjects, although ethnographic work on strategically selected core

curriculum subjects will be addressed in final part of this chapter. Table 4.22 does, however, provide a brief summary of key curriculum shortcomings and assessment results identified by Estyn inspectors. Whilst the reliability and validity of such reports have already been questioned, these reports do, nonetheless, reflect the comments made by teachers during interviews (e.g. refer to Section 4.19). The summary table has been included to illustrate how schools are attempting to improve overall school performance by heeding to the shortcomings identified during school inspections.

Table 4.22: Summary of Curriculum Shortcomings and Assessment

	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Curriculum	Good with outstanding features. Quality teaching, high expectations with outstanding support and guidance	Effectively planned lessons, enthusiastic delivery, and effective use of resources. Context of learning deemed as important as content. Active involvement of pupils	Underdeveloped planning inhibits standards. Suitable SEN provision	Satisfactory KS2, unsatisfactory KS1. satisfactory planning and assessment overall
Lessons Satisfactory	100%	100%	90%	75%
English Shortcoming	No literacy shortcomings but majority of pupils do not use cursive handwriting	No shortcomings. Very good standards of literacy, listening, reading and handwriting	Speaking and listening are underdeveloped	Unsatisfactory KS1 reading and writing and involvement
Maths Shortcoming	No numeracy shortcomings but pupils need to develop ICT to support maths	Standard of mental maths raised in KS1 and speed of recall to be improved in KS2.	Underdeveloped problem solving, oral and mental maths and application of knowledge	Unsatisfactory numeracy skills in KS1, significant proportion of pupils lack confidence
Assessment	Highly constructive feedback is offered, emphasis on positive	Exceeds national averages. Effective progress monitoring. Pupils given opportunities for self-assessment.	Satisfactory but underdeveloped	Some level 2s in Year 6
Achievement CSI*	71%	100%	64%	41%

*Noted for specific year of Inspection Report - therefore non-comparable results

Key institutional differences were found between the higher and lower achieving schools. There were no unsatisfactory or underdeveloped curriculum areas in North Higherbank and Highbury Park, the higher achieving schools, where all lessons were considered to be 'satisfactory' and assessments were praised by the inspectors. Shortcomings and unsatisfactory lessons and assessment were, however, identified in Lowerbridge and Fallowfield, the lower achieving schools. It is interesting to note that the inspection reports have picked up on variation between the higher and lower achieving schools in terms of differences between subject provision in schools. Also, overall core subject indicator (CSI) achievement rates are notably higher in the higher achieving schools (M=86%) compared with the lower achieving schools (M=53%). Notable higher and lower achieving differences also emerge in the percentage of lessons found to be 'satisfactory' (100% at the higher achieving schools compared with 83% at the lower achieving schools). Although the majority of lessons at Lowerbridge and Fallowfield were identified as "satisfactory", these schools are nonetheless identified as not doing well.

4.26 Summary of institutional features

Through analysis of the material culture of each school, this part of the chapter has addressed a wide range of issues from management structures, school and community boundaries through analysis of who comes into school and activities that pupils engage in out of school and the messages relayed to pupils about their school culture. It is evident that all schools in this study share similarities around the areas of: school catchment, ethnicity and socio-economic status of pupils, evidence of committed head teachers, supportive school relationships, and all schools strive to improve links with parents. All Head Teachers are a similar age (late 40s-early 50s) and stage in their careers, all Year 6 teachers simultaneously serve as Deputy Heads and all schools display primarily child-centric work. However, strong differences have emerged between the higher achieving and lower achieving schools, particularly with regard to how much of the 'outside' children are required to leave at the school gates. The following summary presents the features shared by the HA schools (North Higherbank and Highbury Park) and not by the lower achieving schools (Lowerbridge and Fallowfield).

Only in the higher achieving schools are partnerships with parents identified as 'very good'. These schools have effectively established good relationships with parents who attend both

academic and social school events. Parents at North Higherbank and Highbury Park are described by teachers as valuing the importance of education; they engage with staff at SATs and other curriculum-focused events and social events and play a key role in maintaining effective home-school partnerships found at the higher achieving schools.

The higher achieving schools have also created very strong links with the wider community and further utilise these links to encourage their pupils to engage in a wide range of social, cultural, political and historical practices. Children at the higher achieving schools are exposed to twice as many outside school visitors than pupils at the lower achieving schools and experience nearly twice as many school trips both within the locale and crossing the Coalshire's boundary to visit sites of interest outside the locale. North Higherbank and Highbury Park are recognised by Estyn as making effective use of the locale as a learning resource.

A strong Christian ethos is found among the higher achieving schools, in a locale identified as having the lowest religious affiliation in Wales (ONS, 2011). Overt Christian values and practice in daily worship are identified as playing a key role in fostering pupils' self-worth and in encouraging and promoting positive values and excellent attitudes among pupils at North Higherbank and Highbury Park. The local authority recognise that "there is (still) no specific service delivery aimed to raise the self-esteem and aspirations of pupils" (CYPP, 2011, p.59) while recognising a link between these factors and academic achievement. The shared ethos at the lower achieving schools is primarily behaviour-focused; the attitudes of pupils at Lowerbridge and Fallowfield are said to be less than excellent.

Superior planning and delivery of the curriculum were also found at North Higherbank and Highbury Park, where all lessons were acknowledged, by Estyn inspectors, to be satisfactory or better and the curriculum was considered to be planned effectively. These higher achieving schools also provide visually stimulating learning environments for their pupils and very high expectations are clearly communicated to pupils at these schools. In contrast, teachers at Lowerbridge and Fallowfield were found to deliver unsatisfactory lessons and shortcomings were identified in English and mathematics. Furthermore, methods of assessment in these schools were criticised by Estyn as being under-developed.

Although Lowerbridge and Fallowfield did not share these features with the higher achieving schools, it was not easy to find similarities between the LA schools. Notwithstanding, likenesses were found with regard to both lower achieving schools having similar proportions of pupils with SEN (37%) and both schools articulate a desire to strengthen relationships with parents but continue to struggle to achieve this. On the whole, the features of each of the lower achieving schools differed considerably. For example, the learning environment at Lowerbridge was bright and welcoming yet at Fallowfield it was contemporary but bland. Lowerbridge has a higher number of pupils (48%) eligible for free school meals (FSM) compared with 40% at Fallowfield. The resources at Fallowfield were found to be superior to those at Lowerbridge yet Mrs Friend, the head teacher, faces considerable financial constraints, which were not evident at Lowerbridge. Finally, Lowerbridge is making progress in establishing links with the community whereas Fallowfield has not yet developed sufficient community links.

Having outlined the main differences between the higher and lower achieving schools, it is worth attending to the most notable difference across the four institutions, which were in the specific school mottos that focused on:

- Belonging (North Higherbank)
- Social Context (Highbury Park)
- Success (Lowerbridge)
- Respect (Fallowfield)

It is clear that schools vary in the messages they convey to pupils, some focus on belonging to a community of learners while others emphasise appropriate behaviour or stress the importance of academic success. These will be explored further later on in this thesis.

Through looking at boundaries in and out of school, North Higherbank and Highbury Park seem to recognise pupils and the socio-cultural context in which they live. For example, as will become evident in section 4.27, Mr Humour from Highbury Park actually lives in the locale and fully understands the lives of the children in his class. These same schools relay messages to pupils, through the presentation of their own experiences, and the acceptance of outside school artefacts being brought into the school, that they belong to this community. By permitting 'The Crew' to construct their own classroom displays, incorporating wider social experiences into the curriculum, and drawing from contacts within the locale, staff at

Highbury Park are clearly bridging between children's inside and outside school worlds, thus softening the boundaries between home and school. Conversely, the lower achieving schools do not have as many contacts and personal links with members of the wider community and these schools appear to erect and maintain almost impenetrable boundaries around the school (through high fencing, security systems and restricted access to teaching staff) that parents and other members of the community find it difficult to traverse.

It is widely acknowledged that academic achievement varies from year to year and also within schools. While examination of school features serves an important role in promoting understanding of the social and cultural context in which school performance is examined, academic achievement, and more specifically underachievement, cannot be fully understood until the specific classroom contexts in which learners are situated are thoroughly explored. This chapter now becomes increasingly nuanced as the ethnographic research element is accorded greater weighting as the transition is made from the plane of analysis of the institution to the classroom plane of analysis. The following section aims to provide a semblance of the unique classroom cultures experienced by pupils undertaking the SATs intervention in this study. Greater reliance on classroom observations, coupled with teachers' own perceptions of their teaching approach, permits a detailed and rich reflection of each classroom culture.

4.27   Introduction - Plane of analysis: Classroom

The previous section identified movement across school boundaries at North Higherbank and Highbury Park. These higher achieving schools seem to recognise that outside resources, individuals, artefacts and movement across school boundaries increases the potential availability of resources for pupils. Meanwhile, the boundary in and out of school at Lowerbridge and Fallowfield, the lower achieving schools, is much stronger. In order to understand what might make a difference to children's learning, in terms of pupils feeling a sense of belonging to a learning community, it is necessary to look inside each classroom; this is particularly pertinent as the classroom is the context where children go to learn. This section therefore explores the research setting at the classroom plane of analysis. Attention is paid to the artefacts and tools appropriated within the social practices occurring within each classroom context. Drawing from fieldnotes taken during fortnightly observations of each classroom, *ad hoc* discussions with key members of staff during the 18 months of data collection, Estyn Inspectorate Reports and teacher interview data, this section focuses on each school in turn; commencing with (i) a descriptive account of each teacher's instructional approaches to teaching, (ii) teacher-pupil interactions and (iii) management of classroom space and movement. Systematic analyses of these features will provide a detailed picture of the unique learning culture fostered within each classroom.

Pseudonyms have been awarded to each participant; all surnames commence with the same letter as the respective school, e.g. Mr Nowledge works at North Higherbank. To facilitate familiarisation with each class teacher, a name has been allocated that indicates a particular aspect of their individual character. For example, Mr Nowledge is esteemed by his peers as being erudite and wise whilst comedy and wit are readily available in Mr Humour's classroom. Mrs L'Enthuse is highly committed and motivated whilst Mr Fairly is just that; fairly strict and fairly traditional. Each class teacher's instructional approach will be now be explored.

4.28 Class teachers' instructional approach

To facilitate analysis and to aid comparison between classrooms, the following features are explored: (i) teaching experience; (ii) instructional approach; (iii) approach to prepare children for SATs testing; (iv) attitude to teaching; (v) evidence of praise; (vi) expectations communicated to pupils; (vii) pace of lessons; (viii) level of feedback provided; (ix)

opportunities for outside learning, (x) evidence of outsiders being utilised to enhance pupils' learning experiences (xi) whether or not the class teacher resides in Coalshire which may reveal whether or not they understand and draw from the immediate social and cultural context within which children are situated. These features have been selected to identify what might facilitate learning, especially for children in this locale whose specific family and socio-economic circumstances would ordinarily predict unfavourable educational outcomes. The character of each teacher will emerge as their instructional approach is explored. The Year 6 and Year 2 teachers in the higher achieving schools (North Higherbank and Highbury Park) will be explored before the lower achieving schools (Lowerbridge and Fallowfield).

North Higherbank Year 6

Mr Nowledge is an experienced science-specialist teacher in his 50s who loves his job; evident in only 3 days sickness in 25 years. His instructional **approach** involves placing the onus on pupils to be independent learners and he repeats the foundations of new concepts until all children have grasped it. Mr Nowledge is a keen for children to learn that all statements made need to be supported with evidence. The approach employed by Mr Nowledge to prepare pupils for SATs **testing** involves him rewriting the majority of materials used by pupils in preparation for SATs; identifying relevant, context specific, activities for English, maths and science that his pupils will engage with. Mr Nowledge recognises the role played by these tailored resources in the high SATs attainment figures at North Higherbank.

> "I use examples relevant to the children. For example, when investigating the rates of evaporation I ask the girls to tell me the best method of drying their hair; in a pony-tail, scrunched up or by blowing hot air over it. This helps them to understand and they will only remember these concepts if they are applied to everyday life. The children are continually asked for and given examples of how concepts are applied to everyday situations. They need to apply these skills to different situations because they have to do it in their SATs. They need to abstract their knowledge and apply it to different things. Some teachers in some schools have everything neatly compartmentalised, which doesn't particularly help the children. I think that it is crucial that children learn how to apply what they learn in school to other things". [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Mr Nowledge's **attitude** is constantly enthusiastic and he is both dedicated and abundantly passionate about educating young minds.

"I just love being in the classroom with the kids. I love teaching. Teaching is SUCH an enjoyable job to have. If the teacher enjoys teaching and makes learning fun for the kids then they'll enjoy their learning experience" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Praise is regularly administered for good work, behaviour and effort.

"If a child comes to me and says 'that is the best I can do' I'll gladly accept it and say 'well done'. If, however, he or she said it was an 'okay effort' then I will not accept it because it's not good enough. If a child puts in the effort to give his or her best, it's my job to make their best better. If they haven't then I need to give them a kick of encouragement" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Pupils know that their teacher has high **expectations** and will only accept work if it is their absolute best. They are given a reprieve from homework as a reward for hard work in class. Pupils are expected to produce the highest possible standard of work; Mr Nowledge's motto is '*quality counts*'.

"They are used to the intensity of working and they just get on with the workthey are set because they know what they've got to do and they know they've got to do it well. The children know I expect their absolute best, whatever they're doing. It's a fundamental skill to learn whatever the context" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Mr Nowledge encourages his class to identify the purpose in every activity they participate in. He maintains a lively **pace**, humour remains central and children are expected to have fun and encounter positive learning experiences. He also provides extremely detailed and positive **feedback**:

"I spend a lot of time marking work; five minutes per pupil for their English work is a great deal of time, so I spend two and a half hours marking English each day but it is definitely worth it. What's more, the emphasis is always on the positive. I give one √ if the answer is correct or okay, √√ if it is very good and √√√ if I am extremely pleased with what they've done, such as writing the correct apostrophe for possession or demonstrated the correct use of subordinate clauses" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Opportunities for **outside learning** are maximised whenever possible:

> "We make sure education is as fun as we can; we involve children in taking them outside, we make education real so that they can see there is actually a purpose in what they are doing. Personally I avoid text books as much as I can because they are not always right for the situation you are doing so I'd rather do what the class needs in terms of what I do with them rather than something presented out of a text book. I keep it fun. You keep it lively, you keep the class buzzing and the kids respond to that. I'm not a big fan of text books. I try not to use them unless I have to. The best resource and instrument in any school is the person at the front. The books are only as good as the person presenting the task" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Mr Nowledge **utilises others**, namely parents, as a resource and actively encourages pupils and parents to work in partnership with him to support learning.

> "The parents write comments on their books sometimes which I absolutely love. I always encourage the kids to go home and tell their parents what they have been doing and discuss concepts such as finding examples of condensation together, like a chilled wine bottle or a bathroom window" [**Mr Nowledge, Year 6 Teacher, North Higherbank**].

Mr Nowledge **resides** in a neighbouring locale but has invested time in familiarising himself with the social and cultural practices of Coalshire locale. He uses this knowledge in tailoring the curriculum to meet the needs of his pupils. Mr Nowledge is well-liked and respected by his pupils who enjoy his humour and appreciate being treated more like young adults than children.

North Higherbank Year 2

Mrs Noble is a very **experienced** teacher in her 50s who has been teaching for 'a very long time' with many years spent working at North Higherbank Primary. She is a very confident teacher who adopts a firm but fair **approach** with her class. Mrs Noble communicates with her class at their level, ensuring they understood the rules in place. There was no evidence of specific **test** preparation observed during the period spent in this classroom. Mrs Noble shares how her **attitude** to teaching has changed since the implementation of the National Curriculum; she yearns for the earlier freedom experienced by teachers pre-Education Reform Act 1988 and dislikes the current climate of perennial assessment. Humour was not as prevalent in the Year 2 classroom as with Year 6 but was by no means absent. In enforcing the rules of common courtesy, Mrs Noble occasionally a raises her voice; particularly when

telling children off for misbehaving. Regular **praise** is interwoven with reproaching children; usually 'the (less involved) boys on the naughty table' although, more often than not, the 'middle ability' group of girls who fuss and are off-task just as frequently.

Mrs Noble communicates high **expectations** to her class, both in terms of quality of work produced and behaviour in the classroom. Children rarely 'get away with' talking out of turn during circle-time or interrupt when other children put up their hand to offer an answer. Lessons are well-**paced** and activities are differentiated to accommodate the diverse range of learning needs in the classroom. Children receive immediate verbal **feedback** on their work and detailed written and positive feedback in their books. There was no evidence of **outside learning** or use of **outsiders** during the period of data collection. Mrs Noble inferred she was a long-standing **resident** in Coalshire. Mrs Noble's traditional 'no-nonsense' approach to teaching is respected by the children in her class who seem to benefit from the high expectations placed on them; children progress well in this class.

Highbury Park Year 6

Mr Humour is a very **experienced** Year 6 teacher in his 50s who loves his job. He is jovial, enthusiastic, encouraging and humorous and adopts a somewhat atypical **approach** to teaching. He lives for his 'Crew' and strives to enrich their lives and learning experiences. He engages with pupils at their level at the start of every activity. Mr Humour regularly interrupts his class when they're 'working too hard' to discuss non-work issues; for example:

> "Man United were lucky yesterday" to which the class replied in unison "yes, Sir", or: asking "who fancies breakfast next Thursday?" - a "Tesco brecky treat" offered to his 'Crew' [**Mr Humour Year 6 Teacher, Highbury Park**].

Other distraction strategies include stopping the class from working to engage in a game of inflatable basketball:

> "Oi, workers at the back with your eyes down, do you mind, some of us are trying to have a basketball competition here! C'mon, bums to the front of the deck if you think you can do better than Haysey!" [**Mr Humour Year 6 Teacher, Highbury Park**].

These interruptions and jovial rebuking for working too hard offer Crew members regular breaks during lessons and keeps them on-task when not engaging in humorous banter or fun

and games. Crew members are also encouraged to participate in projects such as the school magazine issued fortnightly. Mr Humour adopts such cross-curricular teaching strategies to encourage pupils to see the useful applications of learning correct grammar and punctuation for publishing written articles; understanding scientific concepts to be able to explain to parents how, for example, rockets work or how go-karts gain momentum downhill. Mr Humour is a firm believer that heavy emphasis on SATs **test** preparation in Year 6 only serves to over-burden pupils and cause them unnecessary stress; he purposely refrains from mentioning the 'S word' to children until near the actual assessment date. Mr Humour's **attitude** to teaching is: "If they enjoy school and feel part of the group then they want to do well for the team and that motivates them". He frequently adorns his class with **praise** and each day pupils will hear comments like 'super, very nice, lovely, so good so far, very good, very good effort, excellent work and good effort girl!' Mr Humour is quick to reward his crew for working hard with treats from 'the chiller' (a fridge positioned in the centre of the classroom stocked with fresh fruit and drinks) or allowing them to listen to the local radio station.

Mr Humour clearly sets and communicates very high **expectations**; he commands good quality work in exchange for fun during lessons. The crew's motto, which is the same as the Foreign Legion, is '*Do or Die*!' The crew are expected to remain on-task and focused on their work and respond immediately when Mr Humour says 'put your pens down and look this way' or 'eyes down and bums up for the last half an hour'. He is often heard reminding the class that he wants good quality work and no rubbish. The Crew respond well to the dynamic **pace** of lessons; with fun, and often energetic, distractions, there is little evidence of boredom amongst the Crew members. Pupils' work is regularly inspected and immediate **feedback** is provided; frequent announcements are made throughout the day, such as 'work inspection in three minutes'. Mr Humour regularly facilitates **outdoor learning** and utilises the knowledge and skills of **outsiders** to enrich the social and learning experiences of his pupils, including an engineer friend who was able to assist in hands-on rocket design project whilst another friend who owns a tattoo business was able to sponsor the class and provide appropriate kit for sporting competitions. He says "the children benefit from the equipment and the sponsor benefits from the advertising". School staff are also used to enhance the learning experiences of the Crew; the school caretaker, for example, is pro-actively involved in D&T activities with crew members. On one occasion, he was asked to fix a broken chair and rather than fix it himself he instructed, guided and scaffolded the activity, enabling 'Haysey' to fix the chair

himself, thus learning a new skill. Haysey proudly sat on the chair once he had fixed it. Mr Humour is historically rooted in this locale having **resided** 'here as a youngster' and despite having moved to England and taught in 'posher schools' he has returned to his roots to educate and meet the needs of children growing up in Coalshire. Crew members clearly adore Mr Humour; he is a positive male role model for the children in his class. His Crew enjoy his unorthodox teaching methods and look forward to coming to school and being with their 'Crew Family'.

Highbury Park Year 2

Mrs Heart is in her 40s and is an **experienced** teacher with a fun yet caring sense of humour. She, too, is clearly devoted to her job and enjoys working within the climate created at Highbury Park. A community spirit is fostered in her classroom, although not as explicitly as with the 'Crew Room'. She demonstrates a very inclusive **approach** and focuses on the seemingly more reticent children to encourage them to participate. She is very quick to prompt children she notices as being 'off-task' and offers gentle reminders to concentrate on their work. Pupils are permitted to engage in 'learning talk' but are readily informed by their teacher that "chit chat is not welcome as you don't learn anything from 'talk…talk…giggle' and if you are thinking about letter formations you shouldn't have to talk a lot". Mrs Heart promotes a spirit of competition between groups of children and believes that encouraging collective effort over selfish ambition that may exist when pupils compete against all individuals in the class. She maintains that it encourages on-task behaviour with pupils themselves encouraging one another to stay focused and behave well to ensure that their team receive rewards, such as team points in the form of laminated pictures of biscuits. Children regularly admonish their team-mates for chattering and risking the likelihood of gaining a biscuit. Consequently, the class teacher rarely reproaches the pupils as problem behaviour rarely occurs. There was no evidence of specific **test** preparation observed during the period spent in this classroom.

Mrs Heart's **attitude** to learning is built on the belief that good quality teaching will give children the best possible chance in life. She systematically and consistently administers **praise**, such as 'well done, class clap', and 'he's sure had his Wheetabix this morning!' and regularly promotes high standards and **expectations**; telling her pupils to "be as accurate as you can, do beautifully joined up writing and don't rush". She explains that pupils in this area

tend to speak in a grammatically incorrect manner and she therefore meticulously corrects pupils when, for example, they incorrectly say "it do rain" or "I do need a pencil". Individual pupils are expected to work hard individually but a heightened sense of collaboration exists in this Year 2 class. Lessons are well-**paced** and pupils respond well to the prompt positive and constructive **feedback** offered to them. Although Mrs Heart mentioned that **outside learning** and the use of **outsiders** as a resource were commonplace at Highbury Park, this was not witnessed during the period of data collection. Mrs Heart inferred she **resided** in a neighbouring locale. Mrs Heart is liked and respected by her class. It is clear that she enjoys teaching and encouraging children to achieve their potential.

Lowerbridge Year 6

Mrs L'Enthuse is a very **experienced**, positive and enthusiastic teacher in her 50s whose class generally respond well to her. Mrs L'Enthuse adopts the **approach** of outlining all lesson aims and learning objectives before explaining the structure of the specific activity. She regularly has fun with her class; adopting engaging mental maths activities such as the 'Shoot 'Em Up Showdown' game whereby mental maths questions are quick-fired to a pair of children and the first to answer correctly gets to (pretend) shoot their opponent who is then out of the game. As an incentive, sweets are given to the winner. Mrs L'Enthuse was previously identified as being a very successful Year 6 teacher and was subsequently head-hunted and brought to the school to improve SATs attainment figures at Lowerbridge. Her approach to preparing children for **testing** is to provide abundant opportunities for the children to complete mock tests; pupils begin this process early in the school year.

Mrs L'Enthuse holds fairly traditional **attitudes** regarding teaching; although she appears to enjoy her job, she nonetheless asked:

> "You're not going into teaching are you? The paperwork is horrendous and that's all you do these days. It's definitely got worse over the years" [**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**].

Mrs L'Enthuse regularly **praises** children who respond to her "please work quietly" request, with "well done, good work" comments. On occasions when pupils crowd around her desk for feedback on their completed task, she firmly states: "I do not want Tesco queues here thank you very much so go and sit down". Children in this class understand the high

expectations of their teacher, who regularly draws their attention to motivational posters adorning the walls of the classroom. Lessons are fairly well-**paced**; considerable time is spent recapping topics and consolidating the concepts and issues discussed. Pupils are expected to listen carefully and closely follow Mrs L'Enthuse's instructions. Regular individual **feedback** is provided to pupils on all class work in addition to group feedback following practice English, maths and science tests. There was no evidence of **outside learning** or use of **outsider** resources used to enhance pupils' learning experiences during the period of data collection. Mrs L'Enthuse is a non-Coalshire-native although she conveys an understanding of the needs of her pupils living in a deprived community. As she does not **reside** in Coalshire, she is not immersed in the social and cultural practices of the locale. Having been brought to the school to specifically raise levels of attainment, Mrs L'Enthuse is motivated and focused on improving end-of-Key-Stage 2 assessment results at Lowerbridge. She understands and accommodates the specific needs of the children in her class whilst challenging them to do as well as they can.

Lowerbridge Year 2

Miss Lovejoy is a relatively young teacher in her 20s with limited **experience** but a real passion for teaching. She exudes kindness and positivity and her sanguine nature is warmly responded to by the pupils in her class. She evidently loves her job and has created a happy work environment for her pupils to work in. Miss Lovejoy exhibits a zeal for providing innovative and interesting learning opportunities for her class. She is keen to promote fun learning as "the children are more engaged when they are enjoying themselves, especially when they don't perceive learning as learning! The more fun they have, the more they engage in learning and the more learning takes place". The children in this class are often heard laughing both during lesson time and elsewhere. Miss Lovejoy adopts a firm but fair fun **approach** to teaching and behaviour management. Her pupils know that she won't tolerate any messing and they respect the class rules, which are clearly written in the classroom for all to see and she remains very popular with them. Children respond very well to her style of teaching and the boundaries she sets to manage their behaviour. There was no evidence of specific **test** preparation observed during the period spent in this classroom.

Miss Lovejoy adopts the **attitude** that pupils need to be encouraged to be happy and secure individuals who understand the need for self-discipline. Her classroom code of conduct

stipulates that pupils must: be kind to others and try to help them; always tell the truth and be polite; work quietly and try our best; listen carefully and follow instructions; tell the teacher when we feel unhappy; welcome new children; and look after things in our classroom. There is no shortage of **praise** in Miss Lovejoy's classroom; all children are regularly praised for good work, good behaviour, being kind and for trying hard. Miss Lovejoy explained that many of the children are not given clear boundaries at home and they therefore favour and respond extremely positively to the clear **expectations** and boundaries they are encouraged to meet within school. Lessons are innovative, well-**paced** and dynamic; children respond well to the tasks set by their teacher. Miss Lovejoy is conscientious in providing detailed, positive and constructive **feedback** to her pupils.

Miss Lovejoy strives to provide her children with cultural opportunities **outside** of the classroom and has forged links with a large inner-city multi-faith school. She has organised day exchanges to give the children an insight into contrasting cultural environments. Each school has subsequently researched their partner school and written projects about the other school. The pupils from Lowerbridge were interested in, and surprised by, the diversity of religions and school apparel. The purpose of visits like this are to "provide the children with experiences to allow them to deepen their understanding of other cultures as they only see white children in this neck of the woods". Other **outsiders**, including parents, are also invited into the school to work on collaborative projects with the children to enhance their learning experiences. Miss Lovejoy **resides** in the locale. Despite her young age, Miss Lovejoy demonstrates high quality teaching. She has a warm character and is very kind and patient with the children in her class, who are clearly very fond of her.

Fallowfield Year 6

Mr Fairly is an **experienced** teacher in his 50s whose traditional teaching **approach** is one of imparting knowledge to pupils who are expected to receive it. Humour is not central to learning although Mr Fairly often attempts to be silly with his class, the children rarely respond as he expects; one 'joke' he shared about the Tina Turner 'Simply the Best' song was appreciated by him but the children didn't seem to understand and an awkward tumbleweed moment ensued. Mr Fairly is conspicuously absent for good proportions of some lessons, 'undertaking Deputy Head duties' in his office. The Nursery Nurse, Mrs Fine, is consequently charged with covering some lessons, although Mr Fairly does pop back every

ten minutes or so to check on the class. Despite Mrs Fine being a highly skilled Nursery Nurse, fundamentally responsible for 1:1 work with children with SEN, she admits that she is "neither qualified nor equipped to teach a large class of 36 pupils whose behaviour is far from exemplary"; as witnessed on many occasions. Mrs First, the Year 5 teacher, shared: "you couldn't have come in on a worst day as we're short staffed". Mrs Fine later reveals that "it's always like this. We have all the responsibility but none of the benefits". She explains that:

> "last week I was teaching in Year 5 and Year 6 for four days. When the Head Teacher is out or the staff are on courses, there is nobody to cover as they never get supplies in. It's the SEN staff who are called in to cover. All the work is left but the Head Teacher will say 'do you mind?' but it's not fair on the children. It's not fair on us because we're not qualified and it's doubly not fair on the children because they're always getting second best. If it was my kids, I'd be unhappy about it" [**Mrs Fine, SEN Support Assistant, Fallowfield**].

To prepare for **tests**, Mr Fairly focuses on teaching pupils the knowledge required to pass their SATs. Opportunities to practice past papers are also offered. When interviewed, Mr Fairly's **attitude** to teaching appeared to involve a sense of commitment and willingness to motivate pupils, however, his frequent absence from the classroom makes this difficult to assess in practice. Mr Fairly positively encourages the children, offering individual **praise** to pupils seen to be working hard. He communicates clear **expectations** to his Year 6 pupils; reminding the whole class that "in the run up to SATs I expect personal bests from each and every one of you"; however, he differentiates between the ability groups of pupils, telling pupils on the top table that "you do not need to worry" about the mock SATs. Lessons are not always dynamically **paced** but instructions are consistently given. Pupils are expected to listen closely to these instructions; it was often evident that some pupils did not listen were subsequently confused about the task expectations. It is difficult to asses both the level of verbal **feedback** provided to pupils, as the lessons observed were mostly led by the Nursery Nurse or Mrs First, the English teacher, or written feedback as Mr Fairly is only responsible for Mathematics and Science which generally required a tick or a cross in the children's exercise books. Examination of their English books revealed detailed feedback from Mrs First. There was no evidence of **outside learning** or use of **outsider** resources (other than employment of the Nursery Nurse to cover lessons) used to enhance pupils' learning experiences during the period of data collection. As a **resident** of the locale Mr Fairly is aware of some of the social and cultural issues encountered by Coalshire residents, but was not found to be on the same wavelength as pupils in his class. Mr Fairly is a capable teacher

who takes his deputy head responsibilities seriously. He is aware of the diverse needs of the pupils in his class and is liked by some children in his class. Mr Fairly copes well with the large class size and small classroom space he has to work in.

Fallowfield Year 2

Mrs Funlead is an **experienced** teacher in her 40s. She has a fun sense of humour and treats her class with respect, in an adult-like way. She only moved to infant teaching two years ago after many years of teaching Year 6. Mrs Funlead's **approach** is very firm but fair and she displays elements of humour throughout the school day which could be described as acquired and unique in nature, but it is clear that children have firmly grasped it and enjoy her sense of humour; they regularly laughed at the jokes she made. Mrs Funlead explains that she encourages her class to laugh and enjoy themselves whilst learning. She affectionately calls the pupils "boys and giggles" and allows children to play games like I-spy when waiting for the register. She conducts her teaching in a very calm, kind, controlled and patient manner which the children respond well to. Mrs Funlead regularly provides her pupils with opportunities to exercise responsible behaviour; collecting registers, laminates and reminding her of tasks that need doing. There was no evidence of specific **test** preparation observed during the period spent in this classroom.

Mrs Funlead's **attitude** to teaching is that learners engage more when learning is perceived as fun. She regularly **praises** and rewards her pupils for good work and behaviour; pupils receive stars for good work. She is devoted to high standards of behaviour and communicates her high **expectations** of work to the children in her class. All lessons are well-**paced** and children respond well to the props used to explain various activities; including a collection of trolls and laminated Simpson's characters. Positive **feedback** is regularly issued to pupils; at intermittent times, Mrs Funlead reminds the class of their individual progress, informing them how many more stars they needed to acquire to obtain a prize. She actively encourages excitement; hyping the pupils up and encouraging them to work hard. There was no evidence of **outside learning** during the period of data collection however **outsider** resources, in the form of visiting artists, were used to enhance pupils' learning experiences. Mrs Funlead **resides** outside of Coalshire and previously worked in a neighbouring LEA. Mrs Funlead is appreciated by the children in her class, who enjoy the humour, occasional 'wackiness' and fun she brings to the classroom.

A summary of the class teachers' instructional approaches is presented in Table 4.23.

Table 4.23: Summary of Teachers' Instructional Approach

	Year	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Experience	Y6	25 years	25+ years	~ 25 years	~ 25 years
	Y2	~ 30 years	15+ years	< 5 years	~ 20 years
Approach	Y6	Pupil-focused	Pupil-focused	Lesson-focused	Impart knowledge
	Y2	Firm but fair	Competition	Fun, firm, fair	Fun, firm, fair
Testing Approach	Y6	Reconstruct relevant tests	Anti - None	Drilling/ Practice	Past papers
	Y2	None	None	None	None
Attitude	Y6	Passionate	Passionate	Conformity	Absent
	Y2	Conformity	Quality counts	Promote security & fun	Fun promotes learning
Praise	Y6	Positive	Positive	Positive	Positive
	Y2	Positive	Positive	Positive	Positive
Expectations	Y6	Very High	Very High	Very High	High
	Y2	Very High	Very High	Very High	Very High
Pace	Y6	Dynamic	Dynamic	Consistent	Not Dynamic
	Y2	Consistent	Dynamic	Dynamic	Dynamic
Feedback	Y6	Positive	Positive	Positive	Positive
	Y2	Positive	Positive	Positive	Positive
Outside	Y6	Yes	Yes	Limited	None
	Y2	Limited	Limited	Yes	No
Use of Others	Y6	Yes	Yes	No	No
	Y2	No	No	Yes	Yes
Resides in Locale	Y6	No	Yes	No	Yes
	Y2	Yes	No	Yes	No

It is clear that all teachers consistently praise children for good behaviour or good work, they communicate high or very high expectations to their pupils and children receive positive feedback on their written work and verbally during lessons. However, each teacher brings a different character and creates a particular atmosphere in their classroom.

Among the **Year 6** teachers, *Mr Nowledge* is hard-working, dedicated to his pupils who remain central, committed (as evidenced in his impressive work record), passionate, positive and dynamic. He demands high quality work and has created a learning environment in which pupils are pushed and challenged in a safe way.

Mr Humour also adopts a child-centric approach in everything he does and is passionate about both teaching and improving the lives of the children in his class. Being Coalshire born 'n' bred, he understands the needs of his Crew and invests a great deal of time, effort and his own money in trying to meet these needs and enhance the broader social experiences of these children. He has successfully created a unique classroom atmosphere where all Crew members experience a sense of belonging and collectively engage in quality learning in an extremely fun and informal way.

Mrs L'Enthuse is motivated, focused, enthusiastic, and accepts no nonsense from her pupils while still promoting fun during learning activities. She has an impressive record of success from previous schools and was brought to Lowerbridge to improve school assessment results. Children consequently experience a great deal of practice/drilling in preparation for end-of-year tests. Mrs L'Enthuse has created quite a traditional learning atmosphere whereby children understand that conforming to the rules and meeting her high expectations results in a more enjoyable classroom experience.

Mr Fairly is knowledgeable and keen on his subject areas (mathematics and science), has built good relationships with the children who listen and respect him and he communicates high expectations to his pupils. The atmosphere in his classroom is one that is orderly when he is present but chaotic when he is absent and classroom assistants cover his lessons. The small classroom space and large class numbers do not help.

In **Year 2**, *Mrs Noble* is a traditional, experienced, positive, 'no nonsense' kind of teacher who exercises firmness and fairness with her class. She has successfully earned the respect of the children in her class who work hard under her instruction and enjoy the lighter-hearted elements of her lessons. The atmosphere in the classroom is quite formal yet relaxed. Again, children in this class understand that positive behaviour is rewarded and results in a more enjoyable school experience.

Mrs Heart is positive, dynamic, kind, firm but fair and works hard to get the best out of her class. Competition features heavily in this class, yet the positive class atmosphere stems from collective effort and achievement rather than individual accomplishment.

Miss Lovejoy is warm, kind, caring, fun, positive and also firm but fair. She has worked hard to create a safe atmosphere which particularly benefits the children who lack a sense of security at home. Within this secure environment, Miss Lovejoy believes children will benefit most from learning activities which are fun for children.

Finally, *Mrs Funlead* is experienced, committed, interested in the lives of children in her class and is also firm, fair and fun. She has effectively created a learning atmosphere which is fun for children for as long as they follow acceptable standards of behaviour and produce work at the quality expected of them. Attention now shifts to teacher-pupil interactions.

4.29   Teacher-pupil interactions

Researchers argue that quality teacher-pupil interactions are vital to successful teaching and learning (Galton, Hargreaves, Comber, Wall & Pell, 1999; Wyse & Torrence, 2009). Hattie's (2009) worldwide research, involving a synthesis of 50,000 studies between 1976 and 2007 goes as far as saying that quality teacher-pupil relationships is the best way to raise attainment and improve the educational experiences of learners. It is clear that these interactions are important so the next section will explore pupils' behaviour, the respectful approach of different teachers and the degree of engagement and humour which are features of a good teacher. In this classroom plane of analysis, data drawn from fieldnotes and teacher interview data are used to provide systematic descriptions of: (i) evidence of respect, (ii) pupil behaviour, (iii) noise levels, (iv) humour, (v) relationships, and (vi) community created by the class teacher, all of which will help depict the teacher-pupil interactions taking place in each class context.

North Higherbank Year 6

Pupils respond very favourably to Mr Nowledge; they exercise **respect**, maturity and demonstrate exemplary **behaviour**. Pupils feed off his enthusiasm and remain on-task when expected to. Classroom **noise** levels are limited and the class appears to be united as a cohesive group. **Humour** is present throughout the school day; children regularly laugh at and respond their teacher's jokes. Mr Nowledge has effectively created a community ethos with pupils forming positive **relationships** with the class teacher and one another. Pupils are identified as feeling a sense of **community**, belonging, contentment and an enjoyment of

school. Pupils acknowledge "Mr Nowledge makes us work harder than the other teachers but it's also more fun" (**Caitlin Nelson, Year 6 Pupil at North Higherbank**).

North Higherbank Year 2

Mrs Noble's personality commands **respect** from pupils whom respond favourably to her firm but fair approach. They listen and adhere to her requests and enjoy working in the positive classroom climate they are in. Respect for peers is also evident. The vast majority of pupils demonstrate maturity beyond their years and their **behaviour** is exemplary, with the odd exception. **Noise** levels remain low, regardless of the activity. Whilst **humour** is not an explicit feature of most lessons, Mrs Noble does have fun with her class, which they enjoy. The adult-child **relationships** in this class are good; children know what is expected of them and behave accordingly. Children in this class enjoy the sense of belonging to a cohesive school **community** that staff have worked hard to create.

Highbury Park Year 6

Pupils in the Crew-Room respond well to Mr Humour's affection towards them. They **respect** one-another and their 'Crew leader' and respond accordingly when reprimanded with calm statements such as "shouting is what infants do, have a cooler time" or "you're chopsying too much, cut it out". Pupils **behave** well and **noise** levels are always low when pupils are expected to be working; it is the teacher who encourages more noise in the classroom! **Humour** is present in every lesson (as suggested by the pseudonym awarded to this teacher); the class teacher and pupils enjoy jovial banter which is encouraged throughout the school day. There is a remarkable sense of unity and cohesion amongst pupils in this class, who have a prominent collective cohort identity and an incredibly positive **relationship** with their teacher. Outsiders observing the interactions in this class are left with a unique sense that these pupils and class teacher share mutual feelings of not just respect, but love, for one another. Children wait patiently in line to 'high-five' their leader at the end of the school day. Pupils enjoy being identified by their Crew nick-name rather than their actual name and appear to enjoy belonging to the inimitable Crew **community**. Pupils share the crew ethos and stick to the crew rules: "respect for one another" and "striving forward together". The following extract from fieldnotes provides a flavour of the cohesion experienced by the members of the Crew:

> The only observable behaviour issues concerned one Year 6 boy who was subsequently ex-communicated from 'the Crew' for persistently defying and

disrespecting Teaching Assistants and Lunchtime Supervisors. He was made to join the Year 4 pupils in Mrs Humble's (the Head Teacher's) class, thereby surrendering his esteemed 'Crew Member' status. His anti-social behaviour clearly defied the Crew ethos which promotes respect for one another, working hard and positively contributing to the school community. Mr Humour explained that "Nigel is a sprog". He was subsequently shunned by his peers when he stopped being a Crew member. Paddy Hunter explained this was primarily because "he broke his promise when he put his hand on his heart as a new Crew member and swore with the rest of the class 'I will not let the Crew down ever' but he did". During one lesson, Haysey was observed walking up to Nigel's chair and ripping his name poster off the back of it. He threw it in the bin and then sat down at his desk and continued with his work. The Year 5 pupils in the classroom started muttering and were shocked by Haysey's actions but Mr Humour calmly explained to the crew that Haysey feels let down by Nigel because he was cheeky to the dinner ladies and has therefore been removed from the Crew [Fieldnotes 06/03].

Highbury Park Year 2

Mutual teacher-pupil and pupil-pupil **respect** is clearly evidenced in this class. Children appear to appreciate Mrs Heart's inclusive approach and the warm learning environment she has successfully created. Children conduct themselves in a mature way and their **behaviour** is exemplary. **Noise** in the classroom never exceeds low levels, unless Mrs Heart specifically requests or encourages more noise. Children welcome the **humour** incorporated into some lessons and they seemingly appreciate the good **relationship** they have with their teacher. Mrs Heart has effectively established a team ethos and cohesive **community** of learners at Highbury Park; they are rewarded for collaborative effort over individual achievement. The Year 2 pupils also demonstrate an awareness of being valued members of the wider school community, which the Head Teacher, Mrs Humble, and staff work hard to maintain.

Lowerbridge Year 6

The vast majority of pupils appear to **respect** their teacher; they generally follow Mrs L'Enthuse's instructions and requests for quiet work. Positive **behaviour** is encouraged, although not always found among all pupils, who were found to be disrespectful of one-another. Maturity when in the classroom is not demonstrated by all pupils. Some children consistently appear to remain on-task whilst others do not. **Noise** levels remain fairly low. Pupils appreciate the **humour** and fun they experience on regular occasions with Mrs L'Enthuse. **Relationships** between class teacher and pupils are good. There does not appear to be a clear sense of **community** among learners in this class; a faction of pupils mix in

cliques with some individuals observed to be isolated and bullied by other pupils in lessons and during free-time.

Lowerbridge Year 2

Children in Miss Lovejoy's class visibly **respect** her and each other; she remains popular despite setting very firm boundaries. Miss Lovejoy maintains that pupils need to be encouraged to be happy and secure individuals who understand the need for self-discipline, which is promoted at every opportunity. Despite there being a significant number of pupils with recognised social and behaviour problems, the **behaviour** of children in this class was never anything other than exemplary, even when the children were left under the care of a supply teacher or when being supervised solely by the researcher. **Noise** levels remained low regardless of the activity. Pupils enjoy the regular **humour** incorporated into lessons; Miss Lovejoy effectively relates to children on their level and they respond well to the jokes and anecdotes she shares. Good quality **relationships** are witnessed in this class. It is apparent to visitors that a positive ethos and general sense of **community** is present throughout the infant department in general.

Fallowfield Year 6

Although not the most dynamic of characters, Mr Fairly is fairly consistent in his interactions with pupils. Pupils do not always show **respect** to their teacher or substitute teachers/Nursery Nurses or each other. They are, however, more respectful to Mrs First, the Year 5 English teacher. Pupil **behaviour** was poor whenever Mr Fairly turned his back, even when he was in the classroom. **Noise** levels were excessive at times, particularly when Mr Fairly was absent. **Humour** was occasionally evident although pupils did not necessarily connect with the material being presented. It is clear that some children have stronger, and more positive, **relationships** with their teacher than others. There is no sense of **community** or cohesion amongst this cohort of pupils. Although Mrs Friend, the Head Teacher, yearns for pupils to have a sense of belonging, this was not evident in this class.

Fallowfield Year 2

Mrs Funlead's calm, kind, controlled, respectful and patient manner has earned her **respect** from the children in her class; pupils mentioned on numerous occasions that she was their favourite teacher. Children were mostly respectful to each other. They are treated in an adult-

like way and they **behave** accordingly; most children respond well when given opportunities and challenges to behave maturely. For example, Mrs Funlead might say: "I don't believe you can go for one whole hour of the day without being naughty" to a particular child she needs to listen carefully for a specific activity. Not only do the children appear to enjoy being challenged but they invariably succeed, thus resulting in an improved teaching and learning experience for all. **Noise** heard in this classroom rarely exceeds low levels. All children appear to enjoy their teacher's sense of **humour**, regularly laughing at the jokes she continually makes throughout the school day. Good teacher-pupil **relationships** are found in this class. Although children enjoy the happy learning environment created by Mrs Funlead, there does not appear to be a clear sense of **community** among the learners in this class; instead, children identify more with the small group of children on their tables. A summary of teacher-pupil interactions are presented in Table 4.24.

Table 4.24: Summary of Teacher-Pupil Interactions

	Year	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Respect	Y6	Teacher /Peers	Teacher /Peers	Teacher	Some Staff
	Y2	Teacher and Peers	Teacher and Peers	Teacher and Peers	Teacher and Some Peers
Behaviour	Y6	Exemplary	Exemplary	Good	Variable
	Y2	Exemplary	Exemplary	Exemplary	Good
Noise Levels	Y6	Low	Low	Fairly Low	Inconsistent
	Y2	Low	Low	Low	Low
Humour	Y6	Consistent	Consistent	Occasional	Occasional
	Y2	Occasional	Occasional	Consistent	Consistent
Relationship	Y6	Very Good	Exceptional	Good	Variable
	Y2	Good	Good	Good	Good
Community	Y6	Belonging	Belonging	Not Cohesive	Not Cohesive
	Y2	Belonging	Belonging	General	Not Cohesive

There are no commonly shared features among the eight classrooms or in Year 6. However in Year 2, pupils in all classes are respectful of their teacher and peers, noise levels remain low and teacher-pupil relationships are good. Commonalities identified in the HA schools and the LA schools are highlighted at the end of the chapter.

Assessment of the various teacher-pupil interactions in the four schools reveal one classroom that stands out as unique: Mr Humour's Year 6 'Crew room' at Highbury Park. In this class, feelings of trust, affection, respect, and love underpin all teacher-pupil relationships. Unlike

the other classes, Crew members have a strong collective identity and belong to an inimitable community; one where everyone is accepted and respected. Here, Crew members experience a sense of belonging to a desirable community that other children aspire to join when they reach Year 6. The shared ethos of 'respect for one another' promotes positive peer relations and 'striving forward together' encourages unity and cohesion amongst learners in this special community. With humour included in all lessons, Crew members enjoy engaging in learning activities and in jovial banter with their class teacher. Children in this class experience incredibly positive relationships with their class teacher. Historically, children in Mr Humour's class achieve among the highest end-of-Key-Stage 2 assessment results in Coalshire.

At the opposite end of the community/cohesion continuum is Mr Fairly's Year 6 class at Fallowfield which stands out for entirely different reasons. Here, teacher-pupil relationships are variable; although some children relate to their teacher, others do not. At times, noise levels and standards of behaviour are less than acceptable, particularly when Mr Fairly is out of the classroom and unqualified support assistants are charged with overseeing lessons. The most notable feature in this classroom is the lack of a sense of community. Pupils do not report a sense of belonging and the class functions as distinctly separate groups of pupils who, due to space constraints, sit within close proximity to one another but do not work cohesively as a group of learners. It is worth noting that in recent years, Year 6 pupils at Fallowfield have secured among the lowest KS 2 SATs results in the locale.

4.30   Management of classroom space and movement

The methods teachers employ to manage classroom space and pupils' movement around the classroom are known to impact on students' motivation to learn. Jang, Reeve & Deci (2010) and Healey (2008), among others, have found that individuals demonstrate improved attitudes, increased motivation and engagement in learning when teachers' instructional styles promote student autonomy in the learning process. Pupils feel a sense of autonomy when they have control over the activities and feel they have a freedom to move. Conversely, individuals tend to associate work with being still, fixed at a desk and feel they cannot move. It is therefore important to attend to the degree of autonomy, complete or partial, afforded to pupils in this study. It would be typical to find differences between the two year groups as teachers tend to control the movement of younger children more than that of Year 6 pupils.

In order to assess the level of autonomy supported in each classroom, particular attention will be paid to the following features: (i) seating - rows or groups, (ii) grouping - ability, friendship or other, (iii) positioning - whether influenced by pupils' behaviour (iv) classroom environment - features, (v) resources - pupils use of school or own resources, (vi) movement around the classroom, and (vii) atmosphere created by the class teacher. The higher achieving schools (North Higherbank and Highbury Park) will be examined first then Lowerbridge and Fallowfield (the LA schools) will be explored. A selection of photographs of the classroom and seating plans are provided to illustrate classroom management practices in each school.

North Higherbank Year 6

Children in Mr Nowledge's class are **seated** in orderly rows of 2-4 according to friendship **groups** (see Figures N7-N9). Groups are not assigned a table name and the class is collectively referred to as 'Year 6'. Children identified as 'well-behaved' are **positioned** further from Mr Nowledge's desk. The classroom is visibly a formal learning **environment** which is colourful, highly organised and uncluttered. In addition to communal class **resources**, pupils are permitted to bring personal tools to school; there is a mutual understanding that everyone respects one another's belongings and returns anything borrowed to its rightful place. Children are granted free **movement** around the classroom and need not ask permission to leave to go to the water fountain or toilets. Mr Nowledge believes children respond well if given the freedom to act responsibly; children are informed privileges will be withdrawn if taken for granted and "so far none have". Mr Nowledge believes children learn in "an **atmosphere** of belonging, responsibility and security". To onlookers, children enjoy the positive working environment they are provided.

Fig. N7: Seating

Fig. N8: Classroom layout
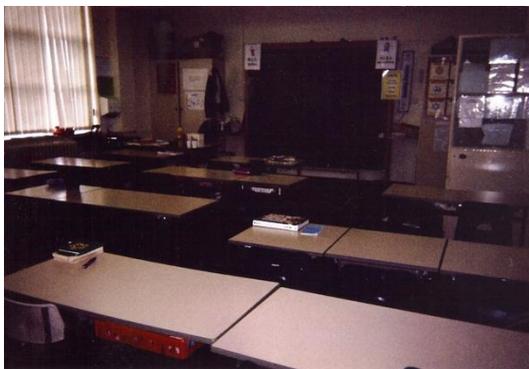
Fig. N9: Classroom view

Fig. N10: Classroom display

Computer

Printer

Storage

Computer

Printer

Storage

DIS

RADIA

Teacher's Desk

Cupboard

Blackboard

Cupboard
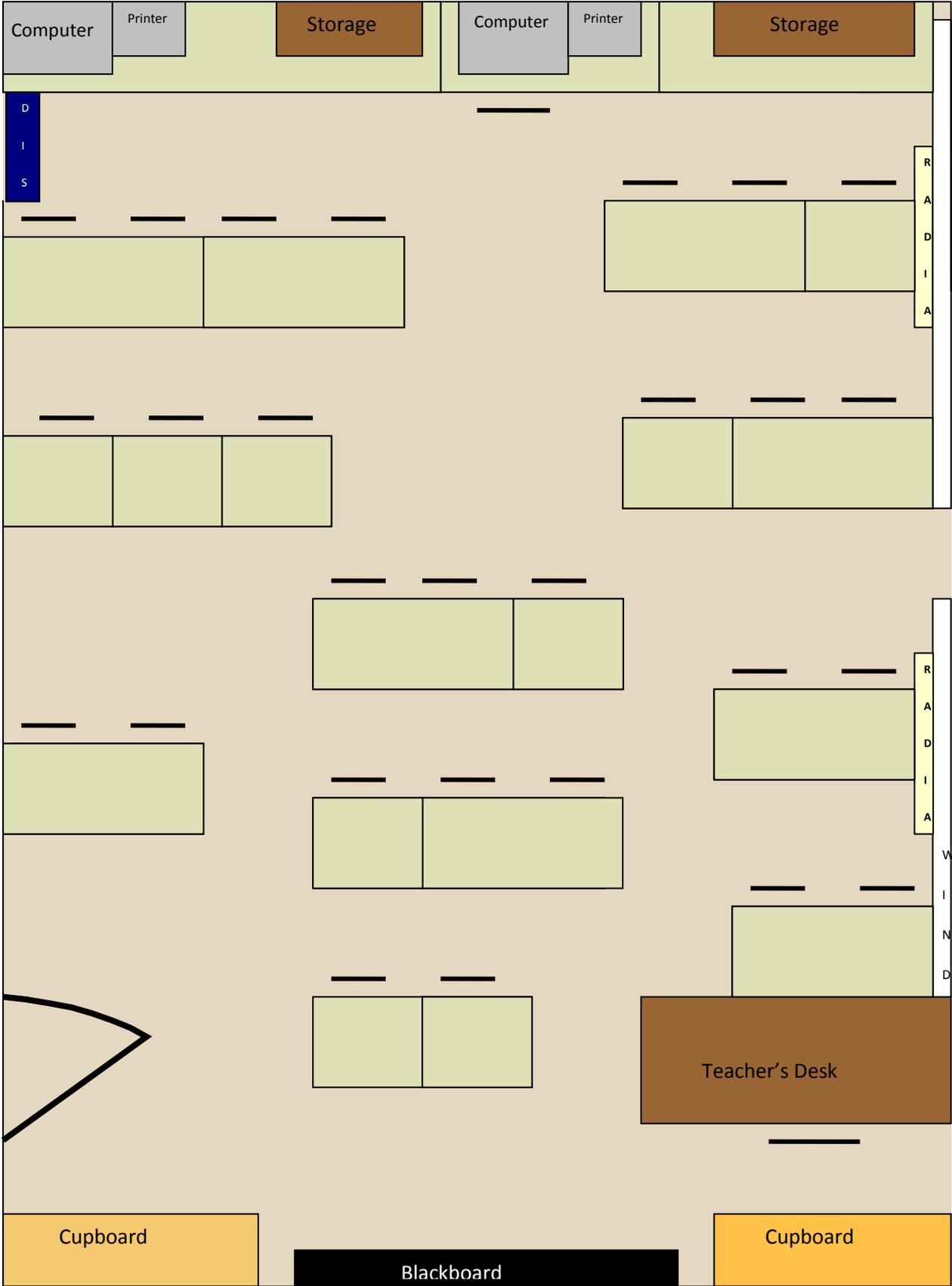
Figure N11: Year 6 Classroom Layout, North Higherbank Primary

North Higherbank Year 2

Children in Mrs Noble's class are **seated** in small **groups** of 4-8 according to ability and gender; the 'bright boys' are **positioned** at the back of the classroom, the 'middle ability/more competent girls' sit in the middle whilst the 'boys requiring additional support' and 'the needy girls' are seated near the front. Individual seats/tables are available if required (see Figure N16). Groups are assigned colour names; the most able groups are identified as blue and red groups whilst the lower ability group is referred to as 'grwp melyn' (yellow group). The classroom **environment** is exceptionally colourful, organised and visually stimulating; it is full of brightly coloured wall displays straddling National Curriculum subjects (see Figure N12). Pupils are encouraged to use communal school **resources** rather than personal effects. Sensible **movement** around the classroom is accepted, for example going to use a pencil sharpener, although pupils are required to ask permission to leave the classroom. Mrs Noble has created a respectful **atmosphere** in this Year 2 classroom.

Fig. N12: Year 2 classroom

Fig. N13: Classroom displays

Fig. N14: Classroom layout

Fig. N15: Classroom view
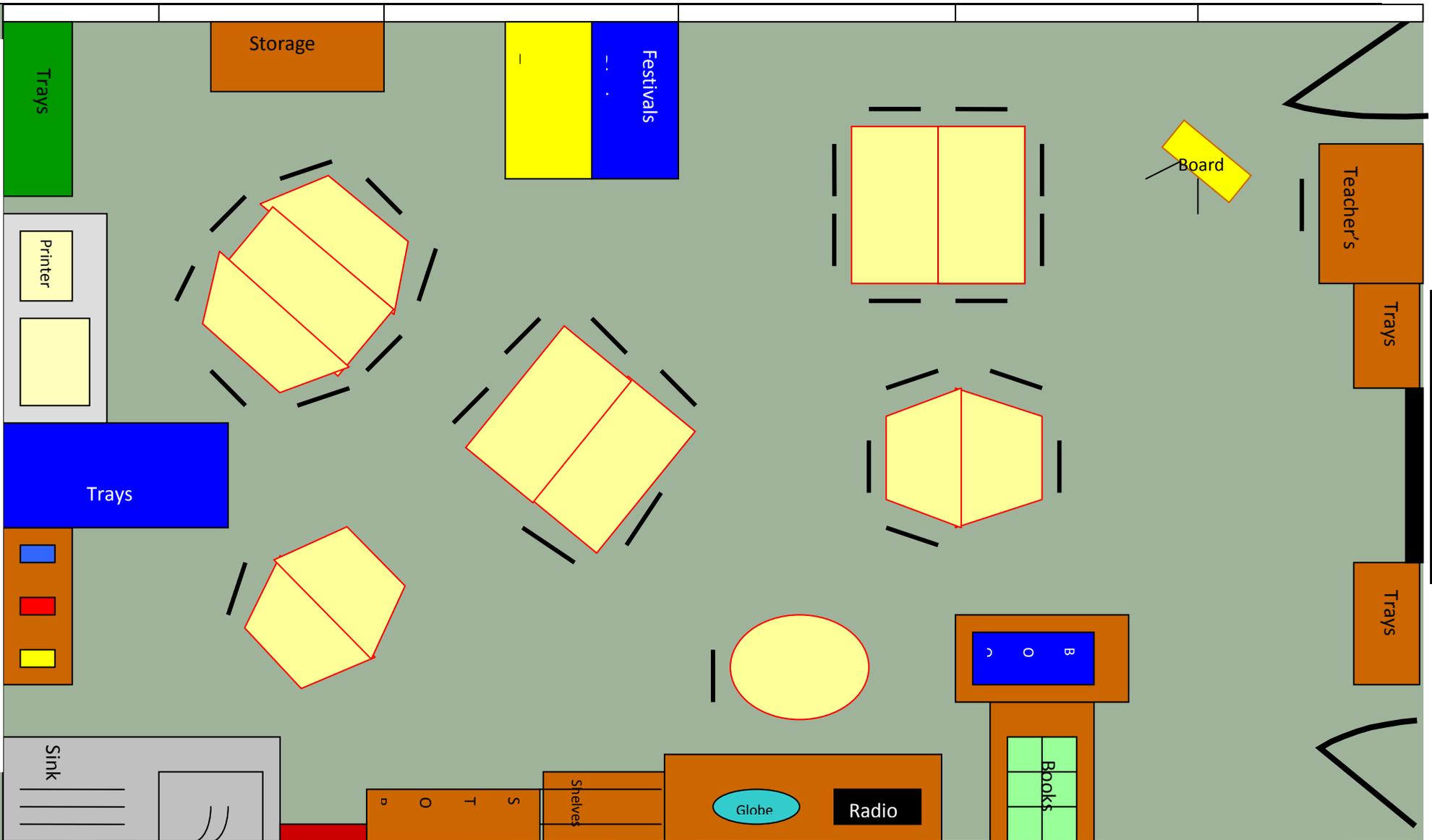
Figure N16: Year 2 Classroom Layout, North Higherbank Primary

North Higherbank Primary Year 2

Trays

Storage

Festivals

Board

Teacher's

Trays

Printer

Trays

Trays

Sink

Shelves

Globe

Radio

Books

188

Highbury Park Year 6

The Crew are **seated** in pairs or friendship **groups** of 4-6. Each child is encouraged to personalise and take ownership of their seat by creating and decorating an A4-sized poster of their name or, more typically, the nickname affectionately awarded to them by Mr Humour or former class teachers. Although some of the 'cheekier' pupils identified as being more easily distracted are **positioned** nearer the front, seating according to behaviour is not a general rule in Mr Humour's class - these children disclosed that they requested being nearer to their teacher. The classroom **environment** is entirely unique - not only is it bursting with colour but it is entirely personalised; every available space is filled with artefacts brought into school by current and previous students or Mr Humour, who believes children's learning experiences should be as familiar and pleasurable as possible (e.g. including access to inflatable toys). Children are encouraged to bring in personal **resources** and artefacts such as cushions and toys to create a familiar and comfortable learning environment. Crew members are granted free **movement** around the school and classroom; children freely switch between their own desk, spare desks, the Literacy Zone or the carpet area during lessons - wherever they feel they are able to work best for any activity. The **atmosphere** created by the class teacher is one of inclusivity, belonging and fun.

Fig H7: Crew room

Fig. H8: Classroom artefacts

Fig. H9: Film artefacts

Fig. H10: Ceiling and wall displays
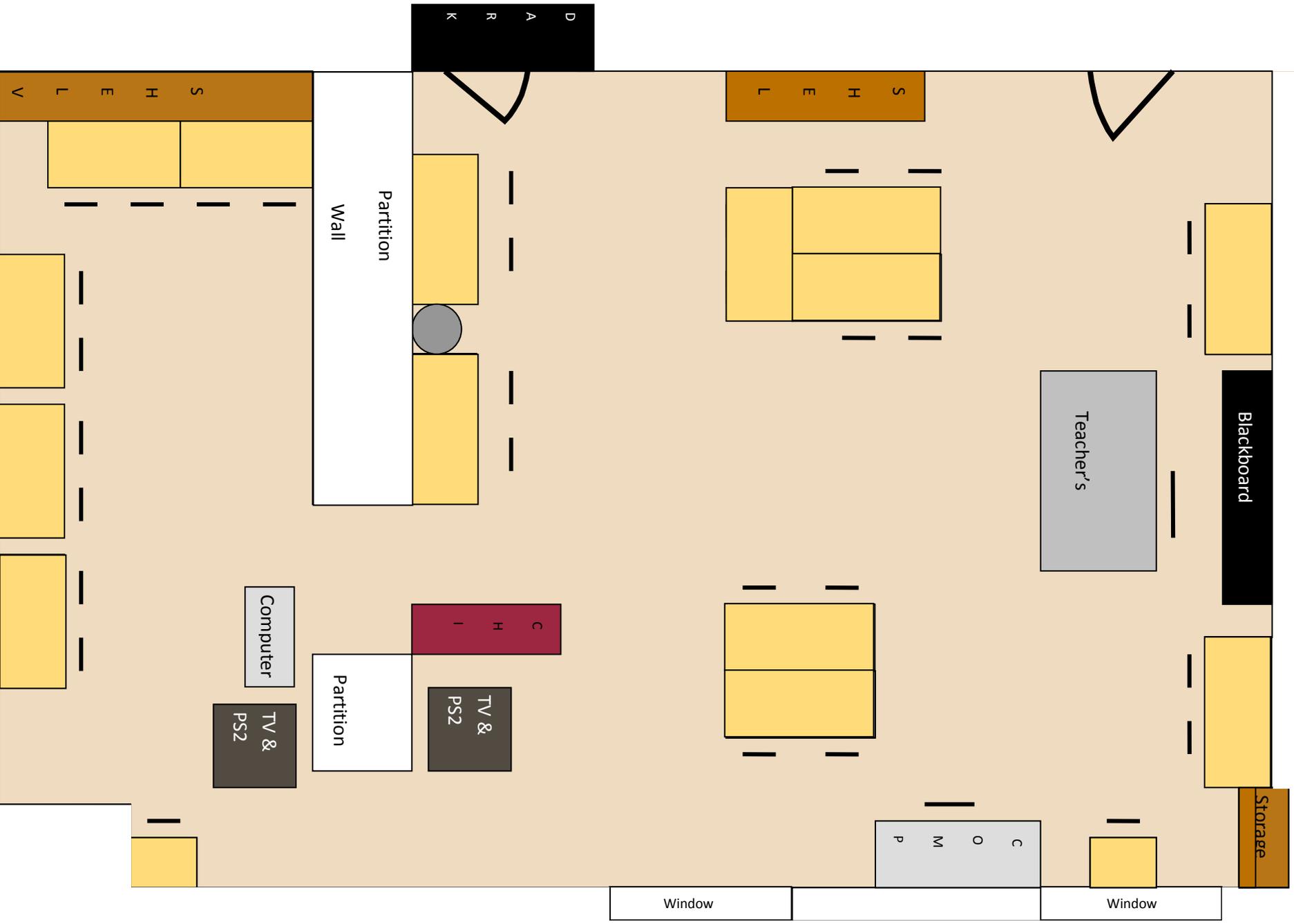
Figure H11: Year 6 Classroom Layout, Highbury Park Primary

DARK

SHELVES

SHELVES

Partition Wall

Partition

Computer

CHI

TV & PS2

TV & PS2

Teacher's

Blackboard

Storage

COMP

Window

Window

Highbury Park Year 2

Children in this class are **seated** in ability **groups** of 6 which are identified according to types of transport. Mrs Heart has awarded the 'lower ability group' the most exciting category of 'motorbikes' while the 'most able' group are identified as 'tractor' group. Mrs Heart is mindful of countering stereotypes often associated with lower ability children; teachers, she says, often categorise these children with the most derogatory labels without realising it. Mrs Heart provides the example of sea creatures where one teacher awarded the 'top groups' exciting sea creatures names such as dolphins and sharks while the 'less able' children were identified as eels. Children are not **positioned** according to behaviour. The classroom **environment** is bright and visually stimulating. While not as personalised as the Crew Room, children's interests have been tapped into with life-sized rockets suspended from the ceiling and 3ft wooden cutouts of Winnie-the-Pooh and Tigger adorn the walls. This wall displays focus on specific curriculum subjects. Children mainly use communal school **resources** although they are permitted to bring their own into school. Pupils are permitted free **movement** around the classroom although permission to leave the classroom is required. Mrs Heart has created a positive, community **atmosphere**.

Fig. H12: Year 2 classroom

Fig. H13: Classroom artefacts

Fig. H14: Classroom design

Fig. H15: Classroom layout
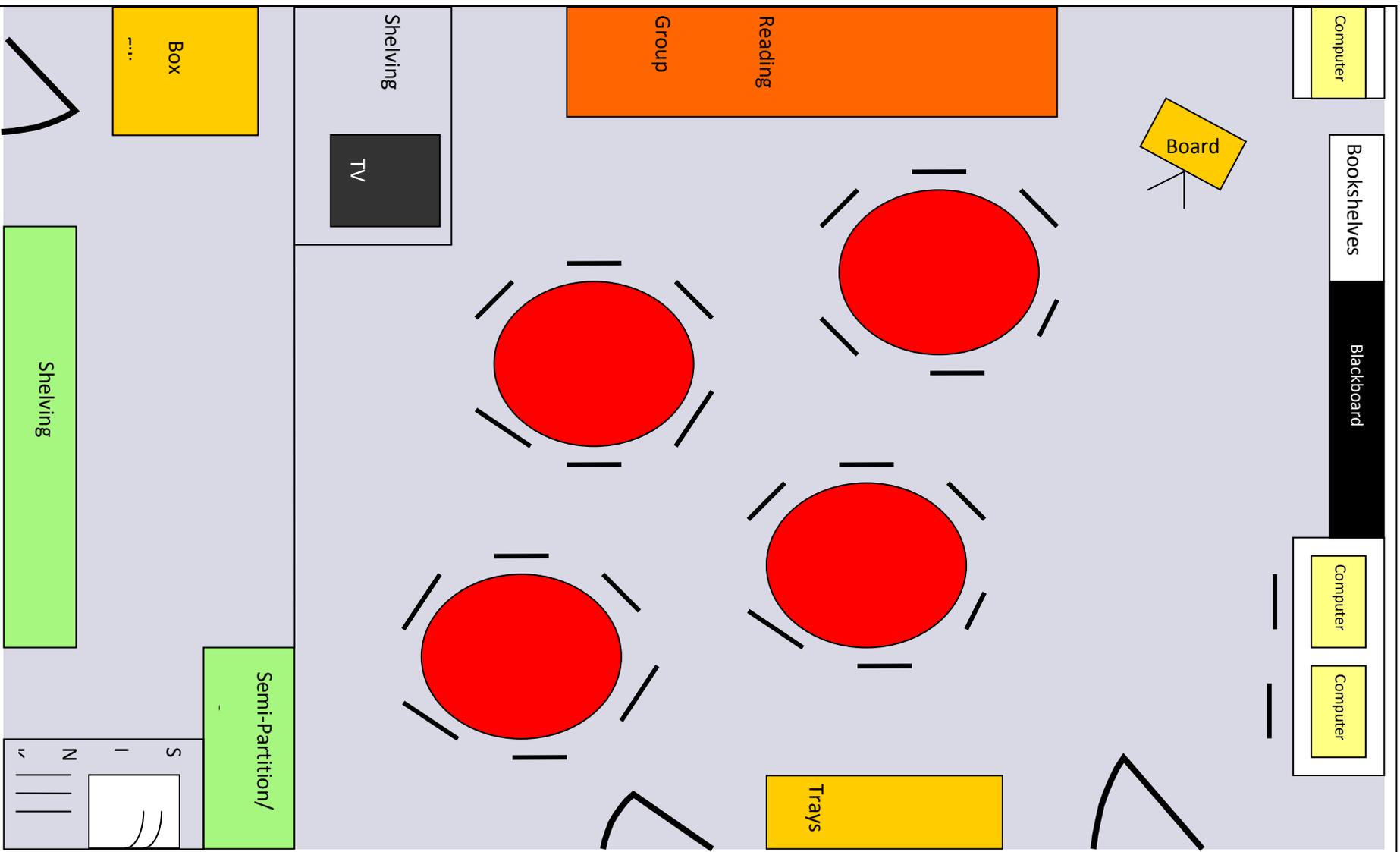
Figure H16: Year 2 Classroom Layout, Highbury Park Primary

Highbury Park Primary Year 2

Computer

Bookshelves

Blackboard

Computer

Computer

Board

Reading

Group

Shelving

TV

Box

Shelving

Semi-Partition/

Trays

Lowerbridge Year 6

Pupils are **seated** in ability **groups** of 4-6 with each cluster of tables neatly aligned, presenting a very ordered learning environment (see Figure L11). There was no specific **positioning** according to pupil behaviour; children perceived to display the least pro-social behaviour were positioned furthest from Mrs L'Enthuse's desk. The classroom **environment** is exceptionally ordered, tidy and structured; children have been trained to keep everything in its rightful place. Wall displays are fairly colourful and focus on core curriculum subjects or motivational posters designed to promote effort and celebrate success. Pupils mainly use communal school **resources** although some bring pens and pencils from home. Movement around the classroom and school is restricted; pupils are not expected to get out of their seats unless permission has been granted. The classroom **atmosphere** is best described as fairly formal, orderly and structured.

Fig. L7: Seating arrangements

Fig. L8: Class design

Fig. L9: Wall displays

Fig. L10: Class view
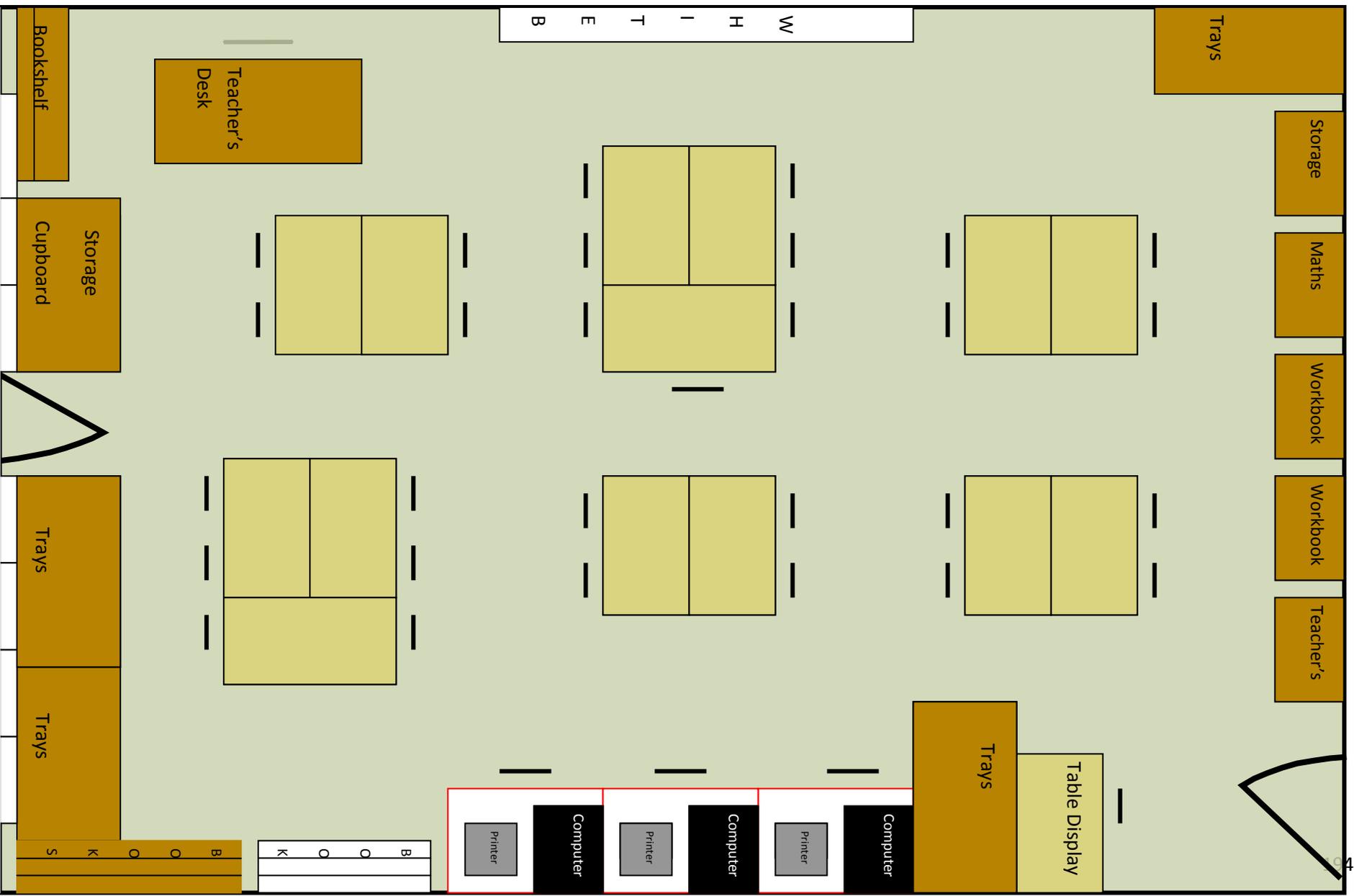
Figure L11: Year 6 Classroom Layout, Lowerbrdge Primary

WHITEB

Bookshelf

Teacher's Desk

Storage Cupboard

Trays

Trays

S K O O B

K O O B

Printer

Computer

Printer

Computer

Printer

Computer

Trays

Table Display

Trays

Storage

Maths

Workbook

Workbook

Teacher's

Lowerbridge Year 2

Children in Miss Lovejoy's class are **seated** in ability **groups** of 5-7 pupils. The 'lowest ability' group are **positioned** furthest from the blackboard but nearest the carpet area where the teacher explains most learning activities. The classroom **environment** is very colourful and visually stimulating; all walls are purposefully painted a bright 'sunshine' yellow (see Figures L12-L15) and wall displays feature both curriculum content and objects of interest to the children, such as dinosaurs. Pupils mainly use communal school **resources** although some children have brought in pencils from home. **Movement** around the classroom is fairly relaxed although permission is required to leave the classroom. Miss Lovejoy has created a positive, happy and welcoming **atmosphere** in her classroom.

Fig. L12: Class design

Fig. L13: Wall display

Fig. L14: Class view

Fig. L15: Seating arrangements
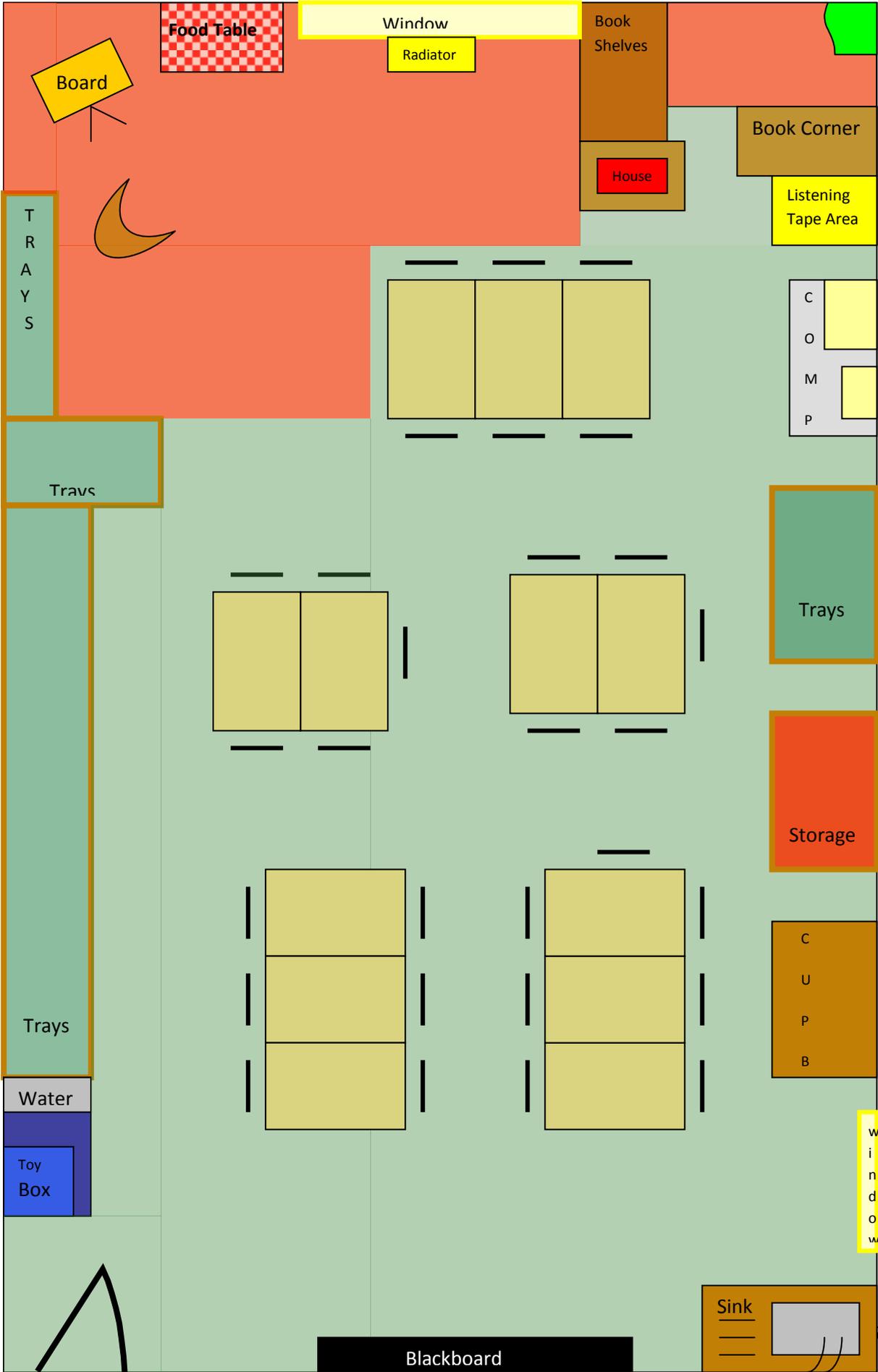
Figure L16: Year 2 Classroom Layout, Lowerbridge Primary

Fallowfield Year 6

Children are **seated** in two long rows comprising smaller **groups** of 4-6 pupils (refer to Figure F11), according to ability. Pupils identified as being 'well behaved' are **positioned** furthest from Mr Fairly's desk along the back row. The classroom **environment** is quite dark and cramped; children sit in such close proximity that their chairs touch when they are working and children often display fractious behaviour when other pupils are perceived to be encroaching on their learning space. The class **environment** uniformly matches all other beige and green-painted classrooms in this newly built school, offering rather a bland learning environment (see Figures F7-F10). There are few displays, other than some of the children's posters taped on the doors of the resource cupboard. Pupils mainly use school **resources** although children do bring pens and pencils in from home. Mr Fairly tries to restrict **movement** around the classroom; children are verbally reprimanded for leaving their seats however they are often found to be doing so. Mr Fairly's own movements are also restricted; it is very difficult for him to move freely around the cramped classroom to inspect pupils' work. Children are not permitted to leave the classroom without permission. The **atmosphere** in this class is claustrophobic and not always conducive to learning.

Fig. F7: Seating arrangements

Fig. F8: Class view

Fig. F9: Class design

Fig. F10: Wall displays
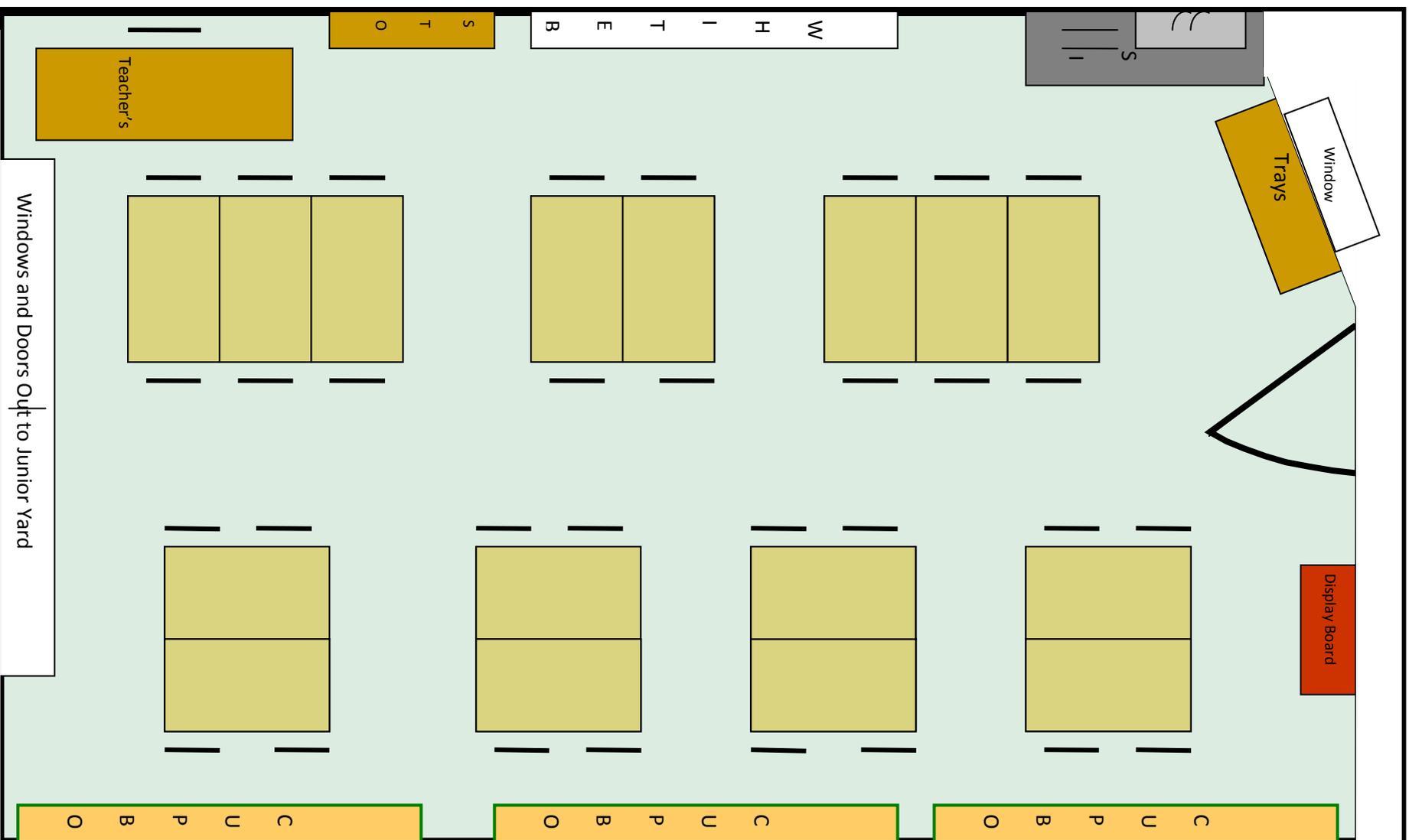
Figure F11: Year 6 Classroom Layout, Fallowfield Primary

Fallowfield Primary Year 6

Teacher's

STORE

WHITEBOARD

SINK

Trays

Window

Windows and Doors Out to Junior Yard

Display Board

CUPBOARDS

CUPBOARDS

CUPBOARDS

198

Fallowfield Year 2

Children in Mrs Funlead's class are **seated** in ability **groups** of 6 with no specific **positioning** of pupils perceived to behave better or worse than others. The Year 2 classroom **environment** is very similar to Year 6; it has the same beige and green uniform pattern as every other classroom in this school (see figures F12-F15). Mrs Funlead has, however, tried to brighten the classroom with wall displays and objects of interest to her pupils, including A4 cut-outs of Bart and Lisa Simpson. Pupils mainly use communal school resources. **Movement** around the classroom and school is restricted; pupils are not expected to get out of their seats or leave the classroom without permission. The **atmosphere** in this classroom is brighter than Year 6; the personality of the class teacher goes a long way in counteracting the lack of colour on the school walls. Visitors entering this classroom will witness quite a happy atmosphere for learning.

Fig. F12: Year 2 classroom

Fig. F13: Class design

Fig. F14: Wall displays

Fig. F15: Class view

Fallowfield Primary Year 2

Windows

Table

windo

SEN Room

Trays

Books   Trays

WHITE

Table

TV

C
U
P
B
O
A

Board

C
U
P
B

Cupboard

Trays

Cupboard
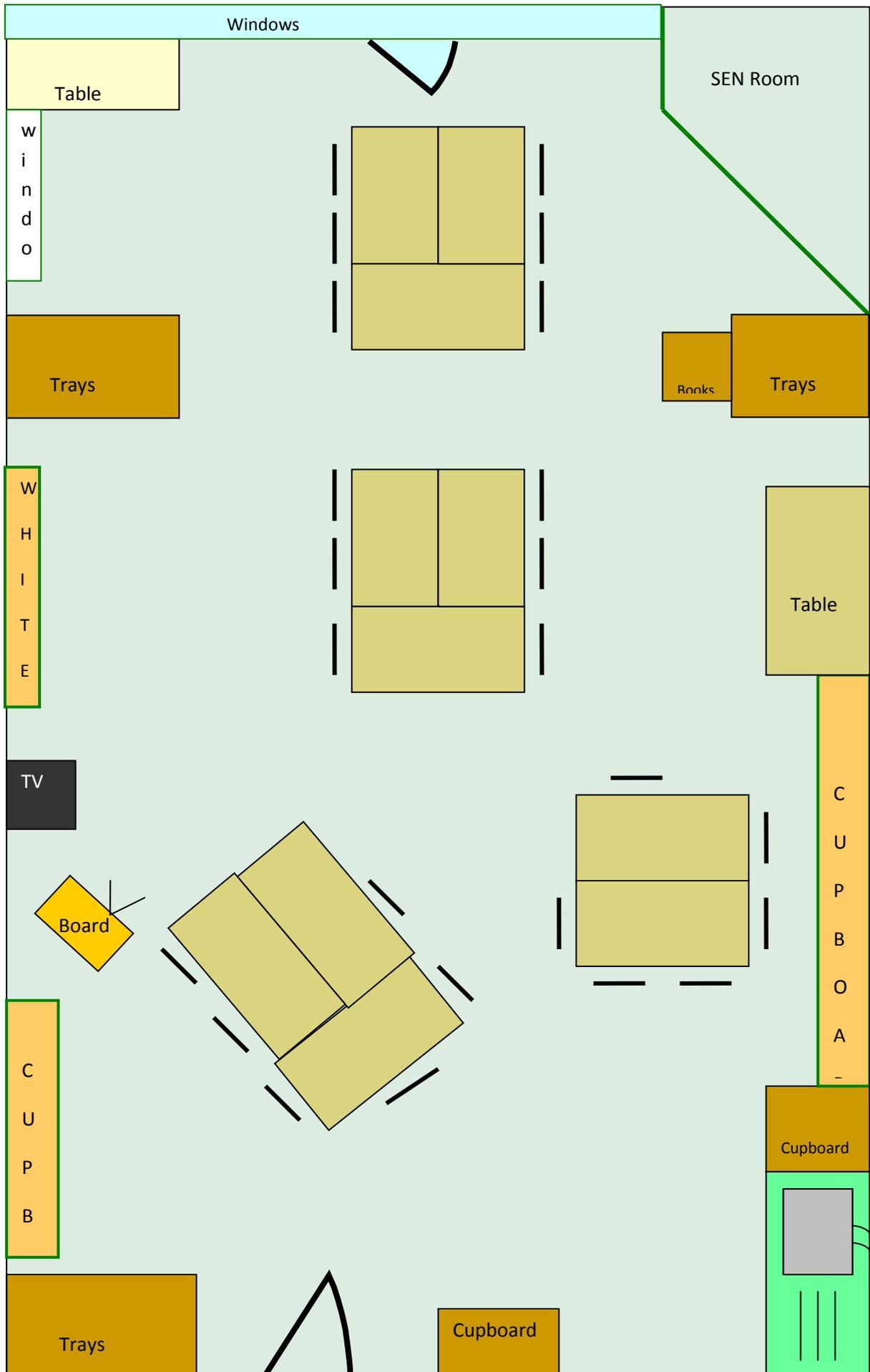
Figure F16: Year 2 Classroom Layout, Fallowfield Primary

Table 4.25: Summary of Classroom Structures, Routines and Movement

	Year	North Higherbank	Highbury Park	Lowerbridge	Fallowfield
Seating	Y6	Rows	Groups	Groups	Rows/Groups
	Y2	Groups	Groups	Groups	Groups
Grouping	Y6	Friendship	Friendship	Ability	Ability
	Y2	Ability	Ability	Ability	Ability
Positioning	Y6	Behaviour	Non-Specific	Non-Specific	Behaviour
	Y2	Behaviour	Non-Specific	Non-Specific	Non-Specific
Environment	Y6	Formal, Colourful, Organised	Unique, Personalised, Comfortable, Colourful	Ordered, Tidy, Structured	Uniform, Cramped, Bland, Quite Dark
	Y2	Colourful, Organised Visually Stimulating	Bright, Visually Stimulating	Very Colourful & Visually Stimulating	Uniform, Some Brighter Displays
Resources	Y6	Personal & Communal	Personal & Communal	Mainly Communal	Mainly Communal
	Y2	Mainly Communal	Mainly Communal	Mainly Communal	Mainly Communal
Movement	Y6	Freedom	Freedom	Restricted	Restricted: Pupils and Teacher
	Y2	Free in Class, Restricted School	Free in Class, Restricted School	Relaxed in Class Restricted School	Restricted in Class and School
Atmosphere	Y6	Belonging, Responsibility & Security	Inclusivity, Belonging, Fun	Fairly Formal, & Structured	Claustro-phobic
	Y2	Respectful	Positive, Community	Positive, Happy & Welcoming	Quite Happy

There is no common management of space and movement across the eight classrooms. As expected, pupils in Year 6 are afforded greater freedom of movement around the classroom than children in Year 2 who are universally seated in ability groups. All children in Year 2 utilise communal school resources rather than being permitted to bring personal possessions in to school. The management of Year 6 pupils differs between the higher and lower

achieving schools. In the HA schools, children are permitted freedom to sit in friendship groups (rather than the teacher-organised ability groups found in the LA schools); pupils have the freedom to bring personal resources and artefacts to use in school; they are afforded free movement around the class and the school (as long as they continue to do so responsibly); and these classes are managed in a way that promotes belonging to a classroom community. In sum, Year 6 children at North Higherbank and Highbury Park are given greater autonomy than pupils at Lowerbridge and Fallowfield. Although the HA schools share these similarities, it must be noted that Mr Nowledge at North Higherbank operates a more controlled learning environment where autonomy of movement is supported but very much on his terms. Children at Highbury Park are awarded greater freedom to move with more independence around the school and classroom (for example, Crew members are actively encouraged by Mr Humour to move around the classroom during lessons if it helps them work better).

4.31   Summary of classroom features

Having explored the research setting at the classroom plane of analysis, focusing on teachers' instructional approaches, interactions with pupils and management of space and movement, particular commonalities have been found among the eight classrooms. These include consistency of praise, positive feedback and high expectations communicated to pupils. Commonly identified Year 6 features include: similar teaching experiences (approximately 25 years in service). Year 2 classes share the following features: children are respectful of their teachers and peers, noise levels remain low, teacher-pupil relationships are identified as good, all children are seated in ability groups and children mainly use communal school resources rather than personal belongings.

4.31.1 Similarities identified in higher achieving (HA) schools

Comparative assessment within this plane of analysis reveals the following features in all **HA classrooms**: respect for teachers and peers; exemplary behaviour; low noise levels; presence of humour (consistently in Year 6 and occasionally in Year 2); good teacher-pupil relationships; a clear sense of belonging; colourful learning environments; and free movement around the classroom (Year 6 are free to move around the school whilst Year 2 need permission to leave the classroom). Further similarities have been identified across the

two **HA Year 6 classrooms**: pupil-focused approaches; passionate teachers; dynamically paced lessons; opportunities to learn outdoors; outsiders are brought into classes to enhance pupils' learning; use of personal possessions permitted; freedom to autonomously move around the classroom and school; and a patent sense of belonging. Meanwhile, the two **HA Year 2 classes** share the following features: limited opportunities for outdoor learning; no use of others to enhance pupils' learning; children are seated in groups; and pupils are free to move around the classroom.

4.31.2 Similarities identified in lower achieving (LA) Schools

The following **LA classroom features** have been identified: children are mostly respectful of teaching staff; presence of humour (occasionally in Year 6 and consistently in Year 2); pupils are seated in ability groups; children mainly use communal resources rather than personal possessions; and all pupils have restricted movement around the class and school. When exploring specific year group similarities, the following features were noted for **LA Year 6**: lessons are not pupil-focused; emphasis on drilling/extensive practice of past SATs papers; limited opportunities for outdoor learning; and no use of others as learning resources. **LA Year 2** similarities include: a fun, firm but fair teaching approach; teacher beliefs that fun promotes learning; dynamically paced lessons; and outsiders are employed to enhance pupils' learning.

4.31.3 Unique features identified in specific schools

Mr Nowledge at **North Higherbank** is the only teacher to adopt rows instead of group configuration (Mr Fairly at Fallowfield implements group structure although the shape of the classroom necessitates the groups to be aligned in rows). North Higherbank is the only school to uniformly position pupils according to their perceived behaviour; the only other example of this is found in Year 6 at Fallowfield. Mr Humour, the Year 6 teacher at **Highbury Park**, is alone in protecting pupils from the pressures of SATs; children are not exposed to practice papers and SATs are not mentioned until just before the actual assessment dates. Mrs Heart, the Year 2 teacher at Highbury Park, is the only teacher to pro-actively encourage competition, although pupils are encouraged to work collaboratively rather than compete at an individual level. Perhaps the most important observation is that only half of the teachers

actually reside in Coalshire locale; the Year 6 teachers at Highbury Park and Fallowfield and the Year 2 teachers at North Higherbank and Lowerbridge.

4.32 Snapshot comparison of one HA and one LA learning environment

To depict a clear contrast between such learning environments, the following section briefly outlines one HA learning environment, The 'Crew Room' at Highbury Park, and one LA learning environment, the classroom at Fallowfield.

Highbury Park Year 6, 'Crew Room'

New visitors to this classroom get a sense of what may be on the other side of the door when approaching the classroom. The 'Crew Room' is clearly labelled for all to see, which further serves to enhance the ownership of space shared by the community of learners within this group. The door itself is littered with an array of artefacts acquired from Mr Humour's travels around the world and donated by pupils (past and present). The Crew Room far surpasses all expectations in terms of visually stimulating learning environments and entering the classroom is reminiscent of stepping into a tardis (see Figures. H4-H6)! The classroom, although not particularly large, is crammed full of fascinating relics that one would not normally expect to see in a primary school classroom: African masks, Aborigine hunting tools, and European artwork. Less traditional inflatable objects reside alongside these cultural artefacts. For example, pupils share their classroom space with a range of unusual objects, including a giant inflatable Spiderman suspended from the ceiling (see Figure H10), a 5ft inflatable punch bag (Figure H5), a life-sized cardboard cut-out of a Lord of the Rings character (Figure H9), which was especially popular at the time of the data collection, large sea creatures hanging from the ceiling, oversized butterflies, a 3D human skeleton, various flags from around the world and an inflatable 4ft football referee amongst others (see Figure H9).

Girls and boys each have a separate TV and Playstation; to prevent the boys from dominating the equipment. The stock cupboard has been transformed into a dark room so that crew members can learn how to process the numerous photographs of class outings and display for all to see. Mr Humour explained to all newcomers that all crew members share a commitment to and an enthusiasm for being a member of this prestigious group and leave their mark in the

form of leaving artefacts brought back from holidays around the world. For example, L.A. Dodgers and Broncos stickers can be seen on the door (see Figure H6). Pupils are encouraged to bring their own precious belongings from home to promote their sense of belonging and sharing of the classroom space. They can freely appropriate tools and artefacts within the classroom to support their learning.

Entering the classroom itself is a remarkably visual experience. The entire room is awash with colourful display boards hanging from the ceiling, detailing various science projects undertaken by the class, whole school outings to Premiership football matches, trips to sites of cultural and historical interest, cycle rides in the countryside to name but a few (see Figures H1-H5). The initial visual overload of assorted of colours, displays, artefacts and objects is somewhat overwhelming at first. Every available space has been used and with so many interesting features, it is difficult to decide where to channel your attention first (see Figures H7-H10). Each wall display is brightly coloured with visual images such as diagrams and photographs to support all written work. The focus of each display is unusual in itself, contrasting to standard science and maths projects usually evident in curriculum subject displays. The displays in this class plainly document evidence of the class stepping over the formal school/learning boundaries to more interesting outside school learning experiences. The learning environment communicates the diverse range of social and cultural opportunities afforded to Crew members. For example: separate filming experiences set up with Tony Robinson for an historical time-team programme (see Figure H1), filming with Ben Fogle for an historical/cultural programme (Figure H2) and Jonah Lomu visiting the school to share his experiences of hard work leading to success. Visitors to the Crew Room can patently see from the visual displays that pupils' learning experiences venture even further a field; with Year 6 pupils travelling across Wales to visit specialist science and technology centres (such as the Centre for Science and Technology in Powys, see Figure H5) to both enhance pupils' science knowledge and development of skills and to provide insight into future careers in the science domain for both girls and boys. Additional fun science projects on hydraulics, water pressure experiments, air pressure rockets, flower pot filters and Andean pan pipes are displayed for all to see.

Displays are enhanced through the effective use of ICT, colour and variety and pupils know how to use the displays and collections of resources to support their learning. The displays

provide an inviting and attractive environment. Pupils' work is attractively displayed and photographic records of extra-curricular activities show that their efforts are valued. Striking displays of pupils' work enhances the interior appearance of the corridors and classroom space; they reflect a wide range of pupils' social and academic activities. Displays in the Year 6 classroom cover a diverse range of topics, including: Filming with Ben Fogle, Castles, Water Pressure Problems, The Crew Room, The Mountain Centre, Village Downs, The Centre for Alternative Technology, The Hill Cup Competition for Aviation Excellence, Tuning Forks, Arsenal vs. Liverpool; The Community Shield Final, The Legendary Rogers' Riders, The Coalshire Heritage Tail, The Town Trail, Air Pressure Rockets, The 'Faletau' (Tongan word for house) Lounge Literacy Zone.

Fallowfield Year 6 Classroom

In stark contrast, entering the Year 6 classroom is a wholly unremarkable experience. The classroom is small and visually stark. Whilst there are uniformly smart and predominantly art-focused displays scattered around the school, each textured with a green backdrop (see Figures F1, F2, F5 and F6), these are not found in Mr Fairly's class. The colour-coordinated and uniform nature of the displays might suggest a preference for order and form over function. Very little effort has been expended on creating displays in this classroom. The only work on display comprises a couple of drawings of shells and several drawings of Roman soldiers stuck onto orange A3 paper and blu-tacked to the resource cupboard door (see Figure F3 and F8). The only other items on display are a 100-square and a times-tables card (see Figure F7) which are positioned by the classroom door and are not easily accessible to the majority of children in the class.

No outside-school artefacts were found in this classroom. In fact, pupils are discouraged from bringing personal possessions into school, for fear of damage or loss. Instead, children are encouraged to use communal school resources and any tools such as pens and pencils brought from home are to be kept safely in drawers when not in use. Pupils are not freely able to appropriate communal class tools to aid learning; these are stored in the secured stock cupboard and teacher permission is required to access these tools. There is no television, computer or games console in the classroom.

There is no collective identity among pupils in this class; instead, cliques of individuals associate with one another. There are no shared Year 6 experiences documented and displayed either in the classroom or elsewhere in the school. There is no evidence of bridging of outside-inside learning in this class.

4.33   Summary of research settings

Summaries of the key features of the locale (Section 4.13), the four institutions (Section 4.25) and the four classrooms (Section 4.30) are presented at the end of each plane of analysis. Given the strong body of evidence supporting the situatedness of cognition (e.g. Gruber, 1999; Engeström, 2001; Renshaw, 2003), focus needs to remain on the interactions between pupils, teachers and the historically and culturally constituted contexts in which they are embedded.   The following section draws together the key features of the research setting within a socio-cultural framework:

4.33.1 Locale plane of analysis

Coalshire is undeniably unique; it's socio-historical and socio-political roots have, undoubtedly, shaped this 'underachieving' locale. Once a region proudly recognised for its industrial success, it is now associated with less favourable labels and disheartening statistics regarding poor educational attainment, poor health and low levels of unemployment. Nonetheless, within this underachieving locale, pupils who share similar social and cultural experiences are demonstrating differential academic attainment in school. Moving to the institutional plane of analysis may shed light on why differential achievement occurs in this unique locale.

4.33.2 Institutional plane of analysis

Exploration within the institutional plane of analysis revealed that the HA schools (North Higherbank and Highbury Park) appear to be *situated* at the heart of the *community* whilst the LA schools (Lowerbridge and Fallowfield) are not. Community and secondary school links, relationships with a diverse range of professionals/specialists and visitors to the school are enjoyed and continually strengthened at North Higherbank and Highbury Park. A greater permeability of *boundaries* is instantiated in these schools; opportunities to experience life in

different social, cultural, historical and political milieus are frequently provided, both within and outside the locale. Whilst some opportunities are provided for pupils at Lowerbridge and Fallowfield, these occur less frequently and predominantly within immediate socio-cultural boundaries. These lower achieving schools are progressively seeking community links; although the relative newness of Fallowfield has proven to be a challenge in establishing such links.

Both North Higherbank and Highbury Park welcome and benefit from the two-way flow of *communication* with parents and guardians, home-school agreements are widely supported and parents are actively involved in both inside and outside-school activities. The vast majority of parents at these schools are reported to value education and make use of the easy access to staff at these schools. Lowerbridge and Fallowfield continually strive yet struggle to achieve the same level of parental support; continual attempts are made to reach out to parents but only the minority respond. Despite these schools drawing from shared catchment areas, education is reported to be valued by the minority of parents at the LA schools.

4.32.3 Classroom plane of analysis

Within the classroom plane of analysis, it is apparent that pupils across both year groups at North Higherbank and Highbury Park are given greater *autonomy* of movement around the learning space, they are given increased responsibility to manage their own learning and are afforded greater independence in managing collaborative projects, such as school newspapers and classroom displays, particularly at Highbury Park. These differences should be viewed in light of the theoretical associations between the practices, activities and discourse of the learning community and knowledge (Lave & Wenger, 1991). Pupils at Lowerbridge and Fallowfield are not entrusted to move freely around the classroom, their movement is strictly policed and severely restricted; teachers reprimand pupils for out-of-seat behaviour, even when queuing to ask for assistance with learning activities.

A clear *sense of belonging* is evident in both Year 6 classes at North Higherbank and Highbury Park. Although not quite as patent in Mr Nowledge's class as Mr Humour's, both teachers nonetheless strive to create a cohesive community in their classrooms. This is more acute at Highbury Park where a strong *collective identity* has been established among the

pupils. The message systems, rituals and routines (Bernstein, 1996) at Highbury Park appear to ameliorate pupils' sense of belonging in their classroom environment. The 'Crew' cohesively unite to 'do or die' together in all classroom, school and wider locale activities and these are proudly presented not just in the classroom but throughout the school. No such approach is evident in the Year 6 classes at Lowerbridge and Fallowfield.

Teachers at North Higherbank and Highbury Park, in Year 6 specifically, appear to realise the importance of investing considerable time and effort in acting as a *broker* and *bridging* between pupils' home and school worlds. Although Mr Nowledge at North Higherbank does not live in Coalshire, he has devoted substantial time to investigate and understand the needs, interests and cultural norms of pupils in his class. Being Coalshire born and bred, Mr Humour at Highbury Park is historically rooted in the locale and also demonstrates a clear appreciation of his pupils' indigenous culture. These teachers are able to share and understand the culture and act as a role model from within the locale. Although Mr Fairly at Fallowfield resides in Coalshire, both he and Mrs L'Enthuse (the teacher specifically brought in to Lowerbridge from another locale to raise school standards) do not appear to make reference to the *rules, rituals* and *resources* in pupils' immediate social and cultural environments when delivering lessons. Stredder (1999) stresses the role and importance of bridging in fostering and maintaining learners' engagement; authentic, meaningful learning is believed to have positive cognitive and affective gains (Murphy, 1999).

As highlighted in the aforementioned snapshot of the Year 6 higher achieving Crew Room at Highbury Park, there is far greater availability of *social and cultural resources* in this class than any other classroom in this study; here, *tools* are readily accessible to mediate pupils' learning activities. These tools not only shape possibilities for thought and action but are in turn shaped by those who use them (Daniels, 2005). Moreover, pupils are pro-actively encouraged to bring personal *artefacts*, with associated attached meaning, from their outside-school worlds into school, thus *bridging* between these two contexts. Conversely, this is actively discouraged in all lower achieving classrooms; pupils at Lowerbridge and Fallowfield are expected to respect and share school property and there is no personal sense of ownership of specific tools or resources. Pupils may remain dissociated from the context if they don't have freely available tools to support their learning.

In sum, it is evident that pupils living in close proximity to one another, in this underachieving locale, have markedly different educational experiences. Current measures of academic success pit these pupils against one another, and more widely against pupils in other locales, without considering the varying socio-cultural contexts in which learners are embedded (Haggis, 2004). This chapter has highlighted how some teachers, namely Mr Humour, strive to create a community of practice (Wenger, 1998) in which learners share a collective identity in being 'Crew Members' whom understand and negotiate learning as a joint enterprise. For these children, learning occurs through shared interest and participation with other Crew members (Rogoff et al., 2001). The Crew are recognised as active constructors of knowledge and have become a social entity as they mutually engage in Crew activities; both inside and outside of school. The shared repertoire of communal resources (Wenger, 1999), the rules and routines of both the classroom and the institution foster a sense of cohesion among Crew members. Essentially, Highbury Park is an institution firmly rooted at the heart of the community, where teaching staff strive to bridge between pupils' home and school worlds and pupils consequently experience a real sense of belonging.

Learning does not take place in a social and cultural vacuum (Rogoff, 1998). Rooted in sociocultural theory, this study seeks to explore the situatedness of learning (Lave & Wenger, 1991). This chapter has provided a flavour of the locale, the four institutions and the eight classrooms in which children encountered education. Coalshire has specific historical, political, economical, social and cultural features that contribute towards its uniqueness as a locale. Because learning cannot be understood in isolation from the rest of the world (Wenger, 1998), and as pupils' immediate social context, as co-constituted political-economic structuring and shared cultural systems of meaning are interrelated (Lave & Wenger, 1991), it is important to consider how pupils negotiate meaning within this unique locale. In order to fully comprehend the extraneous influences surrounding pupils' willingness to engage in learning activities, and their subsequent educational performance, the historical, social and cultural surroundings cannot be ignored. The extent to which the interconnected and mutually defining components of meaning, practice, community and identity (Wenger, 1998) impact on pupils' motivation and academic achievement will be explored in the following chapters. First, however, the SATs research intervention used to probe teachers' perceptions and pupils' experiences of formal assessments will be explored in Chapter 5.

CHAPTER 5   SATS INTERVENTION: TEACHERS

5.0   Introduction

This chapter explores the situated practice of school assessments by focusing the analytic lens on the class teachers. It will begin with a brief overview of the purpose of Standard Attainment Tests (SATs). It will then address the artificially simulated SATs tests undertaken in each of the classrooms in this study, designed within a socio-cultural framework to provide the context of teachers' approaches to formal testing. Teachers' perceptions of SATs testing are then explored to contextualise the specific assessment practices undertaken in their classrooms. Attention then turns to the way in which teachers mediate tests, focusing on the strategies they employ to create testing situations in their classrooms. The messages teachers convey to pupils are examined next to identify whether teachers give tests a prominent position within classroom discourse and focus on academic performance or whether they downplay the assessments and integrate them into everyday classroom activities. The chapter then shifts its focus to identify how pupils performed in the mock research SATs tests. General results from the English and mathematics SATs tests are presented across each Key Stage and school differences are observed. The class teachers' responses to the tests are then reported to identify how much weight they accord to the importance of testing or whether the 'whole child' is considered in assessment situations.

5.1   The testing situation

The academic achievement of children is assessed by school performance in Standard Attainment Tests (SATs), which are commonly used in league tables at the locale and national level. Assessment of the formal and informal instruction children receive is essential for understanding cognitive functioning. As Rogoff (1984) argues, the context of cognitive functioning includes: "besides the physical objects, the task characteristics, and the people present, the less immediate social context in which the task and the problem solver are embedded" (p.5). Unlike most educational research in this field, which focuses on individual cognitive competencies or institutional/locale comparative performance, this chapter maintains its socio-cultural lens on the classroom plane of analysis, exploring the situated practice of school testing situations.

In recent years, SATs have been used throughout schools in Britain to gain insight into pupils' attainment in the core subjects (English, mathematics and science). These end-of-Key-Stage (KS) assessments have been designed to provide an independent and nationally standardised measure of comparative school performance in line with national benchmark targets (DfES, 2004). This method of assessment has been the focus of much controversial discourse in recent years (e.g. Wyse & Torrence, 2009; Webb & Vuillamy, 2006), and whilst it must be recognised that only a snapshot of attainment can be ascertained from this measure, it is, nonetheless, a useful tool in identifying pupils' relative academic achievement. For this reason, SATs performance data play a central role in this thesis. However, this study seeks to move beyond the large body of research on academic attainment that simply abstracts and analyses end of Key Stage attainment figures in isolation from the social milieu of pupils' learning environments. This thesis assumes that cognitive development is inseparable from the social context in which learning takes place (Love & Guthrie, 1999). McDermott & Varenne's (1995) seminal work, which explores the impact of four contrasting cultural contexts on the performance of Adam (a child with SEN), highlights the need to attend to the fundamental role of socio-cultural contexts in shaping pupils' educational experiences and outcomes. Focus therefore remains on the situatedness of academic attainment within social and cultural classroom contexts.

As it was neither feasible nor practical to use pupils' actual end-of-Key Stage SATs (as there was not the time or space to do so) the testing situation was replicated in this study using 'research SATs[13]' which mimicked the real end-of-Key Stage SATs tests. Although a weaker substitute to the real test, the aim of the research SATs intervention was to reproduce, as clearly as possible, an exam situation which would permit investigation of aspects of the testing experience in children's specific school contexts. Employing a SATs test intervention also serves to identify the extent to which teacher's present rigorous and relatively stressful tests to children and may indicate whether or not teachers value the testing situation. In this intervention, absolute replica test papers administered to pupils in England and not Wales in 2001 (KS2) and 2000 (KS1), were used to ensure that pupils had not previously encountered the questions as a past practice paper. Both English and mathematics tests were employed because of the different contextual nature of each subject; maths questions are generally decontextualised whilst the English questions are embedded within a specific story/narrative.

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[13] Research SATs comprised actual past KS1 and KS2 SATs test papers used in England not Wales.

In each school, pupils undertook the English test first and completed an English questionnaire immediately after the test (refer to Chapter 2 for methodological details). The mathematics tests were administered on a separate occasion and were also immediately followed by a mathematics questionnaire. The questionnaires were designed to probe pupils' perceptions of testing and broader socio-cultural influences on children's motivation to learn (these data are presented in Chapter 6).

5.2   Context: Exploring teachers' perceptions of SATs tests

A clearer understanding of the assessment specificities and social practices undertaken in the classrooms in this study may be achieved by exploring teachers' perceptions of formal SATs assessments. Starting with the higher achieving (HA) schools then moving onto the lower achieving (LA) schools, data from teacher interviews are presented to provide a snapshot of teachers' personal views regarding SATs tests.

North Higherbank Year 6: Mr Nowledge primarily believes academic success is dependent upon pupils acquiring SATs skills as opposed to SATs knowledge:

> "I don't teach SATs, I teach the SKILLS children need for SATs. I concentrate on teaching children how to THINK. They can now look at questions, think about what is being asked and then think in their head what the answer will be and their hand is just a tool for getting it on paper. Children in this class can think through problems and find the solution because they know how to think" (**Mr Nowledge, Year 6 Teacher, North Higherbank**).

North Higherbank Year 2: Mrs Noble: believes SATs are "definitely not necessary at Key Stage 1…I mean you know your children better than anyone don't you because you've got them for a year. SATs is just a tiny little part isn't it" (**Mrs Noble, Year 2 Teacher, North Higherbank**).

Highbury Park Year 6: Mr Humour is not an ardent supporter of SATs or the national curriculum (NC), in fact he goes as far as to say "it's rubbish; it's too broad, it's not balanced, it's irrelevant… whoever put it together was drunk!" Mr Humour believes in protecting children from the unnecessary stress caused by unnecessary school assessments and asserts that the Crew will do well if they "are encouraged and become confident so that they're not

afraid to make mistakes; that way they'll have a go at anything" (**Mr Humour, Year 6 Teacher, Highbury Park**).

Highbury Park Year 2: Mrs Heart believes SATs are:

> "Definitely necessary. I think standardized testing of the children every year to show added value, then yes, they're definitely, definitely a necessity…although I wouldn't keep the SATs as they are because they are so artificial. I'd like to see it made more flexible. Personally I would prefer the NFER tests" (**Mrs Heart, Year 2 Teacher, Highbury Park**).

Lowerbridge Year 6: Mrs L'Enthuse views the National curriculum as overly prescriptive and overloaded. She believes there are far too many subjects and the NC fails to cater for differential learning styles; children requiring a more vocational system remain totally disaffected throughout the school system because of the lesson-record-result format promoted within schools. Nonetheless, Mrs L'Enthuse is:

> "Not against SATS in testing the children to find out what they have achieved but the current forms of assessment don't actually measure pupils' true academic ability, just their memory in order to put a number in a box. By pitting schools against each other in league tables, teachers adopt a range of approaches to ensure they come out on top. You narrow the curriculum, you start revision classes early in the year, you give extra homework, and you drill the children so that they're familiar with what they've got to do so that they get their best result. Erm, I don't think that's the purpose of SATs. Now if we didn't do any of that preparation and just gave the children the SATs papers cold and said 'right, we want to know what you've learnt over this year', our results would tumble…I just hope they're going to stop publishing the silly results and putting targets on people…when you reach the top, where do you go? If you fall back, you feel like you've failed in some way… in many cases pupils' would be a lower level than they achieve in the test; if you ask teachers what their day-to-day ability is, the best fit for many would be a lower level" (**Mrs L'Enthuse, Year 6 Teacher, Lowerbridge**).

Lowerbridge Year 2: Miss Lovejoy recognises the importance of standardised assessments for target setting and recording children's progress:

> "I think there needs to be some sort of assessment, definitely because we assess the children right from Nursery to Year 2…we do feel that assessment is very important and we use that then for our progression and setting our targets for the children. The problem with SATs is that you were expecting the children to perform well on one particular day and if they didn't perform well on one test then that was their particular level for the whole year" (**Miss Lovejoy, Year 2 Teacher, Lowerbridge**).

Fallowfield Year 6: Mr Fairly is not necessarily a huge advocate of SATs assessment but does recognise the role they have played in "causing schools to improve rapidly, and have brought about changes very quickly…giving schools a chance to improve". He does, however, highlight the problem of schools tending to teach towards the SATs, making it very narrow rather than the broad balanced curriculum you're supposed to have; he wonders whether "disaffected pupils are actually being provided for when you are only looking at three subjects" (**Mr Fairly, FF6**).

Fallowfield Year 2: Mrs Funlead believes "SATs has certainly focused the minds of teachers over what is important and has certainly made the teaching and the general level of ability of the children better". She questions the validity of assessments:

> "Well, they (SATs) are just ridiculous because you are just working; people are just working towards the test. Er, for months in advance. I mean I know that because I did Year 6 for eight years. For months in advance you are just plugging away and just trying to get things done instead of enjoying yourself" (**Mrs Funlead, Year 2 Teacher, Fallowfield**).

Table 5.1: Teachers' Perceptions of SATs Testing

	North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Y6	Academic success is dependent on acquisition of SATs skills	SATs considered unnecessary; children need protecting from unnecessary stress	SATs useful to assess achievement but not reflective of true ability	SATs caused huge improvements in schools - teaching to test narrows curriculum
Y2	SATs are not necessary	SATs definitely necessary yet too artificial and rigid	SATs assessments useful yet not always true reflection of ability	SATs have improved teaching standards yet success dependant on teaching to test

Two of the eight teachers believe SATs are not necessary (Mrs Noble at North Higherbank and Mr Humour at Highbury Park; both HA schools). Both teachers at Lowerbridge suggest SATs are not a true reflection of children's ability (Mrs L'Enthuse and Miss Lovejoy) while both teachers at Fallowfield identify SATs as playing a role in improving standards (Mr Fairly and Mrs Funlead). Mr Nowledge is alone in explicitly linking academic success to SATs skill acquisition, while the protective views of Mr Humour are also unique; he maintains focus on the whole child over and above test results.

5.3 Teachers' mediation of the test situation

Keeping the analytic lens on the classroom plane of analysis, the situatedness of SATs assessment practices of each school are explored by concentrating on the ways in which the eight class teachers mediate the test situation. Ethnographic descriptions of how teachers differentially presented the test papers to the children in their class are provided to illustrate which teachers emphasise the importance of the test situation and which teachers try to downplay the assessment. Maintaining a focus on teachers' instruction may reveal individual teachers' values and indicate whether teachers concentrate on the whole child or whether they maintain focus on academic league tables. Some teachers adopted a casual approach to the SATs intervention while others took the test seriously. The following section provides a brief overview of the variation between schools. It aims to depict the context in which the tests were undertaken in each institution and will explore the specific strategies used by teachers to create testing conditions, including: (i) covering of wall *displays*, (ii) *desk* layout, (iii) test *instructions* and (iv) the *timing* of the test.

North Higherbank Year 6: In administering the research SATs test, Mr Nowledge said he approached the task "like the real thing in order to get the kids used to these tests". On the morning of the research tests Mr Nowledge covered all wall **displays** in the classroom as some contained mathematical content that may assist children in calculating the maths answers, which may prevent their result from being a true reflection of their ability. The **desks** were spaced out in an exam format and the children were seated at opposite ends of each table to ensure that "opportunities to cheat" were minimised. Mr Nowledge explained that children were about to undertake "very important tests" and told them to do their best to answer the questions. He explained that there may be one or two questions that the children will not be familiar with as they have not covered the entire English and maths syllabus at this stage but they need to try and answer these questions if they can. Mr Nowledge read the formal test **instructions** provided in the SATs instruction booklet. The children were aware they were being **timed** and were instructed to put their pens down when the allocated time was up. Mr Nowledge said he instructed pupils in exactly the same way as he would for the actual SATs.

North Higherbank Year 2: Mrs Noble opted to simulate formal SATs testing conditions in her classroom. Although not quite as thorough as Mr Nowledge (e.g. wall **displays** were not

covered) she did rearrange the **desks** to ensure children were not sat too closely to one another. Her pupils were informed that they were about to do "an important piece of work and that they should concentrate and try their very best for every question." Although not reiterating that it was a formal test, Mrs Noble instructed her class that they were "not to talk to one another or look at anybody else's work as Miss Birdsey is interested in seeing how much you know and not what your neighbour knows". She proceeded to read the formal SATs **instructions** for each test. In accordance with formal testing conditions, Mrs Noble explained to children who raised their hand to ask questions that she could read the question to them but couldn't tell them how to work out the answer and that they had to try to do it by themselves. Children were **timed** accordingly and provided with a "10 minutes until the end" warning.

Highbury Park Year 6: The approach adopted by this class teacher is best understood in light of the aforementioned context. As Mr Humour does not appear to value regular exposure to practice papers, test conditions and SATs training, pupils were not instructed to complete the research SATs under formal test conditions. In fact, Mr Humour, whilst very supportive of this research, requested that the Year 6 pupils were taken outside the classroom to complete the tests which would enable him to remain in the classroom with his Year 5 pupils. The Year 6 pupils therefore did not complete the research SATs under strict SATs test conditions. Whilst efforts were made by the researcher to simulate test conditions, it was very difficult in a very small computer room where space was very limited. There were no wall **displays** to cover in the computer room and there was insufficient space to rearrange **desks.** Pupils were nonetheless read the specific **instructions** from the SATs guidance booklet and emphasis was placed on pupils working individually and not sharing answers or communicating with anybody during each of the 45-minute tests. All computers remained switched off and pupils were given a 10-minute countdown warning and were instructed to stop writing when the **time** was up.

Highbury Park Year 2: Mrs Heart was keen to simulate formal testing conditions in her classroom. Wall **displays** were not covered although number resources were placed face-down. **Desks** were not moved; children remained in their usual seats. Children were told to try their best and not to waste too much time on challenging questions, instead being advised to move on and return to unanswered questions if there is any time remaining at the end. Mrs

Heart read the formal **instructions** from the SATs booklet and timed the class accordingly. Children were advised when there were 10 minutes remaining.

Lowerbridge Year 6: Immediately prior to providing the formal instructions for the research SATs tests, Mrs L'Enthuse drew pupils' attention to the motivational posters displayed around the classroom which contained slogans such as "no one can do everything but everyone can do something"; "quitters don't win and winners don't quit"; and "never give up". The large visual **displays** in the classroom were not covered, largely because they were science-focused and pupils were not completing a science research SATs paper. The smaller mathematical resources such as times-tables posters and hundred-squares were, however, turned face-down so pupils could not use them in the test to help answer the questions. Children's **desks** were rearranged into rows, to simulate formal exam conditions. Mrs L'Enthuse read the formal **instructions** from the SATs guidance booklet exactly as she would in the actual SATs assessment and she reiterated the importance of this assessment in preparing pupils for the actual SATs. The strict **time** allocation was complied with, with a 10 minute warning provided.

Lowerbridge Year 2: Miss Lovejoy removed relevant mathematics resources and covered the number square **display** in her classroom to prevent children from referring to it during the test. The number (washing) line did, however, remain visible. Before the formal test instructions were provided, Miss Lovejoy spent time explaining to her class that they were about to "do some important work" and needed to listen carefully to the instructions so they knew what to do. The **desks** were not repositioned to simulate formal test conditions. Miss Lovejoy prepared the class for the test before the researcher read the test **instructions**; as printed in the SATs guidance booklet. Children were **timed** accordingly and were given the appropriate 10-minute countdown warning.

Fallowfield Year 6: Mr Fairly's approach to the research SATs is also best framed within the aforementioned contextual factors; his regular absences from the classroom were again noted when the children were due to complete the research SATs tests. Mr Fairly commenced the session by repositioning some pupils in the most over-crowded areas of the classroom to desks with more space. **Displays** were not covered, and **desks** were not moved in his classroom. He then imparted pearls of wisdom to the class, stating that it's "important to do

well in SATs so you can get a job when you're older" before reading through the formal SATs guidance **instructions** and highlighting the **time** limit. He then absconded, leaving the researcher to invigilate the test. Despite being a qualified primary school teacher, with experience and confidence in managing challenging pupil behaviour, pupils in this class welcomed the opportunity to 'push their luck' in causing disruption the moment Mr Fairly left the room. Although the disruptive pupils quickly settled, the initial disruption and the absence of the class teacher meant that the research SATs did not simulate the specific formal SATS testing environment. To further impinge on the SATs simulation, Mrs Friend, the Head Teacher, entered the classroom part way through the English test and began glancing over pupils' shoulders to read their answers. Armed with an awareness of how the children were progressing, she then started interrupting the class with advice on how best to approach the answers. A gentle, yet somewhat awkward, reminder from the researcher that pupils should continue to do the best they can inevitably prevented further comments from Mrs Friend. Nonetheless, this approach taken by the Head Teacher is somewhat revealing in terms of strategies used by teachers to boost school performance figures.

Fallowfield Year 2: Mrs Funlead scanned the classroom to identify resources and **displays** that may need covering or removing before the children entered the classroom for the research SATs tests. **Desks** were not rearranged although children were specifically instructed not to look at each other's work. Mrs Funlead requested the researcher read the test **instructions** to the class. The test was **timed** accordingly and children were informed when 10 minutes remained.

A summary of teachers' differential mediation of the test situation is presented in Table 5.2 overleaf. While similarities are found in the lower achieving schools (Lowerbridge and Fallowfield), it is evident that the strategies used at the two higher achieving schools (North Higherbank and Highbury Park) are polarised in terms of the approaches used. There appears to be a spectrum of teachers' mediation of the test situation with teachers at North Higherbank who appear to have executed textbook simulation of the SATs test at one end, followed closely by Lowerbridge and Fallowfield and Highbury Park at the other end of the spectrum, where teachers do not attempt to simulate formal testing conditions. It is worth noting that Mrs L'Enthuse, the Year 6 teacher at Lowerbridge (a school previously identified as low achieving) mediates the test in a similar way to Mr Nowledge at North Higherbank.

Table 5.2: Summary of Teachers' Mediation of the Test Situation

		North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
Teacher Teacher	Y6	√	X (researcher)	√	√
	Y2	√	√	X (researcher)	X (researcher)
Classroom Setting	Y6	√	X (IT room)	√	√
	Y2	√	√	√	√
Displays Covered	Y6	√	X	Some	X
	Y2	√	X	Some	√
Desks - Test Format	Y6	√	X	√	X
	Y2	√	X	X	X
Exact Test Instructions	Y6	√	√	√	√
	Y2	√	√	√	√
Timing - exact	Y6	√	√	√	√
	Y2	√	√	√	√

All teachers followed the exact instructions in the SATs guidance booklet and all adhered to strict time restrictions. Year 6 pupils at Highbury Park were the only class not able to complete the tests in their classroom. Having briefly outlined the main instructional features for each teacher, attention now turns to the imbued SATs messages identified in each classroom context.

5.4   Importance of SATs: Messages conveyed to pupils

Drawing from classroom observations and informal talks with class teachers, this section will focus on the messages teachers signal to pupils about the importance of SATs tests.

North Higherbank Year 6: Mr Nowledge regularly conveys to his class that he expects the highest standards in both SATs and non-SATs work; his motto is "quality counts". Pupils received the message that Mr Nowledge values the importance of the research SATs; as evident in the classroom space (a large stock-cupboard) being dedicated to SATs resources, past-papers and teacher-devised SATs topic booklets in addition to Mr Nowledge's regular references to SATs during everyday lessons. Throughout the year Mr Nowledge explicitly links lesson content to SATs tests, for example outlining "this is a typical '2 mark' SATs

question" and explaining that "this word (pointing to symmetry written on the board) would be written in bold on the SATs paper so pay attention to it now as it will help you to answer the question". Pupils were under no illusion that SATs are valued in this class when Mr Nowledge set aside the whole afternoon to go over the English and mathematics research SATs, at a slow enough pace for the entire class to grasp all concepts to ensure that all children learned from the assessment; both identifying where mistakes were made and how they should be answered, and to increase confidence where pupils answered correctly.

North Higherbank Year 2: Although pupils were told the research SATs constituted "an important piece of work" the absence of previous practice opportunities or mention of formal assessments suggests children are not aware of the importance of SATs assessments.

Highbury Park Year 6: Given Mr Humour's conscious decision to refrain from mentioning SATs until nearer the assessment date, pupils are unlikely to be imbued with a sense that SATs are a critically important feature of Year 6. Pupils may also have failed to identify the importance of the research SATs as their Crew leader banished Year 6 pupils from the Crew room to complete the tests in the IT room; an environment usually accorded weighting as a fun learning context and used as a treat for pupils who complete their work early. The fact that Mr Humour was not present for the assessment and pupils understood that they were "helping Nic (essentially an outsider) with her college work", conveyed to pupils that their efforts were not necessarily required in the same way as demanded by a formal assessment.

Highbury Park Year 2: Children have not been made aware of end-of-year-assessments. References to SATs or alternative assessments, such as NFER tests, do not feature in classroom lessons. Children are seemingly non-cognisant of the importance of formal assessments.

Lowerbridge Year 6: Pupils at Lowerbridge seem to understand the importance of SATs assessments as they have been reminded on a regular basis since the start of the year. They are acquainted with SATs terminology and are no longer fazed by mock SATs tests as they have regularly encountered so many practise papers in each of the core subjects. Mrs L'Enthuse allocated significant lesson time to exploring the English and mathematics research SATs questions to help pupils identify areas in which they have to improve. This

action further communicates to pupils that they need to pay close attention in reading the questions carefully to identify what specifically is being asked of them. With such heavy emphasis on practising past papers, the message conveyed to pupils is arguably one that suggests cramming and training are useful tools in helping you pass tests, which is the apparent measure of one's ability. Mrs L'Enthuse is also signalling the value of SATs for educational success.

Lowerbridge Year 2: As with the other Year 2 classes, the importance of formal testing was not a message regularly communicated to children in Miss Lovejoy's class. Children were informed the research SATs were "important work" but had not previously encountered such assessments.

Fallowfield Year 6: Mr Fairly's absence during both research SATs assessments probably conveys to pupils that tests are not important. Whilst he was observed verbally highlighting the value and importance of SATs during the year, he did not commit 45 minutes of his time to remain in the classroom to oversee each test. The message signalled by the Head Teacher's interruption is that pupils are able to ask for assistance if necessary; this is not permitted in SATs examinations, teachers are only allowed to assist with reading words on maths and science papers and not explaining the meaning of specific questions.

Fallowfield Year 2: Mrs Funlead also refrained from mentioning formal assessments to her class and they consequently appeared to be unaware of the importance of SATs testing. A summary of the importance of SATs, as conveyed by the class teachers is presented in Table 5.3 on the next page.

Wide variation was found among teachers in Year 6 but not in Year 2. It is not surprising that Key Stage 1 teachers do not stress the importance of formal end-of-Key Stage assessments. At the time of data collection, KS1 SATs tests had recently been abolished, releasing teachers of the pressure to prepare their pupils to perform well for school league tables. With demands placed on schools to perform well in KS2 SATs, some teachers signalled to pupils that SATs were critically important, as evident in continual references made to the assessments and the opportunities provided for pupils to practice past papers.

This was particularly evident at North Higherbank and Lowerbridge where teachers' synchronised verbal messages and actions conveyed the importance of doing well in tests.

Table 5.3: Summary of Importance of SATs: Messages Conveyed by Teachers

		North Higherbank	*Highbury Park*	*Lowerbridge*	*Fallowfield*
SATS Mentioned	**Y6**	Throughout the year	Not until near the assessment	Throughout the year	Throughout the year
	Y2	No	No	No	No
Importance of SATs	**Y6**	Very (continual reference)	Not (banished from room, teacher absent)	Very (drilling)	Mixed (verbally important, physically absent)
	Y2	No although research SATs are important work	No	No although research SATs are important work	No

 KS2 children at Fallowfield were verbally told that SATs were important. Unlike the other Year 6 teachers, Mr Humour at Highbury Park did not, at any stage, signal to pupils that SATs were important. His actions confirm that he maintains focus on the whole child and he continued to protect his Crew from the unnecessary burden of formal assessments. Mr Humour is consistent in everyday and testing situations. Other teachers are less consistent. Having outlined the specific instructional approaches and messages conveyed to pupils, this chapter will now explore pupils' academic attainment on the English and mathematics research SATs in each school.

5.5   Research SATs results

These research SATs results do not carry much weight because the tests results cannot be reliably compared: the tests were completed at different times across the schools, children were exposed to different parts of the syllabus at the time of testing and there were variations

in the context of the test situation. It is, however, worthwhile exploring how children in each class performed. Although children's actual SATs were not investigated as the central focus of this study, these results will be analysed later in this thesis to document their true end-of-Key-Stage academic achievement (see Chapter 9). This section provides a brief summary of how each Year 6 and Year 2 classroom performed on the English and mathematics research SATs tests. Further analyses are presented in section 5.5.1 to demonstrate superior academic performance in one subject across all schools; the rank order of school performance is outlined in section 5.5.2 which potentially challenges the higher and lower achieving status of the schools in this study; and overall differences in performance between the higher and lower achieving schools are identified in section 5.5.3. This final part of this section (5.5.4) reports the percentage of pupils who achieved the expected level (benchmark) in these SATs tests. These data are important because they throw light on the findings from pupils' questionnaires presented in Chapter 6.

The overall results for the Year 6 and Year 2 English and mathematics research SATs are presented overleaf in Tables 5.4 and 5.5 respectively. The percentage of pupils achieving each Level (5-2 in KS2 and 2A-N for English and Levels 3-N for mathematics in KS1) is reported for each class in each Key Stage[14].

Table 5.4: English and Mathematics Research SATs for Year 6

Year 6	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
Level	English (n=29)	Maths (n=29)	English (n=11)	Maths (n=11)	English (n=27)	Maths (n=27)	English (n=36)	Maths (n=36)
5	42	3	18	0	34	0	25	0
4	45	24	36	18	37	26	55	14
3	10	73	46	55	22	67	17	55
2	3	0	0	27	7	7	3	31

The percentage of pupils is, perhaps, better illustrated in Figure 5.1 for English and Figure 5.2 for mathematics.

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[14] NB: the benchmark for Key Stage 2 is Level 4 while the Key Stage 1 benchmark is Level 2.

Figure 5.1: Percentage of Year 6 Pupils Achieving each Level in English Research SATs
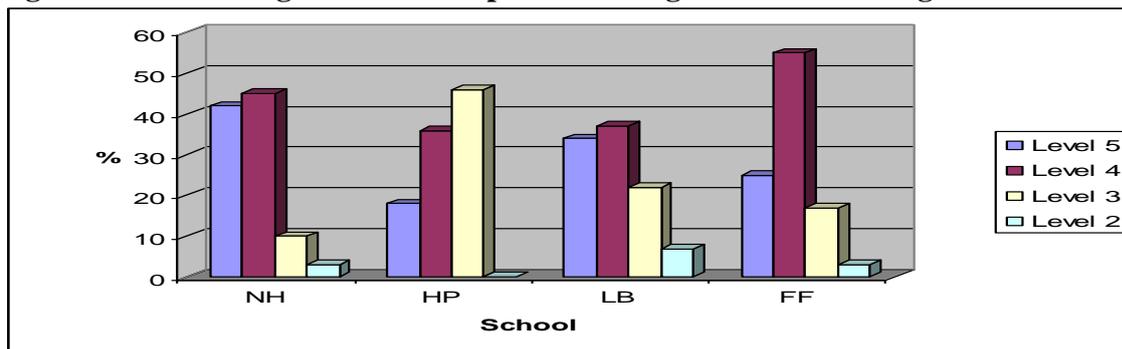
Figure 5.2: Percentage of Year 6 Pupils Achieving each Level in Mathematics SATs
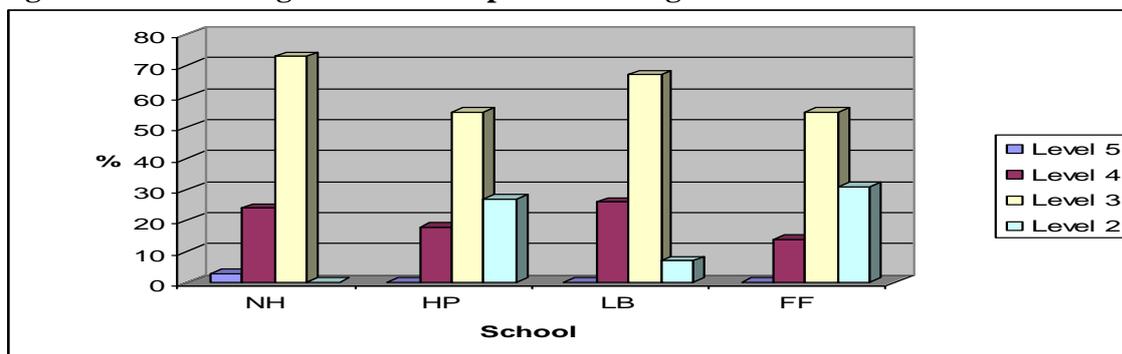
The results for Year 2 are presented next; the English and maths levels achieved by pupils are presented in Table 5.5, with separate histograms for each subject in Figures 5.3 and 5.4.

Table 5.5: English and Mathematics Research SATs for Year 2

Year 2	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
Level	English (n=27)	Maths (n=27)	English (n=25)	Maths (n=26)	English (n=25)	Maths (n=25)	English (n=19)	Maths (n=19)
3	N/A	19	N/A	0	N/A	4	N/A	0
2A	41	33	28	39	28	44	0	5
2B	26	26	28	39	32	16	42	37
2C	15	22	28	14	32	36	32	37
1	N/A	0	N/A	1	N/A	0	N/A	3
N*	18	0	4	1	2	0	5	1

* **N: Level Not Achieved**

Figure 5.3: Percentage of Year 2 Pupils Achieving Each Level in English SATs
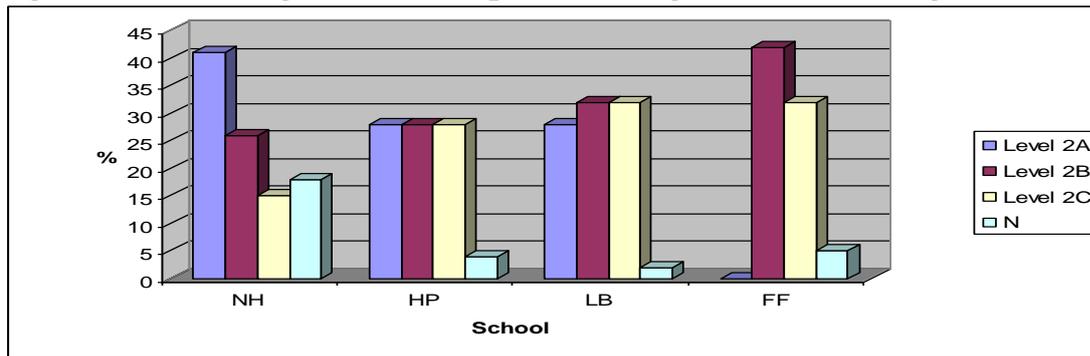
Figure 5.4: Percentage of Y2 Pupils Achieving Each Level in Maths research SATs
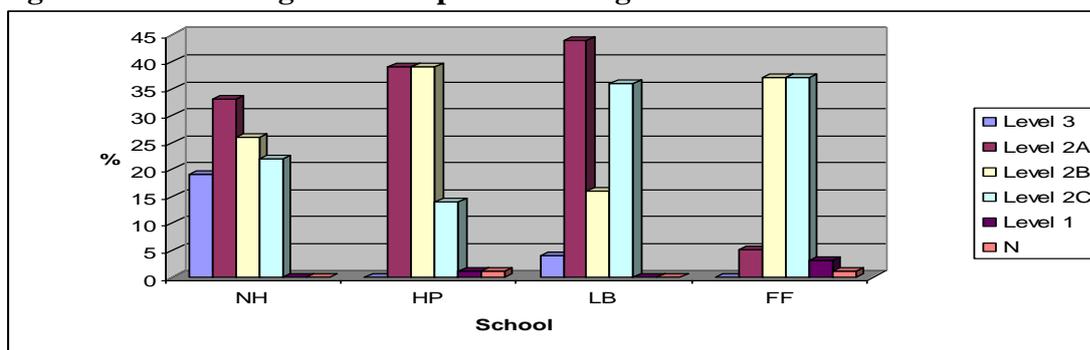
5.5.1 Children's differential performance in English and mathematics

All children, across both year groups, perform better in English than mathematics although the difference is more marked in Year 6 (Figure 5.5) than Year 2 (Figure 5.6). In the English test, children are required to identify responses embedded within a story rather than decontextualised stand-alone mathematics questions. It would appear that at this stage in their education, children in Year 6 are able to engage more easily with this format of assessment.

Figure 5.5: Mean English and Mathematics Year 6 Research SATs Scores

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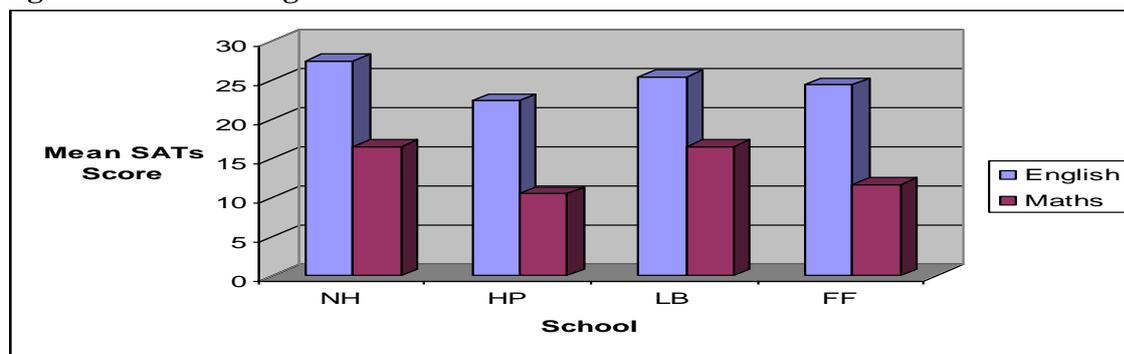
Figure 5.6: Mean English and Mathematics Year 2 Research SATs Scores
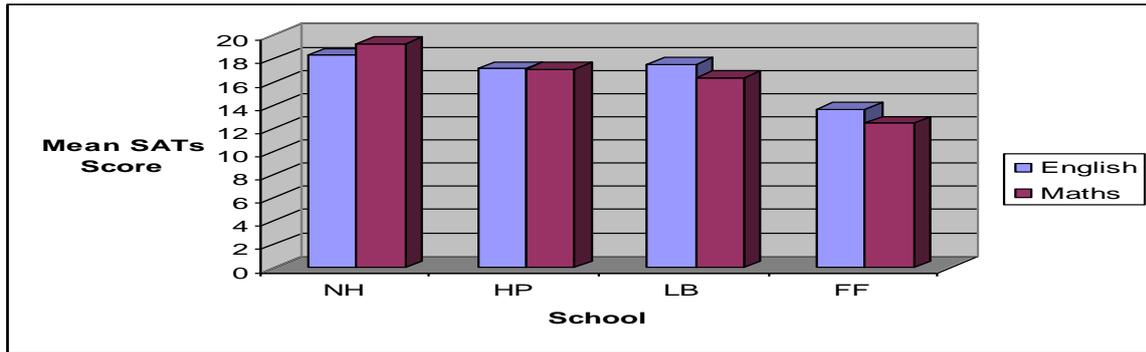
Statistical analyses of the research SATs results will now be presented for each year group. Mean scores for the Key Stage 2 English and mathematics SATs are presented for each Year 6 class in Table 5.6 and each Year 2 class in Table 5.7.

Table 5.6: Summary of Mean Research Year 6 SATs Scores for Each School

School	Research SATs	Range of Scores	Mean	Std.	T	df	Sig.
North Higherbank (N=29)	English	7-46	27.52	9.36	7.66	28	.000**
	Maths	9-33	16.55	5.51			
Highbury Park (N=11)	English	11-39	22.45	10.38	5.86	10	.000**
	Maths	2-22	10.55	6.28			
Lowerbridge (N=27)	English	8-42	25.52	10.48	5.84	26	.000**
	Maths	4-25	16.59	4.80			
Fallowfield (N=36)	English	4-39	24.47	7.84	9.60	35	.000**
	Maths	1-30	11.67	7.28			

**p=<.001

Paired-samples t-tests identified statistically significant differences between pupils' scores in the English and mathematics research SATs in every Year 6 class. The mean scores confirm that children perform much better in the English comprehension test than the mathematics mental arithmetic test.

Table 5.7: Summary of Mean Year 2 Research SATs Scores for Each School

School	Research SATs Test	Range of Scores	Mean	Std.	t	df	Sig.
North Higherbank (N=27)	English	2-27	18.33	7.80	-.94	26	.36
	Maths	10-35	19.30	6.68			
Highbury Park (N=26)	English	1-27	17.16	7.95	-.06	24	.95
	Maths	4-24	17.12	5.10			
Lowerbridge (N=25)	English	6-27	17.52	7.05	1.26	22	.22
	Maths	9-26	16.40	4.67			
Fallowfield (N=19)	English	4-21	13.68	6.54	.82	18	.42
	Maths	4-24	12.47	4.75			

Analysis of the KS1 research SATs tests reveal no significant differences in the English and mathematics scores of pupils in any of the Year 2 classes. At this stage in their education, children in KS1 appear to engage equally well with the different test formats.

5.5.2   Rank ordering of school performance

Although the flaws of using the research SATs data in any meaningful way have already been observed, the schools are placed in rank order to identify whether they conform to their previously identified higher and lower achieving status. One might expect the two HA schools (North Higherbank and Highbury Park) to feature in the top two positions in both subjects across both year groups. This is not found. As Table 5.8 reveals, North Higherbank (HA) and Lowerbridge (LA) share the top two positions.

Table 5.8: Year 6 Rank Order of School Performance for Research SATs

	English	*Maths*
1	North Higherbank	Lowerbridge
2	Lowerbridge	North Higherbank
3	Fallowfield	Fallowfield
4	Highbury Park	Highbury Park

Children in Year 6 at Highbury Park performed least well in both English and mathematics research SATs assessments. The context within which these tests were undertaken cannot be ignored (refer back to section 5.3).

Table 5.9 shows that in KS1, North Higherbank performs best in both English and mathematics while Fallowfield is the worst performing school in both subjects in the Year 2 research SATs assessments. The KS1 mathematics results conform to the higher/lower achieving status divide with the two HA schools faring better than the LA schools.

Table 5.9: Year 2 Rank Order of School Performance for Research SATs

	English	*Maths*
1	North Higherbank	North Higherbank
2	Lowerbridge	Highbury Park
3	Highbury Park	Lowerbridge
4	Fallowfield	Fallowfield

5.5.3   Exploring HA and LA school differences

Examination of overall means for the higher and lower achieving schools reveal almost identical KS2 English scores (HA Schools M=24.99, LA Schools M=25.00). Similar scores were found for the KS2 mathematics results (M=13.55 for HA schools, M=14.13 for LA schools). A mixed between-within subjects analysis of variance (ANOVA) compared Year 6 pupils' scores from the HA and LA schools on the respective research SATs. As expected, there was a significant main effect for SATs subject with Year 6 children performing significantly better in English than mathematics [Wilks' Lambda=.336, $F(1,103)$=1.99, p<.000, multivariate partial eta squared =.66]. The was, however, no significant difference between the higher and lower achieving schools [$F(1,103)$=.10, p=.76].

Figure 5.7: Mean English and Mathematics Scores for Y6 HA and LA schools
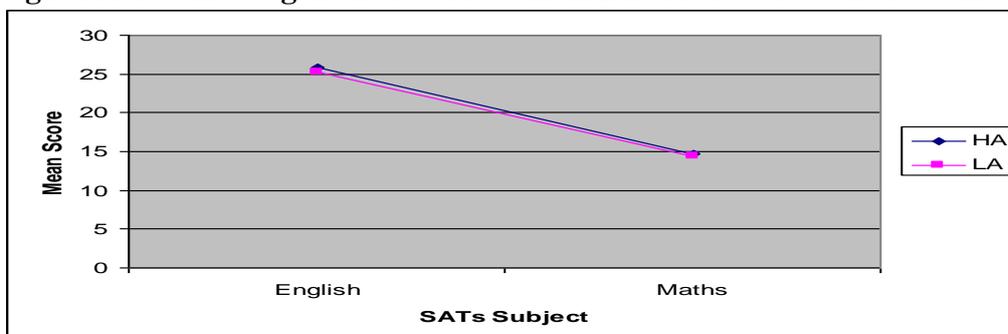
It is clear from Figure 5.7 that children in higher and lower achieving schools perform equally well on the respective SATs tests. All schools achieved higher scores in English than mathematics. When assessing differences between the higher and lower achieving Year 2 classes, children in the HA schools performed marginally better overall in the English research SATs (M=17.75) than the LA schools (M=15.60). Pupils in the HA schools scored significantly better in the mathematics research SATs (M=18.21) than children in the LA schools (M=15.34), $t(93) = 3.05$, $p < .005$.

A mixed between-within subjects ANOVA confirmed a significant overall between-subjects effect between the higher and lower achieving schools [$F(1,94)=5.58$, $p=.02$], with the HA schools outperforming the LA schools however the main effect for English and mathematics SATs subject did not reach statistical significance [Wilks' Lambda $=.99$, $F(1,94)=.469$, $p=.50$, partial eta squared=.005].

Figure 5.8: Mean English and Mathematics Scores for Y2 HA and LA schools
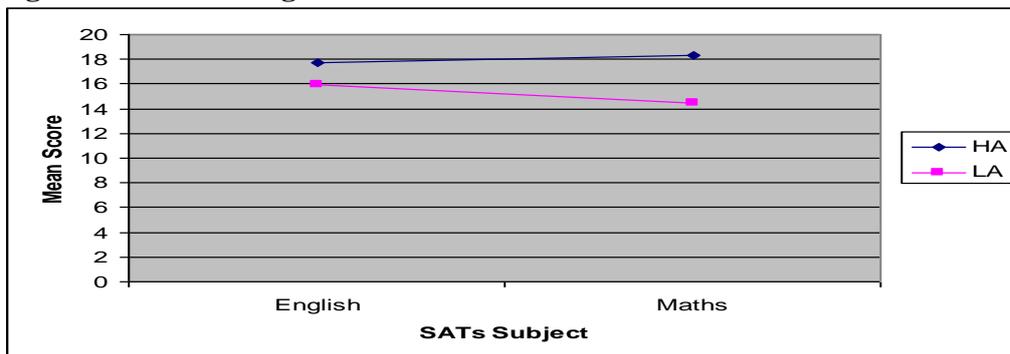
Figure 5.8 confirms that greater HA/LA variation is found on the KS1 mathematics research SATs test than the English SATs test.

Although examination of mean scores may serve as a useful tool in comparing the relative performance of children across classroom settings (at this stage in their education), it does not throw light on how many of these children are achieving expected benchmarks for their age. Although the proportion of pupils achieving each individual level is outlined in section 5.5, Tables 5.4 and 5.5, it is important to ascertain the percentage of pupils who reach the expected 'Level' in each subject, which determines whether or not they have achieved what is expected of them. This benchmark is widely used in school comparison tables.

5.5.4 Identifying the percentage of pupils achieving expected key stage levels

The benchmark achievement for Year 6 children in KS2 is Level 4 while Year 2 children are expected to achieve Level 2 in their SATs tests; children are identified as 'underachieving' if they fail to reach these levels in their English and mathematics (and science) assessments. In these research SATs, Year 6 pupils are required to score higher than 19/50 in English and 20/40 or more in maths to gain a Level 4. Year 2 pupils have to score more than 7/27 in English and 8/36 in mathematics to achieve Level 2. The percentage of pupils achieving the expected level is presented in Table 5.10 and Figures 5.9 and 5.10 below.

Table 5.10: Percentage of Pupils achieving the expected Level for their Key Stage

	Percent Year 6 Achieving Expected Level 4		*Percent Year 2 Achieving Expected Level 2*	
	English	**Maths**	**English**	**Maths**
North Higherbank	86	28	81	100
Highbury Park	55	18	84	96
Lowerbridge	70	26	92	100
Fallowfield	81	14	74	79
HA Schools	71	23	83	98
LA Schools	76	20	83	90

Histograms are presented for each year group to better illustrate the school differences.

Figure 5.9: Percentage of Year 6 Pupils Achieving Expected Level 4
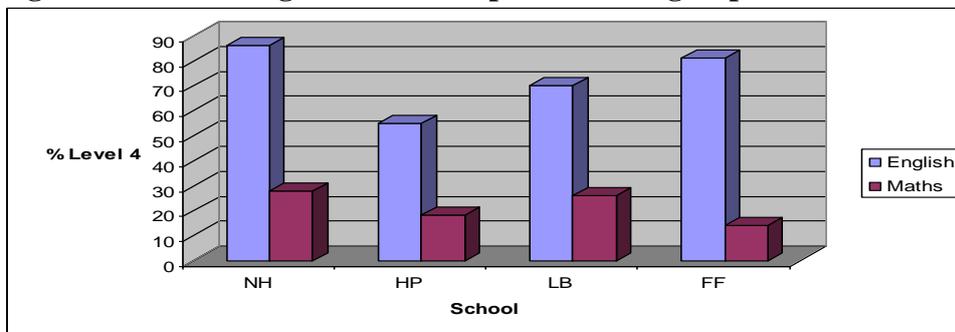
Figure 5.10: Percentage of Year 2 Pupils Achieving Expected Level 2
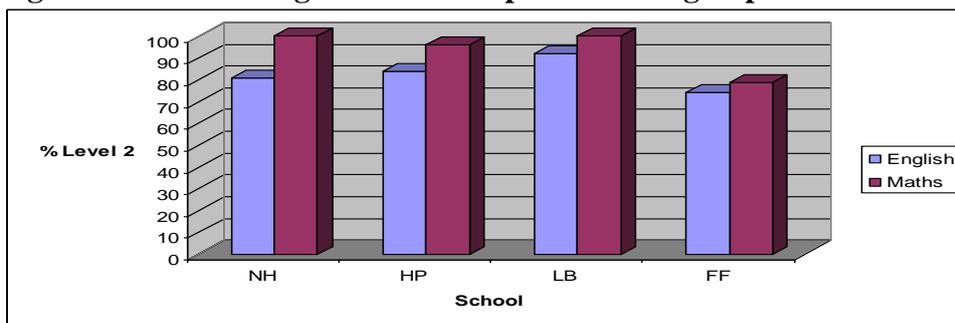
Three quarters of KS2 LA pupils (76%) have reached the expected level 4 in the English assessment; HA pupils did not perform as well (71% awarded Level 4). Although children in the higher achieving schools fared slightly better than pupils in the LA schools in mathematics, the difference was small (23% vs. 20% respectively).

The same percentage of KS1 pupils achieved the required level 2 in the English SATs test (83%) in HA and LA schools. Year 2 pupils in the HA schools performed better in the mathematics test (98%) than children at the LA schools (90%) although cross-tabular analysis revealed no significant differences [$\chi^2(1, N = 95) = 2.74$, $p=$ ns].

Having outlined the relative performance of individual classes and overall differences between the higher and lower achieving schools, attention now turns to the class teachers' responses to the test results.

5.6 Teachers' responses to the research SATs results

Exploring teachers' perceptions of the research SATs intervention may reveal whether they accord weight to the importance of testing or whether they consider the whole child in such situations. It will become apparent in the following sections that great variation is found among teachers' views on testing children in primary school settings. While some teachers believe in focusing on educational attainment, others put tests in the wider context and see it as part of children's educational experience.

North Higherbank Year 6: Mr Nowledge was extremely dissatisfied with his class' "disparagingly poor performance, particularly in maths". His class were told to "pull (their) socks up" if they expected to pass SATs at the end of the year as the results were "a complete and utter shock to me…the children are not performing as well as I would expect them to". He subsequently u-turned on his decision not to overwork pupils with regular homework and immediately introduced a minimum of fifteen minutes worth of English, mathematics and science every day in the subsequent run-up to SATs. Areas of the mathematics curriculum were also revisited to consolidate skills.

North Higherbank Year 2: Mrs Noble asked for a copy of the results to assess pupils' performance and compare with the end-of-year NFER test results. She was pleased with the overall results.

Highbury Park Year 6: Mr Humour expressed an interest in having a cursory glance over the research SATs results but explained that he wouldn't "take the results too seriously as some curriculum content has not even been covered yet" so it would not be a "fair reflection of his kids' abilities". He did, however, express surprise that the results were not higher. Mr Humour did not wish to go over the SATs tests with the class to identify any potential areas of weakness but did divulge that having seen the results, he may give his pupils the interactive DVDs he had made sooner than previously planned. These DVDs were designed to help the Crew enhance SATs skills in a fun and engaging way, without them realising it was actual SATs preparation.

Highbury Park Year 2: Mrs Heart spent time looking over pupils' individual results and commented on isolated cases where pupils had performed better or worse than expected. Although a promising 84% achieved the required level 2 in English and 77% in maths, Mrs Heart was interested in assessing the number of children who achieved the higher Level 3 and 2A scores, i.e. where pupils scored above 23 in English and 25 in mathematics.

Lowerbridge Year 6: Mrs L'Enthuse's response to the SATs results was not dissimilar to that of Mr Nowledge; she expected the results to be higher given pupils' exposure to past papers and was particularly disappointed in the maths results, particularly as the maths curriculum was re-written two years ago in an attempt to improve mathematics performance at Lowerbridge. Mrs L'Enthuse later shared that the disheartening results prompted her to timetable even more mock SATs tests for both her class and the parallel Year 6 class in the following weeks to better prepare them for the end-of-year assessments.

Lowerbridge Year 2: Miss Lovejoy also inspected the research SATs results closely, remarking on surprising findings for individual children in her class. She was pleased with the 91% English Level 2s.

Fallowfield Year 6: Mr Fairly, too, was surprised by the research SATs results, particularly mathematics as it was his specialist subject; he does not teach English which is the responsibility of Mrs First, the Year 5 teacher. Mr Fairly admitted that he had intended to "intensify revision" in the spring term but, having seen the results, said he *may* bring forward this process.

Fallowfield Year 2: Upon reviewing the research SATs results, Mrs Funlead expressed that they were pretty much as expected; the different ability groups performed accordingly. She was particularly interested in the "middle ground" target group, i.e. "the one's that are *just* underachieving. If you give them the input and you get everybody to give them that input all the way through then it can make a big difference" (**Mrs Funlead, Fallowfield, Year 2 Teacher**).

It is perhaps unsurprising that the Year 6 teachers were more concerned about the research SATs results than the Year 2 teachers, who were not faced with the same pressures to prepare children for formal, national, standardised tests at the end of the year. With the exception of Mr Humour at Highbury Park, the Year 6 teachers expected to see better results from their children and were particularly dissatisfied with the mathematics scores. These teachers reacted to what they called 'disappointing' SATs results by immediately implementing strategies such as issuing more homework, rearranging plans to provide more opportunities for practice tests and revisiting areas of the curriculum to consolidate skills, particularly in mathematics. Mr Humour maintained his view of the 'whole child' and was not fazed by the test results.

5.7   Summary

The greatest school and subject differences were found in Key Stage 2. Schools with the highest Year 6 SATs results in both English and mathematics (North Higherbank and Lowerbridge) both engage in coaching, drilling and practise techniques from early on in the academic year; the other schools do not. These strategies may boost pupils' grades but not necessarily their understanding of specific curriculum concepts. Such approaches have been widely adopted by teachers since the introduction of the formal 11+ test (Yates & Pidgeon, 1957 cited in Wyse & Torrence, 2009) in an attempt to raise academic performance.

The teachers in this study support the views of teachers in Webb & Vulliamy's (2006) research that SATs testing dominates the curriculum and negatively impacts on their teaching; teachers identified issues such as: 'working to the test' (Mrs Funlead), results not being a true reflection of pupils' ability (Miss Lovejoy), SATs not catering for disaffected pupils (Mr Fairly) and causing teachers to narrow the curriculum (Mrs L'Enthuse), thus limiting pupils' learning opportunities in other subject areas and certainly *not* ensuring that "every child gets the benefit of a rich, well-designed and broad curriculum" (DfES, 2004, p.34). With the then-recently abolished end-of-Key Stage 1 SATs assessment, Year 2 teachers were accorded greater freedom and chose not to provide pupils with opportunities to practice test papers.

There was great variation in the way the research SATs were implemented; some teachers simulated formal SATs testing (e.g. North Higherbank) while others asked the researcher to oversee the tests (e.g. Highbury Park Year 6, Lowerbridge Year 2 and Fallowfield in both year groups). This did not appear to impact on the research SATs results. The Year 6 teachers (Mr Nowledge and Mrs L'Enthuse) who attempted to simulate formal exam conditions (i.e. covering wall displays and repositioning desks) achieved the highest test results overall, although as previously mentioned, these teachers both engage in practise and coaching techniques. It is worth noting that only one school, North Higherbank, had teachers whom unanimously treated the research SATs like the formal SATs assessment; this school achieved the highest result across both year groups.

Of note, is the poorest performing school in the KS2 research SATs: Highbury Park. This was the only setting in which an emerging community of practice (Wenger, 1998) was identified in Chapter 4 and the only setting in which the analytic lens in the classroom plane revealed unique features at every stage of analysis, including: (i) **SATs perspective**: although other teachers expressed some concerns about SATs assessments, Mr Humour was the only teacher to emphatically state that children need to be protected from the unnecessary stress of SATs testing; (ii) **Instructional approach**: the Crew was the only group of pupils not permitted to take the assessment in their own classroom (they were asked to decamp to the IT room) and this was the only case where the class teacher absolved all responsibility of the tests, not wishing to be present when they took place; other teachers at least framed the assessment by communicating expectations and reading test instructions; and (iii) **Messages**

conveyed: Mr Humour was also the only teacher to *explicitly* convey the message that the research SATs were unimportant to him; his Crew were informed the activity would be 'helping Nic with her college work'; pupils essentially had nothing to gain by working hard. The other teachers explicitly conveyed the message that SATs are important and their actions reinforced this in all classes except Year 6 at Fallowfield where Mr Fairly's absence did not go unnoticed.

Year 6 pupils' apparent underachievement in mathematics, but not English, is perhaps the most surprising finding from this research SATs intervention. While mathematics result across all schools are poor, thus lending support to the argument that Welsh pupils continue to perform significantly worse than the OECD average and UK average (PISA, 2009 cited in WAG 2010; OECD, 2012), the coaching and practise techniques used in the aforementioned schools appear to have had a small yet positive impact; children in these schools gained, on average, 5 points more in this test than pupils at the schools which had not given children opportunities to complete practise SATs tests prior to the research SATs intervention. It should, however, be noted that teachers' autonomous planning of the mathematics syllabus resulted in schools having covered different mathematical concepts at the time of this intervention. As Goldstein (1998) notes, the timing of, and pupils' age at, the assessment is associated with end of Key Stage achievement. The Year 2 pupils performed equally well on the English and mathematics assessments.

It is evident that pupils' academic success, as measured by standardised SATs tests, may be influenced by class teachers' instructional approaches. As Lantolt & Thorne (2006) and Yildrim (2008) argue, instruction and assessment should be inseparable from one another and children's academic ability, achievement and underachievement, can only be fully understood when viewed as a dynamic process. Static assessments, like this research SATs intervention, which place demands on pupils to independently solve problems in challenging test conditions, will only ever reveal part of a child's academic ability. Such measures ignore children's proximal development (Vygotsky, 1956) and fail to take into account broader social and cultural issues which impact on pupils' motivation and their subsequent performance in academic assessments. In order to fully understand pupils' motivation to learn, attention needs to shift from focusing on children's individualistic cognitive abilities in the form of scores derived from artificial tests to wider socio-cultural influences, which may

explain why some children effectively engage in learning and do well in school tests while others do not. Whilst continuing to focus on the research SATs intervention, the analytical lens will move from the teachers to the children in the next chapter to probe pupils' understanding of tests and explore the wider social and cultural challenges faced by children undertaking school assessments.

CHAPTER 6   **SATS INTERVENTION: PUPILS**

6.0   Introduction

Having highlighted the situated nature of the research SATs intervention in the previous chapter, it is now time to adjust the lens to focus on the pupils and their responses to these tests. Probing children's accounts of learning, school assessments and their engagement in English and mathematics may throw light on why some children succeed, academically, while others do not. This chapter draws on data from the English and mathematics questionnaires, which were completed by children immediately after each SATs test (refer to Chapter 3 for details). The questionnaires serve two purposes: firstly, they seek to investigate pupil motivation by identifying children's reactions to the tests; exploring whether or not pupils were interested in the content, whether they found it easy or challenging to complete the test and if/why children were motivated to persevere with challenging test questions. Secondly, the questionnaires permit exploration of broader socio-cultural issues, such as children's outside-school educational experiences, support received at home and their perceptions of the usefulness of learning English and mathematics in helping them achieve any future ambitions. This chapter will briefly address the use of tests in identifying achievement and underachievement, it will explore testing from the perspective of the child and then synthesise findings from the SATs tests and the questionnaires to identify features of academic achievers and underachievers. It will then investigate differences between children's reported motivation and social and cultural experiences at the higher and lower achieving schools.

6.1   Using tests to identify achievement and underachievement

The term 'underachievement' is often used synonymously with 'educational failure', which is a well-established institutional fact (McDermott, 1987). While some children adapt with ease to the social and institutional constraints and cognitive demands placed on them, others experience difficulties in understanding and meeting the requirements of formal educational tasks (Cooper & Dunne, 1999). In a system where children are expected to participate, engage and perform better than everyone else (Hood, McDermott & Cole, 1980), it is inevitable that some children will fail because it is simply not possible for every child to do better than every other child. The school system identifies 'failure' with tests. Tests are

strongly framed, artificial and specialised assessments (Varenne & McDermott, 1998), which contrast sharply with the freedom children experience in their everyday life. In testing situations, pupils are deprived of all of the socio-cultural resources they normally use to manoeuvre around everyday-life challenges and testing remains the most stringent environment in which the child has to perform (McDermott & Varenne, 1996). It is within this context that pupils' academic achievement is evaluated. The test situation remains at the heart of children's school experiences and these testing conditions put children in a specific order to evaluate their performance. Although standardised tests reveal only part of a child's mental ability and ignore their potential developmental capabilities, academic achievement in the form of test results is ultimately the only thing that counts and is taken seriously by those working in school settings and those charged with policy making. Examination of such testing situations may reveal how pupils manage to perform and respond to this stressful context.

6.2   Exploring pupils' response to the research SATs tests

The following data were drawn from the English and mathematics questionnaires given to pupils upon completion of each research SATs test. The questionnaires explore children's immediate responses to the tests, their views on each subject and their beliefs about their own capabilities. These measures also enquire about children's general perceptions about their enjoyment of learning and explore whether children try hard in school and if they think learning is 'cool'. These questions seek to probe the reasons why pupils choose to either engage or not in learning. The lens then moves out to investigate children's broader social and cultural experiences, focusing on opportunities to practice English and mathematics skills, the support they receive at home and whether or not children signify the importance of English and mathematics in everyday and future life.

Pupils appear to report greater enjoyment of mathematics than English in Year 6 but not in Year 2 (see Tables 6.1 and 6.2 on the next page). Children in both Key Stages found the mathematics test more challenging. Year 6 children identified that maths would be required more than English in future (NB: perceived developmental restrictions in understanding 'the future' prevented Year 2 children being asked this question). Two thirds of Year 6 pupils (*N*=63) and more than three quarters of Year 2 pupils (*N*=77) said they tried hard in the tests.

Table 6.1: Exploring Pupils' Views of SATs Tests

	Year 6 %		Year 2 %	
	English	**Maths**	**English**	**Maths**
Enjoy subject	57	67	86	76
Found test challenging	53	70	52	66
Tried hard	67	61	86	77
Rushed to finish	32	38	25	-
Need to use in future	79	89	-	-

Table 6.2: Identifying Year 6 & Year 2 Pupils' Perceived Interests & Ability

	Year 6 %	Year 2 %
Interested in English test topic	73	83
Good at reading	76	81
Good at spelling	63	78
Good at writing	70	71
Read with someone at home	51	74
Favourite genre - Fiction	57	29
Compete with friends	30	-
Cool to work hard in school	64	-

Table 6.2 illustrates that more than a quarter of Year 6 pupils (*N*=27) were not at all interested in the 'Whale Voices' test topic. Interest in the KS1 'More about Dogs' was higher, although 17% (*N*=16) of children said the topic did not interest them; these pupils suggested future tests on vehicles, sport, nature and cartoons would sustain greater interest. One quarter (*N*=24) of KS2 children identify themselves as poor readers and approximately one third state they are not good at spelling (*N*=37) or writing (*N*=30). Self-reported reading, spelling and writing ability was generally higher among KS1 pupils. Fiction is the preferred genre for only 57% of Year 6 children and 29% of Year 2 children although this is not necessarily a fair comparison as the younger children identified preferences to read about animals or people which could arguable be included in the fiction/'make-believe' category.

One third of the older children reported they compete with friends to get the best marks. Only half of the KS2 children (*N*=50) reported reading with anybody at home while almost 75% of KS1 (*N*=70) children read with family members. Over a third of Year 6 pupils (36%) divulge that it is not 'cool' to work hard in school, providing reasons such as "I don't want to be the odd one out", "nothing's cool in school", "it's not smart to work hard" and "I get pit (picked) on if I do (work hard)".

6.3   Children's perceptions of learning

Further exploration into the reasons why children think it *is* cool to work in school revealed a surprising number of Year 6 pupils were aware of the importance of learning (14%) and getting a good education (26%) to equip them with the knowledge and skills to have a more favourable future (24%). Only 2% admitted that external rewards or working to make others proud made learning cool. Year 2 children were not asked about these issues.

Figure 6.1: Year 6 Children's Reasons Why Learning is 'Cool'
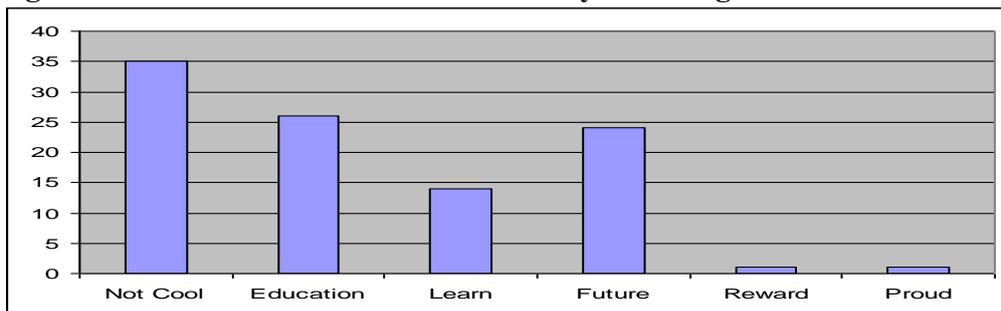
Having identified that 43% of Year 6 children do not enjoy English and 27% are not interested in reading and learning about whales (the test subject), it may be worth exploring whether children recognise the need to persevere in tests, which might be challenging.

6.4   Identifying pupils' reasons to persevere in tests

When asked why children keep trying to answer difficult questions in tests, the majority (58%) of Year 6 pupils said they wanted to do their best while 12% admitted to not trying to answer challenging questions (see Figure 6.2).

Figure 6.2: Year 6 Pupils' Explanations of Why They Keep Trying
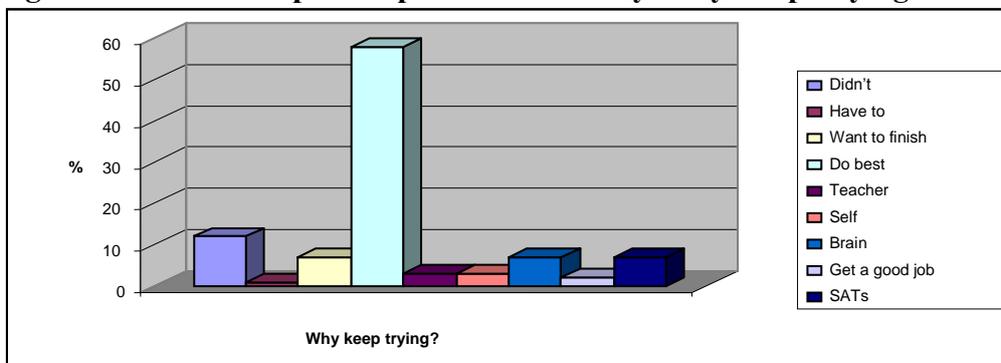
Figure 6.2 reveals that 7% said they wanted to finish the work in time, 7% identified their 'brain' made them keep trying and 7% said that SATs made them keep trying. Only 3% identified the role of their teacher or themselves (3%) as the cause for them investing effort in the research SATs test. Having identified the reasons why some children persevere in tests, it would be interesting to explore how well children think they have performed in each test in relation to how well they think their teacher will say they've done (for Year 6 pupils) or how well their friends will think they have performed (for Year 2 children).

6.5   Children's predicted academic performance

Children were asked to assess their performance in each of the tests, prior to discovering their actual score. Their predictions are summarised in Table 6.3.

Table 6.3: Children's Predicted Academic Performance on Research SATs Tests

Year 6	SATs	Bad %	Okay %	Good %	Excellent %
Pupil	**English**	16	36	22	25
	Maths	36	22	34	9
Teacher	**English**	9	31	42	18
	Maths	8	42	42	8
Year 2					
Teacher	**English**	7	12	15	66
	Maths	11	13	23	53
Friend	**English**	10	17	26	47
	Maths	-	-	-	-

On the whole, Year 6 pupils appear to assess their own performance more negatively than the feedback they predict they will receive from their class teacher.

Figure 6.3: Year 6 Pupils' Predicted Achievement in English and Maths Tests
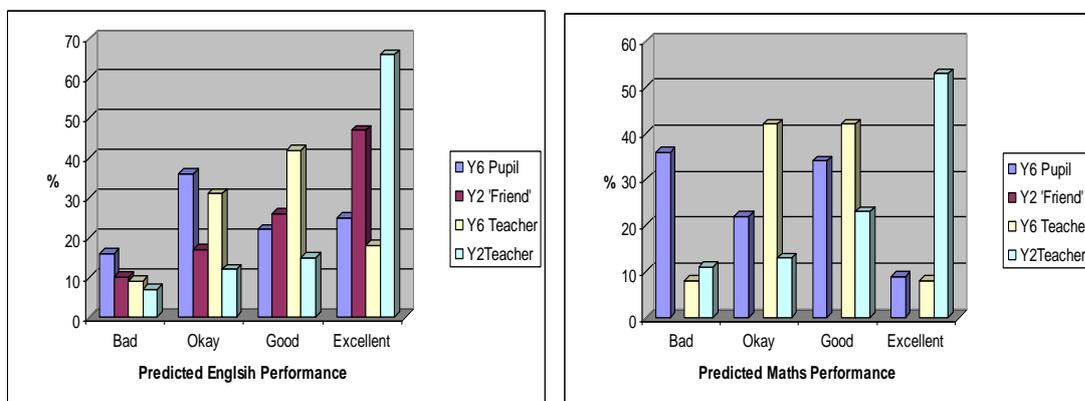
Although some children identify their own performance as 'bad' (16% in the English test and 36% in the maths test), they rarely think their teacher will assess their performance as negatively as they do[15].

Having identified children's immediate responses to the research SATs tests, their perceived interest in each subject, and predicted performance in each tests, it is time to move the lens outside of the classroom to explore outside-school practices which might throw light on children's differential performance in school tests. The next section will briefly explore pupils' out-of-school reading practices, sources of encouragement, children's perceptions on the usefulness of English and mathematics and their career aspirations in the hope that features of academic 'achievers' and 'underachievers' may be identified.

6.6   Out-of-school reading

The reported frequency of outside-school reading is presented in Figure 6.2.

Figure 6.4: Year 6 & Year 2 Pupils' Reported Frequency of Out-of-School Reading

Reading Frequency	Daily	Few	Once a	Once a	Never
Year 6	39	13	21	9	18
Year 2	47	19	20	7	7
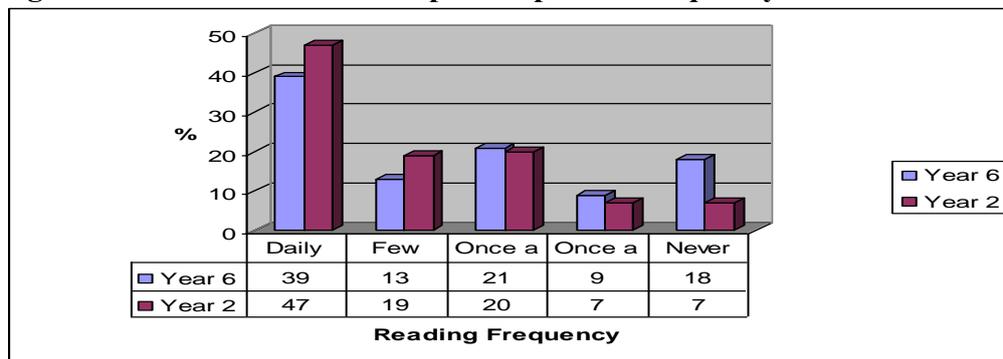
Almost one in five Year 6 children report they never engage in reading outside of school; more than twice the number of Year 2 pupils reported the same. Fewer than 40% of Year 6 and 50% of Year 2 pupils read on a daily basis.

6.7   Identifying sources of encouragement

Children in Year 6 identified the following individuals as sources of encouragement to them: parents, teachers, grandparents and friends (as shown in Figure 6.5). The vast majority of

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[15] The scale deliberately ranged from bad to excellent to encourage children to carefully consider each of the responses rather than opting for the most positive option straight away. Year 2 pupils were not asked to rate their own performance; instead they were asked to think about what their friends would think; with the intention that it would result in them projecting their assessment of their own performance.

Year 6 pupils receive some form of encouragement from parents, teachers or both. Of particular concern are the 1/10 (*N*=11) children whom purportedly receive no encouragement from family members or teachers.

Figure 6.5: Identification of Year 6 Pupils' Encouraging 'Others'
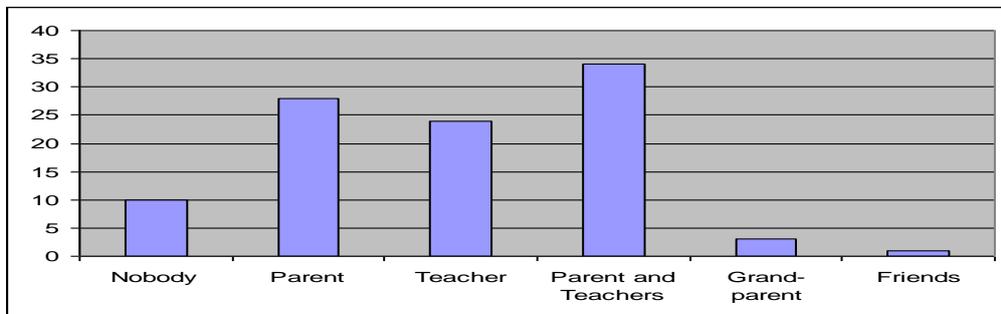
Year 2 children were asked to specify who helps them with reading or maths at home; it appears they receive greater assistance with reading. While it is encouraging that parents are supporting out-of-school learning, a surprising number of Year 2 pupils reported that they did not engage in any form of reading (26%, *N*=24) or mathematics (37%, *N*=35) activities with other, more experienced, individuals outside of school.

Figure 6.6: Identification of Year 2 Pupils' 'Encouraging Others'

	Nobody	Parents	Grandparents	Siblings
English	26	68	2	4
Maths	37	37	3	5
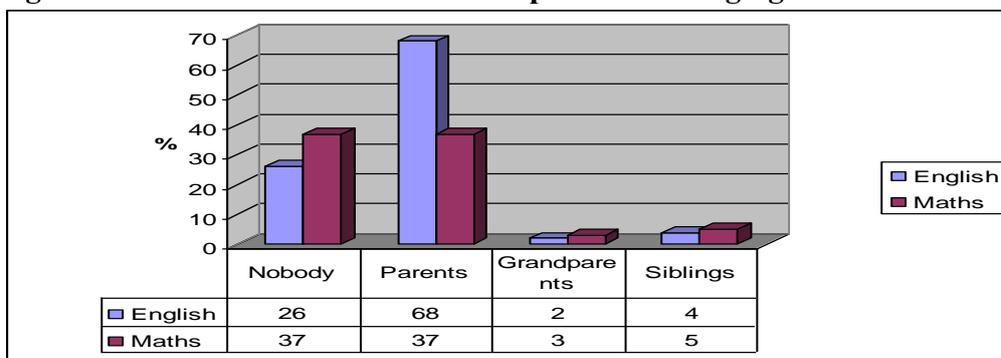
6.8   Exploring perceptions on the usefulness of English and mathematics in the future

Having already identified (in Table 6.1) that most pupils demonstrate awareness that English and maths may be useful in the future, it is not yet clear how or where children think they may need to apply the skills being taught at school. In total, nearly one quarter of the 101 children questioned believe that English is not relevant once compulsory education is finished (see Figure 6.7) while approximately 1/6 believe they will not need to apply mathematics

knowledge or skills in either a job or everyday life (see Figure 6.8). Only half of all Year 6 children think they will use English and maths in future jobs. Year 2 children were not asked these questions.

Figure 6.7: Year 6 Perceptions on the Usefulness of English Post-Education

	Nothing	Job	Life
HA	37	50	13
LA	13	53	34

English
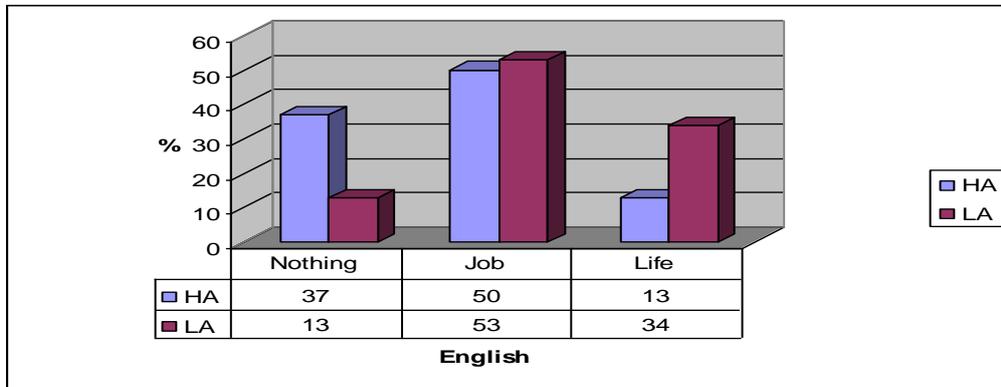
Figure 6.8 Year 6 Perceptions on the Usefulness of Mathematics Post-Education

	Nothing	Job	Life
HA	17	63	20
LA	13	49	38

Mathematics
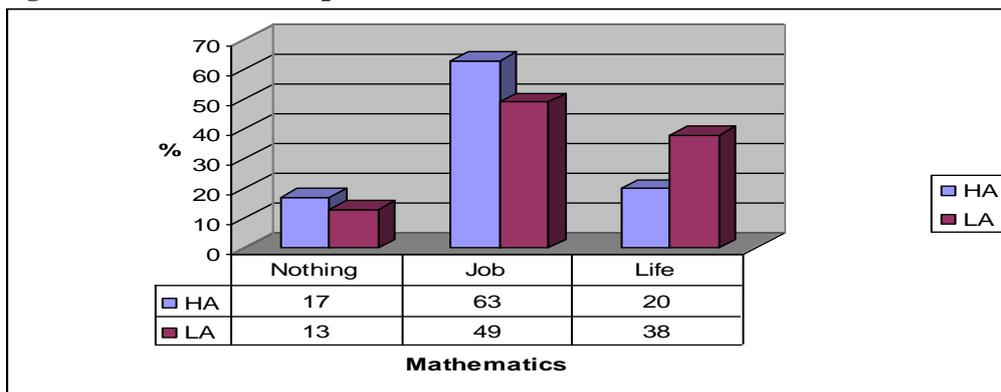
6.9   Career aspirations

The Year 6 cohort was asked to identify a job they think they may have in the future. Their responses were coded into professional, manual, 'stardom' and none (see Figure 6.9). Jobs identified as professional include: Vet, Teacher, Nurse and Policeman while manual jobs include: Carpenter, Builder and Hairdresser. Stardom includes careers as professional footballers, wrestlers or pop stars.

Figure 6.9: Year 6 Pupils' Career Aspirations
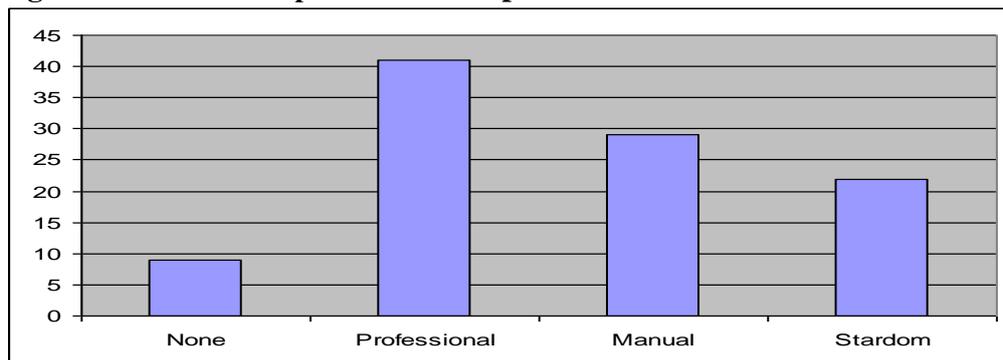
Almost 10% of KS2 pupils failed to identify a job they aspire to have. 70% of children identified professional or manual career aspirations whilst one in five pupils revealed they wanted to become superstars. The following variations were identified when pupils were asked what they think their actual job will be:

- 56% identified the same job (e.g. I want to be: "a lawyer", I think I will be: a "lawyer") (**Camilla Hawkins, Highbury Park, Year 6**);

- 6% believed their actual job would be better than the job they most want (e.g. wanting to be "a hairdresser" but think will actually be "a teacher") (**Patricia Law, Lowerbridge, Year 6**);

- 17% identified a job they perceived to be more realistic (e.g. I want to be: "vet", think I will be: "a nursery nurse") (**Caitlin Nelson, North Higherbank, Year 6**).

Many children identified career aspirations but believed these to be unachievable. For example: 'The job I most want to have is: "a game maker" but I actually think I will be: "being fat, drinking beer and watching the TV" (**Timmy Lunn, Lowerbridge, Year 6**) or wanting to be a "footballer" but actually becoming "uninplode" (unemployed; **Louis Farman, Fallowfield, Year 6**). Others revealed aspirations for careers in the police force but actually believed they would end up doing "nothing" (**Karlos Falton & Stella Farrow, Fallowfield, Year 6**).

6.10   Identifying features of academic under/achievers

This section explores the responses of children identified as achievers and underachievers to identify common features of each group. Children are identified as 'achieving' if they

reached the expected benchmark on the SATs tests. English and mathematics will be addressed in turn, firstly for Year 6 then for Year 2.

Year 6: Having explored academic achievement and willingness to engage in learning for the cohort as a whole, it is important to examine identifiable features shared by pupils who 'achieve' ($N=78$), i.e. those who attained the required Level 4 in the SATs assessment and those who did not ($N=23$). As illustrated in Table 4, achieving Year 6 pupils reported significantly greater enjoyment of English [$\chi^2(1, N=101) = 6.53, p < .05$]; reportedly tried significantly harder in the English SATs test [$\chi^2(1, N=101) = 7.70, p < .01$]; prefer fiction over other genres [$\chi^2(1, N = 101) = 4.07, p < .05$] and perceive English to be significantly more use to them in future [$\chi^2(1, N=101) = 7.18, p < .05$] than the underachieving pupils. Differences in the perceptions of under/achieving Year 6 pupils regarding the maths test and their beliefs about the usefulness of mathematics in the future were illustrated in Table 6.5.

Table 6.4: Chi-square Analysis: Year 6 Under/Achievers Views on English

English		Yes	No	Chi. Sq.	Sig.
Enjoy English	Level 4	73	27	6.53	**.04***
	UA*	50	50		
Found test challenging	Level 4	50	50	.84	.36
	UA	61	39		
Tried hard	Level 4	74	26	7.70	**.01***
	UA	43	57		
Rushed to finish	Level 4	31	69	.13	.72
	UA	35	65		
Interested in subject	Level 4	76	24	.88	.65
	UA	70	30		
Good at reading	Level 4	82	18	4.72	.10
	UA	61	39		
Good at spelling	Level 4	64	36	.08	.77
	UA	61	39		
Good at writing	Level 4	72	28	.37	.54
	UA	65	35		
Read with someone at home	Level 4	53	47	.98	.61
	UA	44	56		
Favourite genre - Fiction	Level 4	63	37	4.07	**.04***
	UA	61	39		
Use English in Future	Level 4	86	14	7.18	**.03***
	UA	61	39		

Table 6.5: Chi-square Analysis: Year 6 Under/Achievers Views on Maths

Maths		Yes	No	Chi. Sq.	Sig.
Enjoy Maths	Level 4	90	10	6.76	**.03***
	UA*	59	41		
Found test challenging	Level 4	70	30	.01	.97
	UA	70	30		
Tried hard	Level 4	70	30	4.48	.11
	UA	61	39		
Rushed to finish	Level 4	30	70	.62	.43
	UA	40	60		
Compete with friends	Level 4	35	65	.34	.56
	UA	28	72		
Cool to work hard	Level 4	55	45	1.36	.51
	UA	67	33		
Use maths in future	Level 4	85	15	.95	.62
	UA	90	10		

***p=<.05** *UA - Pupil 'underachieved' by failing to reach the required Level 4 benchmark

Underachieving Year 6 children enjoy mathematics significantly less than pupils who reached level 4 in this SATs assessment [χ^2(1, N=101) = 6.67, $p < .05$]. There were no differences in perceived usefulness of maths in the future; most children identified the need to use mathematics in the future (although it must be noted that 'future' was not defined; some children may be thinking ahead to 'the comp' while others may be thinking about life after compulsory education). Attention now turns to Year 2.

Year 2: Distinguishing features were also evident among the achieving (N=78) and underachieving (N=16) pupils in Key Stage 1. Children were identified as underachieving if they failed to reach the expected Level 2 benchmark on the respective English and mathematics research SATs tests. Tables 6.6 and 6.7 on the following pages highlight differences identified from chi-square analyses on data from the Year 2 post-SATs English and mathematics questionnaires.

The tables demonstrate that similar responses were provided by all children, regardless of how they performed on the research English SATs test. The only significant difference was identified for pupils' self-belief about their test results; those scoring higher on this test appear to be more confident about their academic performance.

Table 6.6: Chi-square Analysis: Year 2 Under/Achievers Views on English

English		Yes	No	Chi. Sq.	Sig.
Enjoy English	Level 2	83	17	5.50	.14
	UA*	81	19		
Found test easy	Level 2	51	49	4.97	.29
	UA	31	69		
Tried hard	Level 2	89	11	7.47	.11
	UA	75	25		
Rushed to finish	Level 2	23	77	2.29	.68
	UA	31	69		
Wanted to finish	Level 2	59	41	.89	.90
	UA	50	50		
Believe got the answers right	Level 2	55	45	10.03	**.04**
	UA	31	69		
Interested in subject	Level 2	86	14	2.76	.10
	UA	68	32		
Good at reading	Level 2	83	17	2.40	.30
	UA	69	31		
Good at spelling	Level 2	78	22	.30	.79
	UA	81	19		
Good at writing	Level 2	74	26	.02	.88
	UA	63	37		
Read with someone at home	Level 2	73	27	1.55	.46
	UA	87	13		
Like reading	Level 2	85	15	4.95	.29
	UA	88	12		
Enjoy school	Level 2	73	27	.40	.82
	UA	69	31		

Pupils 'underachieved' by failing to reach the required Level 2 benchmark.

Table 6.7 reveals that no significant differences were identified among achieving and underachieving children in Year 2 regarding their views and experiences of mathematics.

Table 6.7: Chi-square Analysis: Year 2 Under/Achievers Views on Maths

Maths		Yes	No	Chi. Sq.	Sig.
Enjoy maths	Level 2	73	27	3.04	.08
	UA*	88	12		
Found test easy	Level 2	35	65	7.87	.10
	UA	31	69		
Tried hard	Level 2	78	22	6.30	.18
	UA	69	31		
Wanted to finish	Level 2	72	28	4.43	.35
	UA	63	37		
Finished all questions	Level 2	71	29	2.67	.62
	UA	63	37		
Got the answers right	Level 2	42	58	4.83	.31
	UA	25	75		
Enjoyed the test questions	Level 2	58	42	4.06	.40
	UA	69	31		
Would like to do more work like this	Level 2	68	32	3.26	.07
	UA	81	19		
Do maths with someone at home	Level 2	64	36	2.43	.66
	UA	56	44		
Play number games at home	Level 2	69	31	.47	.50
	UA	69	31		
Help with shopping	Level 2	63	37	1.40	.24
	UA	81	19		
Receive pocket money	Level 2	82	18	2.53	.11
	UA	88	12		
Do jobs for money	Level 2	60	40	2.91	.09
	UA	63	37		
Important to be good at maths	Level 2	83	17	.99	.32
	UA	94	6		

*UA - Pupil 'underachieved' by failing to reach the required Level 2 benchmark

The next section addresses differences found among pupils' at the higher and lower achieving schools.

6.11 Identifying HA and LA school differences

Year 6: It has already been established that 60% of children do not read every day. However, school differences emerge with twice as many HA pupils (55%) reporting they engage in daily reading than LA pupils (28%). Significant differences were also found between pupils in the HA (*N*=40) and LA (*N*=63) schools for enjoyment of English [χ^2(1, *N* = 101) = .02, *p* < .05] with pupils in the LA schools reportedly enjoying English more than their HA counterparts who found the English SATs test significantly more challenging [χ^2(1,

$N = 101) = 8.16$, $p < .01$] and rushed to finish the test [$\chi^2(1, N = 101) = 13.26$, $p < .001$] more than LA pupils. Children in the HA schools further reported a stronger preference for fiction [$\chi^2(1, N = 101) = 6.16$, $p < .05$] than LA pupils. In addition, chi-square analysis revealed significant differences between HA and LA pupils' estimated English performance [$\chi^2(3, N = 101) = 8.10$, $p < .05$] with children at LA schools believing they performed better. No differences were identified for maths.

Further differences were identified between the HA and LA schools for pupils' enjoyment of mathematics [$\chi^2(1, N = 101) = 11.89$, $p < .01$] with children at the higher achieving schools reporting greater enjoyment of the subject than pupils at the LA schools. Fewer children in the lower achieving schools said they had to rush to finish the SATs test in time [$\chi^2(1, N = 101) = 4.32$, $p < .04$].

Finally, fewer LA pupils aspire to have professional jobs in the future (36%) compared with 48% of children at HA schools. One quarter of LA pupils (26%) identified becoming 'a star' as a future career; only 15% of children in the HA schools identified this as a viable career.

Year 2: Children in the LA schools responded more favourably to the English SATs than pupils in the HA schools; they reported greater enjoyment of the story 'More about Dogs' [98% vs. 71%; $\chi^2(3, N = 94) = 11.61$, $p < .01$]; they rushed less [19% vs. 29%; $\chi^2(4, N = 94) = 16.39$, $p < .005$]; 71% they wanted to finish the test more than the 46% at HA schools [$\chi^2(4, N = 94) = 11.83$, $p < .05$] and 86% reportedly finished all of the questions [$\chi^2(4, N = 94) = 12.13$, $p < .05$] compared with 56% at the HA schools. 86% also identified themselves as being adept at writing [$\chi^2(2, N = 94) = 10.27$, $p < .01$]; only 60% of children in HA schools said they were good writers. Almost twice as many LA school children (64% vs. 33%) expressed they thought their friends would say they had done well in the tests [$\chi^2(4, N = 94) = 11.83$, $p < .05$].

6.12   Summary

Children have been identified as 'achievers' and 'underachievers' in this chapter purely for exploratory purposes. This study acknowledges that the ascription of failure to particular children says nothing about their learning potential (McDermott, 1987) and that the SATs

intervention is not a reliable measure as the children had not completed the full curriculum at the time of testing; the 'achieving' and 'underachieving' status of individuals in this chapter is therefore treated with caution. Nonetheless, informal discourse with class teachers indicated that children identified as achieving and underachieving generally corresponded with teachers' perceptions of these children's academic abilities[16].

It is perhaps not surprising that 'underachievement' was more prolific in the curriculum subject that children in Key Stage 2 least enjoyed: mathematics. It is widely known that interest and enjoyment are of primary importance in guiding and mobilising non-directed learning (Ryan, Connell & Plant, 1990). Enjoyment as a construct has long been incorporated into definitions of academic motivation. For example, Piaget's (1981) analogy of interest as a motor that energises cognitive growth and Gottfried's (1990) assertion that academic motivation is characterised by enjoyment of school learning. The marked reduction in reported enjoyment of mathematics among older children is also compatible with existing motivation literature (e.g. Lai, 2011) as academic motivation is believed to decline as children progress through school.

Not only do older pupils appear to be less interested in the English test subject, they are also less confident in their reading ability and engage less in out-of-school reading activities than younger children. These findings are consistent with research on children's reading engagement in both the UK (e.g. Sainsbury & Clarkson, 2008) and USA (McKenna, Kerr & Ellsworth, 1995). Given the strong body of evidence indicating that children's out-of-school reading correlates positively with academic achievement (e.g. Anderson, Fielding & Wilson, 1988; Sonnenschein & Schmidt, 2000), it was perhaps surprising to find that the identified group of 'underachieving' pupils did not differ in terms of out-of-school reading frequency from their achieving peers. Notwithstanding, reported home reading rates were low for both groups of Year 6 children, which may perhaps suggest that broader social and cultural factors are at play here.

In light of the extant psychological and sociological literature asserting the fundamental role of parents in influencing children's academic achievement (e.g. Anderson & Minke, 2007;

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[16] There was, however, a slight anomaly for Year 6 mathematics where slightly more children were identified as 'underachieving' than teachers expected.

Jacobs & Harvey, 2005; Johnson, McGue & Iacono, 2007) and associations identified between supported home reading and verbal and cognitive abilities (D'Angiulli, Siegel & Hertzman, 2004; Pahl & Kelly, 2005 and Lin, 2005), it is particularly concerning that one fifth of the sample reported that they never read with anybody at home. As underscored by Vygotsky (1962), social collaborative processes in which children actively construct meaning are critical to children's learning; *if* these children's self-reports are accurate, a significant proportion of pupils in this underachieving locale are being deprived of crucial opportunities for scaffolding by more experienced others (parents) to take place, with *potential* implications for future academic success.

An abundance of research supports claims that children's mathematical skills can be developed and maths performance in tests improved if parents actively engage in maths related activities in the home (Cobb & Hodge, 2002; Cooper & Dunne, 1998; White *et al*., 2004 and Pan, Gauvain, Liu & Cheng, 2006). Whilst researchers are beginning to explore the links between children's home and school mathematics practices, few have explored differential parental involvement of higher and lower achieving schools; and none-to-date within an empirically underachieving locale. This study found no differences in children's perceived parental involvement in mathematics between either (i) achieving or underachieving pupils, or (ii) schools previously identified as high achieving or low achieving. Again, it is possible that broader socio-cultural influences, shared by residents in this locale, underpin such practises. Further exploration into ways in which parents' representations of school mathematics influence how maths is supported at home (de Abreu & Cline, 2004) may be of value.

Examination of pupils' academic performance revealed no differences between the previously identified higher achieving (HA) and lower achieving (LA) schools for either subject in Year 6, despite children in the HA schools reporting greater engagement in daily reading activities. The unique practises undertaken in the Crew room may, however, have impacted on these research SATs results. Examination of pupils' actual end-of-year SATs results (addressed in Chapter 9) will throw light on the extent to which Mr Humour's approaches benefit or impinge on pupils' academic achievement. Clearer HA/LA differences are witnessed in Year 2; where children at the higher achieving schools perform slightly better in English and significantly better in mathematics, thus providing potential support to

the notion that some schools in underachieving locales are more resilient to educational underachievement than others. Concurring with Ryan's (1982) interest-enjoyment thesis, pupils at the HA schools reported greater overall enjoyment of the test subjects. *Further* HA/LA school differences were observed regarding the proportion of Year 2 pupils gaining the expected Level 2 benchmark for mathematics; children at the higher achieving schools fared significantly better than those at LA schools. Differences were also found for Year 6 children achieving Level 4 for English; however the inverse was found as children at the LA schools outperformed their HA counterparts. There were no identifiable differences for maths KS2 results or English KS1 results.

Finally, moving the analytic lens from the classroom to the locale, there are common characteristics among pupils situated in this underachieving area that need to be addressed. Regardless of the school status or specificities of classroom practise, there is consensus among a significant minority (1/3 of pupils in Year 6) that learning is simply 'not cool'. For some of these individuals, conforming to peer-pressure and adopting the role of an unwilling learner prevents pejorative remarks being made by classmates. While this may be an effective strategy in achieving peer-acceptance (Sullivan, Tobias & McDonough, 2006) it may have longer-term implications for pupils' school adjustment and academic attainment.

It is disheartening to learn that one tenth of children completing their primary education reportedly receive *no* encouragement from anybody regarding school-related activities. Given that scholastic success is correlated with parental involvement (Steinberg, Lamborn, Dornbusch & Darling, 1992; Codjoe, 2007; Epstein, 1987), these children are seemingly disadvantaged before even embarking upon their secondary education. Some researchers (e.g. Trusty, 1999) suggest low-SES families, of which there are many in this locale (see Chapter 4), have not necessarily experienced the benefits associated with educational success and therefore find it more difficult to positively their children's education (Hill *et al.*, 2004).

A disproportionately large number of children in this study (48% Year 6, 44% Year 2) do not believe they will need to use English or maths in future jobs, many of whom believe English and mathematics serve no purpose outside the classroom. It is noteworthy that children identified as currently achieving (i.e. reaching expected benchmarks) identified the relevance and importance of future English use while the underachievers did not. Despite still being in

primary school, one tenth of the sample predicted that they would not manage to gain employment upon leaving school; perhaps a reflection of the social, cultural, political and historical context within which they are situated. As identified in Chapter 4, Coalshire secures the top positions in unemployment league tables, so for these children future unemployment may well be a harsh reality for them. For many children, career aspirations centre on seeking fame and notoriety; again, a reflection of their socio-cultural surroundings. Recent research has identified the detrimental effects of the cult of celebrity on pupils' aspirations and expectations (e.g. Farrar, 2008); thus, the perceived usefulness of education may diminish if children remove academic qualifications from their perceived equation for future success. Given that children's learning preferences are influenced by perceived usefulness and importance of tasks, (Graham & Taylor, 2002), this may have secondary implications on future academic engagement.

For some children, understanding and meeting the demands of formal assessments remains challenging; situating these children on the *periphery* of educational engagement. Other children participate and engage in the school system with ease, enabling them to remain *central* participants in the learning process. Manoeuvring the analytical lens to the class teachers in the next chapter will reveal how central and peripheral children were identified by their class teacher. These children will become the primary focus for the remainder of this study.

CHAPTER 7　　　　TEACHER PERCEPTIONS

7.0　　Introduction

This chapter aims to identify why some children in an underachieving locale succeed academically in school while others do not, from the perspective of the class teacher. Teachers remain central to this investigation; not only are they are instrumental in creating learning contexts within which pupil engagement may or may not occur, they are also able to convey to an outsider the unique set of assumptions embedded within each institution about the way in which pupils are expected to conduct themselves in order to do well in school. This may throw light on why some pupils in particular contexts are more resilient to educational underachievement than others. Whilst educational research, particularly within sociological arenas (e.g. Becker, 1952; Laws & Davis, 2000; Archer, 2008; Hempel-Jorgensen, 2009), has identified ways that teachers classify and react to different groups of pupils, this study focuses more specifically on how teachers make sense of the differential behaviour of children in their classrooms, thus addressing the imagined 'other side' of pedagogical discourse.

This chapter seeks to identify whether teachers have strong representations of children that succeed and those who do not. It attempts to capture teachers' social representations of pupils using a range of sequentially triangulated qualitative and quantitative research instruments including: (i) questionnaires to identify central and peripheral learners (requiring each of the eight teachers to identify four pupils that were most involved in learning and four that were not), (ii) qualitative probing of teachers' views (entailing teacher justification of their pupil nomination choices), (iii) a quantitative 5-point Likert scale (requiring teachers to rate each of their eight nominated children on a ten item bi-polar scale), (iv) analysis of teachers' annual reports for each child (to identify teachers' social representations of pupils) and (v) teacher interviews (to probe the issues identified in research instruments i-iv and to explore 'teacher theories' of engagement and achievement: refer to Chapter 3 for methodological discussion of each research instrument). Each measure was specifically designed and systematically analysed to elicit and build on how teachers differentiate between pupils, and reveal whether teachers' social representations of pupils transcend year group (Year 6 and Year 2) and school type (higher and lower achieving schools).

7.1   Teacher nominations: Identification of focus children

Each of the eight class teachers, four Year 6 teachers and four Year 2 teachers, were asked to nominate four children they considered to be the *most* involved in learning and four children that were *not* (see Chapter 3 for selection criteria details). Hence, a total of 64 focus children (32 most involved and 32 least involved in learning) were selected on the basis of teachers' conceptions of their differential engagement in the learning process. As this chapter is concerned with exploring teachers' perceptions of pupil involvement, the nomination instructions given to teachers were purposely general in nature thus enabling them to draw from and articulate their own understanding of 'involvement'. The two groups will, herein, be referred to as 'central' and 'peripheral' children although the specific terminology used by each teacher was maintained throughout the research process when referring to the groups they identified (e.g. 'group 1' and 'group 2' by Mr Nowledge and the 'higher achievers' and 'the other lot' by Mrs L'Enthuse).

All teachers were quick to identify the first group of central learners without hesitation; the speed at which they all recalled the names of these pupils may indicate that they hold firm representations of the characteristics required to be a central learner. There was, however, a marked contrast in the time taken and the ease with which the teachers identified the peripheral children. With the exception of Mrs Heart at Highbury Park, who listed the names of four boys without wavering, the remaining seven teachers deliberated for a longer period of time before selecting these children. These teachers questioned the expected criteria for this group, seeking clarification on whether they should primarily consider the children's academic ability, perceived motivation or their behaviour in class; whether they should select an equal number of girls and boys; and asking if it was problematic that the involved group predominantly comprised girls while the least involved group contained more boys. The standard response given to all teachers was that it did not matter and they were free to decide which children to select for each group. It is interesting that these questions arose after the central children had already been selected with ease. It is possible that teachers do not have such clear representations of pupils at the periphery of classroom learning. Data from the pilot study revealed that teachers identified central pupils as 'more (academically) able' whilst the peripheral pupils were *either* characterised as 'academically able but lazy' or 'not very academically able'. Whilst teachers may associate high academic ability with

involvement for pupils considered to be most involved in learning, they may find it problematic in applying inverse judgements to peripheral learners. This will be explored further later in the chapter.

7.2 Gender differences in teachers' nominations

Assessment of teachers' individual nominations revealed interesting gender differences; some teachers selected an equal number of girls and boys in each group, i.e. the Year 6 teachers at North Higherbank (NH) and Lowerbridge (LB) and the Year 2 teacher at Fallowfield (FF) whilst others identified same-sex groups (e.g. the Year 2 teacher at Highbury Park (HP); the gender ratio for the most involved and the least involved groups at each school can be seen in Table 7.1.

Table 7.1: Nominated Focus Children at Each School

		North Higherbank	Highbury Park	Lowerbridge	Fallowfield	Total
Year 6	**Most involved**	2 boys 2 girls	- 4 girls	2 boys 2 girls	2 boys 2 girls	**6 boys 10 girls**
	Least involved	2 boys 2 girls	2 boys 2 girls	2 boys 2 girls	3 boys 1 girl	**9 boys 7 girls**
Year 2	**Most involved**	3 boys 1 girl	- 4 girls	- 4 girls	2 boys 2 girls	**5 boys 11 girls**
	Least involved	3 boys 1 girl	4 boys -	2 boys 2 girls	2 boys 2 girls	**11 boys 5 girls**

Teachers in this study have identified almost twice as many girls (66%, $N=21$) as central learners than boys (34%, $N=11$). A similar gender imbalance is found for peripheral learners with boys (63%, $N=20$) markedly outnumbering the girls (37%, $N=12$) in this group. There are two notable exceptions, both at the higher achieving (HA) schools. At North Higherbank, 3 boys were included in the central Year 2 group; although this anomaly was explained by Mrs Noble as a cohort effect – the boy: girl ratio was unusually high for this particular year group (NB: the same ratio is found in the least involved group). Both teachers at Highbury Park identified girls only for the central groups and boys only in the peripheral Year 2 group. Figure 7.1 illustrates the gender ratio for each group of learners.

Figure 7.1: Gender Ratio for Central and Peripheral Groups of Learners
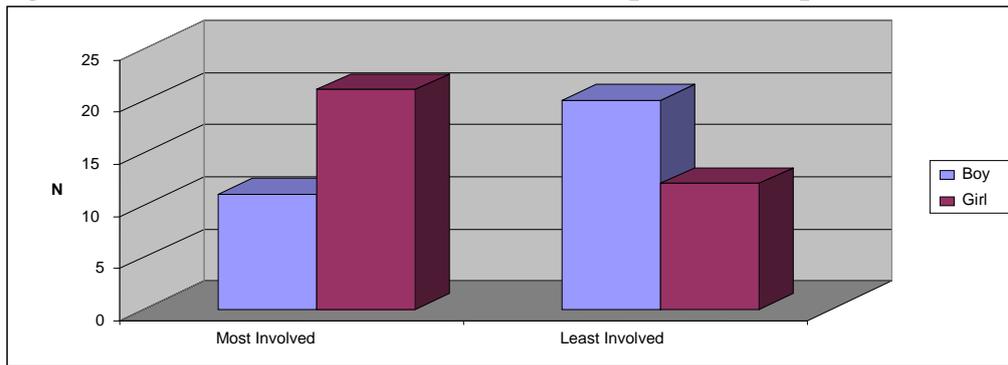
Brief statistical analysis, using Pearson's Chi Square Test of Independence, confirms that a significant difference was found between the status group and gender of pupils nominated by their class teachers: $[\chi^2 \ (1, \ N=64) \ =5.07, \ p=.024]$. The teachers in this study readily associate girls with more central involvement in learning than boys.

7.3   Qualitative exploration of teachers' representations of learners

Having identified the eight focus pupils in each class, teachers were asked the following probing questions: (i) What was involved in making your judgment for each group? (ii) How would you describe each of these groups? and (iii) How do you perceive the future success of the children in each of these groups? These questions seek to explore the representations teachers have of central and peripheral learners in their class.

7.3.1   Teachers' justifications for selecting pupils

Analysis of teachers' justifications should provide insight into the ways in which they identify and conceptualise groups of learners in their class. Thematic analysis of teachers' written responses revealed the following markers that teachers use to distinguish between central and peripheral learners: (i) motivation, (ii) academic ability, (iii) attitude to work and school life, (iv) concentration span and (v) other. The 'other' category included 'interest in activities' identified by Mrs Noble [NH, Year 2] and an additional three criteria identified by Miss Lovejoy [LB, Year 2], including: 'effort', 'behaviour' and 'communication with others'. The total responses identified in each category are presented in Table 7.2. The corresponding class teacher is also reported (e.g. the Year 6 teacher at Highbury Park is listed as HP6).

Table 7.2: Teachers' Justifications for Identifying Central and Peripheral Learners

	Year 6	*Year 2*
Motivation	2 [HP6, FF6]	2 [LB2, FF2]
Ability	2 [NH6, LB6]	1 [FF2]
Attitude	1 [LB6]	3 [NH2, HP2, LB2]
Concentration Span	0	3 [NH2, HP2, LB2]
Other	0	4 [NH2, LB2, LB2, LB2]

The Year 6 teachers appear to draw from a narrower range of criteria when distinguishing between central and peripheral learners in their class than Year 2 teachers. It seems that: *motivation* ("motivation on the part of individual children", Mr Humour, HP6; "self-motivation", Mr Fairly, FF6); *ability* ("able and not so able", Mr Nowledge, NH6; "able to achieve", Mrs L'Enthuse, LB6); and *attitude* ("attitude towards school life", Mrs L'Enthuse, LB6) are the key determinants of involvement for these teachers.

The Year 2 teachers also consider these factors in addition to *concentration span* (peripheral children are identified as being "easily distracted with a limited concentration span", Mrs Noble, NH2; and "allow themselves to be easily distracted", Mrs Funlead, FF2). Miss Lovejoy (LB2) identified the broadest range of characteristics (including motivation, attitude to work, concentration span, effort, behaviour and communication with others). Most Year 6 teachers selected just one characteristic, suggesting that they hold firmer judgements about the underlying factors affecting pupil involvement.

Teachers appear to be identifying desirable characteristics (motivation to learn, academic ability, positive attitudes to learning and good concentration span) to identify central children. Teachers also seem to identify the peripheral children as lacking these attributes which might suggest a deficit model is being used by teachers to distinguish between groups of learners in their class. Teachers appear to have clear representations of central learners but less clear representations of peripheral learners. It is evident that teachers draw from a variety of constructs, particularly in Year 2, to help them identify groups of learners in their class, however, the extent to which children meet these criteria is not yet clear. The following analyses should provide greater insight into the characteristics associated with each group of learners.

7.3.2 Teachers' classifications of central and peripheral learners

Teachers were asked to 'describe each of these groups' to gain insight into the characteristics they attribute to central and peripheral pupils. Thematic analysis of all of their responses revealed three dominant themes: *Individual, Context* and *Pedagogy*, with each category classified as either positive (+) or negative (-) (refer to Chapter 3 for further details of analytic coding used to identify themes). A summary of year group differences and total number of categories identified by teachers within each theme can be found in Table 7.3.

Table 7.3: Summary of Teachers' Classifications of Central and Peripheral Learners

Category	+/-	Year 6			Year 2			TOTAL
		Central	Peripheral	Y6 Total	Central	Peripheral	Y2 Total	
Individual	+	NH6 HP6 LB6 FF6		4	NH2 HP2 LB2 FF2		4	**8**
	-		NH6 LB6 FF6	3		NH2 HP2 LB2 FF2	4	**7**
Context	+		FF6	1	HP2		1	**2**
	-		FF6	1		HP2	1	**2**
Pedagogy	*		HP6	1			0	**1**

*With only one reference to pedagogical features, this category was not coded as positive or negative.

The three themes (individual features, context, and pedagogy) that emerged from teachers' descriptions of central and peripheral learners will be discussed briefly, below.

Individual Features: It is clear that teachers primarily consider individual characteristics over context or pedagogical factors when differentiating between children they consider to be central or peripheral learners. Without exception, every teacher, across both year groups, identified exclusively positive individual characteristics for the most involved children and negative individual features for the least involved pupils, as evident in the following exemplars listed below:

Positive individual features - only identified for most involved learners:

- Ability to achieve a great deal [Mr Nowledge, NH6];
- More academic [Mr Humour, HP6];
- Higher achievers with a good work ethic who always give their best [Mrs L'Enthuse, LB6];
- Highly motivated; any incentive is intrinsic [Mr Fairly, FF6];
- Hardworking and interested in all activities [Mrs Noble, NH2];
- Definitely able, want to do well and learn [Mrs Heart, HP2];
- Attentive, keen to learn and try their best [Miss Lovejoy, LB2];
- Confident, eager to please, willing to try new things work to best of ability [Mr Fairly, FF6].

Negative individual features - found only among least involved learners:

- Underachieving and lacks motivation [Mr Nowledge, NH6];
- Disaffected learners with low self-esteem; academic work is challenging and they are content to 'get by' and do 'just enough' [Mrs L'Enthuse, LB6];
- Only do as much as you need them to do. They are either disaffected of invisible, i.e. passive [Mr Fairly, FF6];
- Easily distracted with a limited concentration span [Mrs Noble, NH2];
- Less able, not motivated or committed. Any success is by luck rather than effort [Mrs Noble, NH2];
- Not attentive, do not try their best and give up easily [Miss Lovejoy, LB2];
- Lack motivation, allow themselves to be distracted, unwilling to finish tasks [Mrs Funlead, FF2].

All teachers, with the exception of Mr Humour, the Year 6 'Crew Leader' at Highbury Park, identified entirely negative characteristics for pupils considered to be peripheral learners, suggesting these teachers fail to recognise redeeming features when identifying these children. Mr Humour was the only teacher not to portray the least involved individuals in a negative light, focusing instead on methods employed to engage them in learning and increase levels of involvement: "it is to do with ability but you can to a certain extent influence achievement - by involving them, by making sure they contribute, by making them feel wanted and making them feel appreciated" (**Mr Humour, Highbury Park, Year 6 teacher**). Mr Humour maintains his view of the 'whole child'. Incidentally, this was the only classroom identified in Chapter 4 as having an emerging community of practice.

Context: Only two teachers, one in each year group, made reference to contextual influences on pupils' learning involvement:

"The most involved children are well supported at home, although most fall into the single parent category while the other group (least involved) do not enjoy a great deal of parental support" (**Mr Fairly, Fallowfield, Year 6**).

"They (the central pupils) are more supported at home and support at home is generally not in place for the children that are not able" (**Mrs Heart, Highbury Park, Year 2**).

These teachers recognise the role played by parents outside of school and how it impacts on children's engagement in learning within the classroom.

Pedagogy: With the exception of Mr Fairly, the Year 6 teacher at Fallowfield, who firmly believes class teachers can actively influence the degree to which children are engaged in learning, the remaining teachers did not consider pedagogical factors when distinguishing between central and peripheral children.

In sum, teachers appear to hold firm representations about each group of pupils in their class. They seem to suggest that central pupils are: academically able, highly motivated, hard working, keen, and want to do well. Conversely, children identified as peripheral learners are labelled as underachieving, unmotivated, disaffected, unwilling and lacking in self-esteem.

7.3.3 Teachers' predicted future success of children in each group

Teachers were asked to predict the future success for each group of learners in order to determine whether they perceived children's involvement status and learner identity as a short-term transitory state or whether they believed there might be longer-term implications. Thematic analysis of teachers' responses revealed five main themes: *Academic* success in secondary schooling, further education or higher education; likelihood of *employment* in office or manual jobs; *personal* factors relating to ambition and motivation, *pedagogy* in terms of perceived suitability to the curriculum; and *neutral* whereby teachers were unable to predict the success of pupils in their class. Each category was classified as either positive (+) or negative (-). A summary of the categories identified by teachers is provided in Table 7.4.

Table 7.4: Summary of Teachers' Predicted Success for Each Group of Learners

Category	+/-	Year 6			Year 2			Total
		Central	Peripheral	Y6 Total	Central	Peripheral	Y2 Total	
Academic	+	NH6 FF6		3	HP2 LB2 FF2		3	**6**
	-		NH6	1			0	**1**
Employment	+	HP6		1	HP2	LB2	2	**3**
	-			0		HP2	1	**1**
Personal	+	LB6		1			0	**1**
	-		LB6	1			0	**1**
Pedagogy	*		FF6	1		FF2	1	**2**
Neutral	*			0	NH2	NH2	2	**2**

*It was not necessary to code these categories as positive or negative

Assessment of the positive and negative responses for each theme reveals that teachers view central and peripheral children's futures very differently. The predicted future of central children is consistently positive, particularly regarding their academic success. The absence of comments on peripheral children's academic future may suggest that teachers hold less hope of these children succeeding within the education system. Each theme will briefly be discussed in turn.

Academic: Teachers seem to primarily reflect on academic factors when considering how successful central and peripheral learners may be in the future. None of the peripheral children were predicted as having positive academic success in the future. Examples of the positive anticipated success for central learners and the negative predictions made for peripheral learners are listed below:

Positive future academic success - anticipated for central learners:

- Could do well at University or higher education [Mr Nowledge, North Higherbank, Year 6];
- Should tend towards degree qualifications or higher education [Mr Fairly, Fallowfield, Year 6];
- Might go to University and find an educated post afterwards; they will definitely all be regularly employed [Mrs Heart, Highbury Park, Year 2];
- Will do really well in school and will achieve very good exam results [Miss Lovejoy, Lowerbridge, Year];
- They will probably get As and Bs in GCSEs and A Levels [Mrs Funlead, Fallowfield, Year 6]

Negative academic future - predicted for peripheral learners:

- Fear they will continue to struggle and get lost in the Comprehensive school [Mr Nowledge, North Higherbank, Year 6].

There appears to be a stark contrast in teachers' predictions for centrally and peripherally engaged learners, particularly with regards to their perceived future academic success. Despite half of these pupils being just 7 years old, their teachers already hold firm representations about their future learning trajectories, both in the medium term, regarding academic performance in secondary school, and long-term academic achievements.

Employment: Most central pupils were predicted *positive future employment* by: achieving professional status (HP6) and finding secure employment in office based environments (HP2). However, Miss Lovejoy, Year 2 teacher at Lowerbridge, also included the peripheral children in this category, suggesting they can be successful in whatever job they choose (LB2). *Negative future employment* was predicted for the peripheral children by Mrs Heart, Year 2 teacher at Highbury Park, who believes that 'with luck' they may possibly be employed but not in *clean* employment: they are going to be low skilled at the *dirty* end of the factory (HP2).

Personal: The Year 6 teacher at Lowerbridge, Mrs L'Enthuse, was the only teacher to identify personal factors when thinking about the future success of the children in her class. She anticipates the central children will 'have a greater chance of achieving their ambition' whilst the peripheral pupils have ideas about their future which are 'totally unrealistic given their academic and motivational skills'.

Pedagogy: The teachers at Fallowfield Primary were the only ones to make reference to pedagogical factors when considering the future success of peripheral children. Mr Fairly (Year 6) stated 'a more practical curriculum would suit these pupils' while Mrs Funlead (Year 2) suggested giving input to 'the ones that are *just* underachieving' as it can 'make a big difference'.

Neutral: Only one teacher, Mrs Noble at North Higherbank, remained neutral stating she was 'undecided' about the future success of the children in her class.

When contemplating children's futures, teachers appear to focus on three key criteria: anticipated exam success, likely participation in higher education and anticipated career prospects. Teachers predominantly imagine success through the academic system, with the hope of reaching the end-point of the academic trajectory and achieving professional status. Teachers appear to have firm representations of future success within the academy for central children; the academic pathway is generally not mentioned with respect to the peripheral children. The channel upwards through the academy is clear for central children but teachers have a clouded view of the academy for peripheral children. By holding such strong representations of 'success', confined within the parameters of the school institution, teachers may not recognise or promote peripheral pupils' variations of potential or their alternative routes to success. If teachers' representations are picked up through daily interaction and discourse with children, it may impact negatively on those children not able or interested in pursuing an academic pathway. Only the teachers at Fallowfield, Mr Fairly and Mrs Funlead, identified the role of pedagogy in making a difference to children's future success.

The picture created here is very positive for the children who are perceived by their teachers to be central learners; they are expected to encounter great success in future examinations; are expected to attend university; are anticipated to realise their ambitions and secure professional employment. This creates a marked contrast to the depressing portrait created for the pupils whom are less involved in learning. With the exception of Miss Lovejoy, Year 2 teacher at Lowerbridge, who sees peripheral children more positively than the other teachers, teachers predict that peripheral children will be lucky to secure employment in low-skilled 'dirty' factories, if at all. Mrs Heart, Year 2 teacher at Highbury Park, affirmed that peripheral pupils will need to rely on *luck* to secure a successful future. This is the same teacher who, unlike the other seven teachers, immediately identified the least involved learners in her class, thus suggesting that she has firm representations of peripheral children.

7.4   Summary of qualitative exploration of teachers' representations

Teachers appear to have strong representations of central learners but less clear representations of peripheral children. Central and peripheral pupils are almost a mirror image of one another; central children seemingly possess a number of desirable 'inside child' characteristics that will enable them to succeed as they progress through school while

peripheral learners do not. Peripheral children are almost considered to have a deficit in these skills and attributes. The strong representations held by teachers for the central children, suggests they have imagined a clear trajectory through academia to reach success, in the form of a professional status as an adult. The imagined future for peripheral pupils is less open; a pejorative alternative future, potentially tinged with unemployment. If the social representations held by teachers are transmitted, directly or indirectly, to the children in their class the consequences could be damaging, particularly to peripheral learners.

7.5 Quantitative exploration of teachers' representations of learners

To further explore teachers' representations of these groups, teachers were asked to assess each child using a five-point Likert scale containing ten bi-polar items (identified from literature and the pilot study - see Chapter 3 for further details). Each teacher was asked to carefully consider and rate their eight nominated focus children according to the following criteria: how involved – passive the child is; how motivated – lazy they are; how social - reticent; how hard working - minimal effort made; how well behaved - challenging their behaviour is; whether they are a joy to teach - difficult to teach; whether they anticipate success - anticipate failure; if the child is able academically - or struggles academically; how well suited the child is to style of teaching - not suited to 'school life'; and if learning occurs outside classroom – or if no learning occurs outside school. Higher scores are associated with greater involvement (i.e. a score of 5 suggests the child is the most involved, motivated, social etc. while a score of 1 is associated with low levels of involvement). The average (mode) and total scores for all children in each group are presented in Table 7.5.

Table 7.5: Average (Mode) and Total Teacher Ratings for Central and Peripheral Learners

Item	Central (N=32)		Peripheral (N=32)	
	Mode /5	Total /160	Mode /5	Total /160
Involved	5	150	2	69
Motivated	5	148	2	66
Social	5	145	4	117
Hard Working	5	151	1	68
Well Behaved	5	151	3	108
Joy to Teach	5	152	3	102
Anticipate Success	5	147	2	77
Able Academically	4	141	1	76
Well-Suited to Teaching	5	152	3	91
Learns Outside Classroom	5	141	1	71

Examination of the mode scores and overall total scores reveal notably incongruent scores for the two groups on most items except the social item, where teachers rated the peripheral pupils as being quite social (mode = 5 for central learners and 4 for peripheral children). This supports the supposition that teachers do not necessarily consider children's level of sociability to be a key factor affecting their involvement in learning. It is, however, possible that teachers' differential interpretations of the term 'social' may better explain this finding. Subsequent *ad hoc* discussions with teachers revealed that some teachers interpreted the term 'social' to mean pupils were sociable in class, i.e. frequently chatted with friends during learning activities when instructed not to; other teachers considered social to mean that children possessed the skills to communicate with teachers, i.e. ask questions to seek clarification on instructions they had not listened to; whilst others deduced that social referred to the child's levels of confidence in communicating with peers and staff.

Teachers awarded the lowest overall total scores for peripheral learners for the involved, motivated, hard working, anticipate success, able academically and learning occurs outside the classroom items. This would suggest these factors differentiate peripheral children most from their central counterparts. As illustrated in Figure 7.2, there is slightly less variation between central and peripheral pupils on the social, well behaved and joy to teach items.

Figure 7.2: Mode Scores of Teachers' Ratings of Central and Peripheral Learners
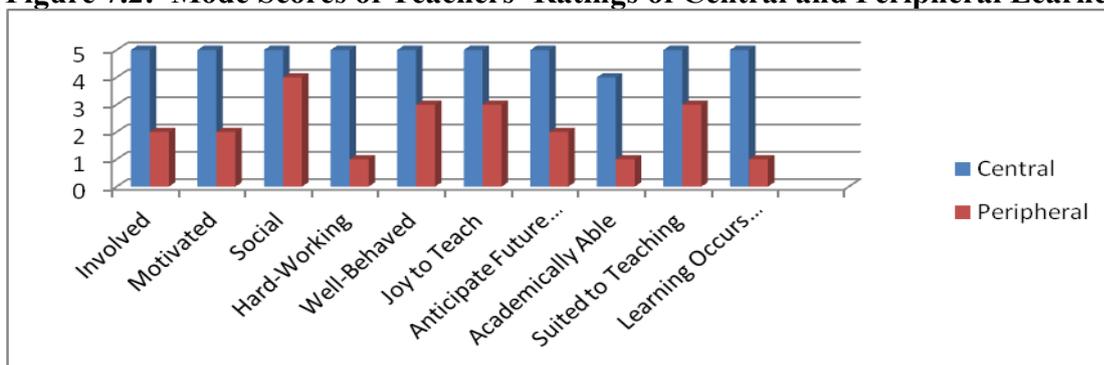
Teachers awarded 5s to the most involved group on all items except 'academically able', where they most frequently awarded a score of 4. This would suggest that the academic/cognitive ability of pupils is not the predominant criterion used by teachers to identify the most involved learners in their class; thus conflicting with the data attained in the pilot study, where teachers frequently referred to academic ability as the primary factor. The

consistently high scores awarded to central pupils suggest these children may share a set of characteristics that sharply contrast with their peripheral peers.

The greatest contrast between the most and least involved groups of learners was found for the 'hard working', 'academically able' and 'learning occurs outside the classroom' items where the peripheral pupils received the lowest possible teacher ratings; a score of 1. Teachers appear to regard these children as investing minimal effort in learning activities, to be situated at the lower end of the academic achievement scale and consider these children to have restricted opportunities to engage in learning-related activities at home. These pupils don't fare much better on the 'involved' and 'motivated' items, where teachers identified a rating of 2, and teachers reported that they don't anticipate a great deal of future success for children in this group. Teachers were marginally more positive (awarding a 3) to these children when rating their behaviour, whether or not they were a joy to teach, and whether they suited their personal style of teaching. Statistical analyses of the class teachers' ratings of central and peripheral learners are presented in Table 7.6.

Table 7.6: Statistical Analyses of Teachers' Representations (*N*=64)

	Status	N	Mean	SD	T	df	Sig.
Involved	Central	32	4.69	.54	14.30	62	.000*
	Peripheral	32	2.16	.85			
Motivated	Central	32	4.63	.55	13.70	62	.000*
	Peripheral	32	2.06	.88			
Social	Central	32	4.53	.67	1.01	62	.000*
	Peripheral	32	3.66	1.04			
Hard-Working	Central	32	4.72	.46	13.26	62	.000*
	Peripheral	32	2.13	1.01			
Well-Behaved	Central	32	4.72	.58	5.29	62	.000*
	Peripheral	32	3.38	1.31			
Joy to Teach	Central	32	4.75	.51	8.10	62	.000*
	Peripheral	32	3.19	.97			
Anticipate Success	Central	32	4.59	.56	10.45	62	.000*
	Peripheral	32	2.41	1.04			
Able Academically	Central	32	4.41	.61	8.77	62	.000*
	Peripheral	32	2.38	1.16			
Well-Suited to Teaching	Central	32	4.75	.51	12.20	62	.000*
	Peripheral	32	2.84	.72			
Learns Outside Classroom	Central	32	4.41	.80	9.11	62	.000*
	Peripheral	32	2.22	1.10			

p=<.0001

Independent-samples t-tests reveal significant differences between teachers' ratings of central and peripheral children for all items, significant at $p=<.000$. This would suggest that teachers are potentially employing these criteria when differentiating between groups of learners in their class. Teachers appear to hold significantly different representations of these groups of children.

7.5.1 Year group differences

Differences in the scores awarded by Year 6 and 2 teachers to central and peripheral children were explored to identify whether or not teachers' representations of central and peripheral learners transcend year group and Key Stages. Table 7.7 presents a summary of the scores awarded within each year group.

Table 7.7: Comparison of Mode and Total Scores for Central and Peripheral Learners in Year 6 and Year 2

Item	N	Year Group	Central		Peripheral	
			Mode / 5	Total / 80	Mode / 5	Total / 80
Involved	32	Year 6	5	73	2	36
	32	Year 2	5	77	2	33
Motivated	32	Year 6	5	71	2	34
	32	Year 2	5	77	2	32
Social	32	Year 6	4	69	3	51
	32	Year 2	5	76	4	66
Hard-Working	32	Year 6	5	75	1	37
	32	Year 2	5	76	1	31
Well-Behaved	32	Year 6	5	76	3	57
	32	Year 2	5	75	3	51
Joy to Teach	32	Year 6	5	76	3	49
	32	Year 2	5	76	3	53
Anticipate Success	32	Year 6	5	71	2	37
	32	Year 2	5	76	1	40
Able Academically	32	Year 6	4	67	2	38
	32	Year 2	5	74	1	38
Well-Suited to Teaching	32	Year 6	5	73	3	46
	32	Year 2	5	79	3	45
Learns Outside Classroom	32	Year 6	5	71	2	34
	32	Year 2	5	70	1	37

When rating the attributes of the *central* children, teachers consistently award the highest ratings, particularly in Year 2, where teachers most frequently awarded 5s for all items. Year 6 teachers frequently awarded 4s for central pupils' social and academic ability items. The

total scores for central children are higher than 70 out of a potential score of 80 on most items, suggesting that teachers across both year groups consider central children to be very engaged in learning, motivated, well suited to their teaching styles, a joy to teach and able to engage in learning outside of the classroom. Figure 7.3 illustrates the consistency in teachers' ratings of the central pupils; teachers' representations of these children appear to transcend year groups.

Figure 7.3: Year Group Differences in Teachers' Mode Scores for Central Learners
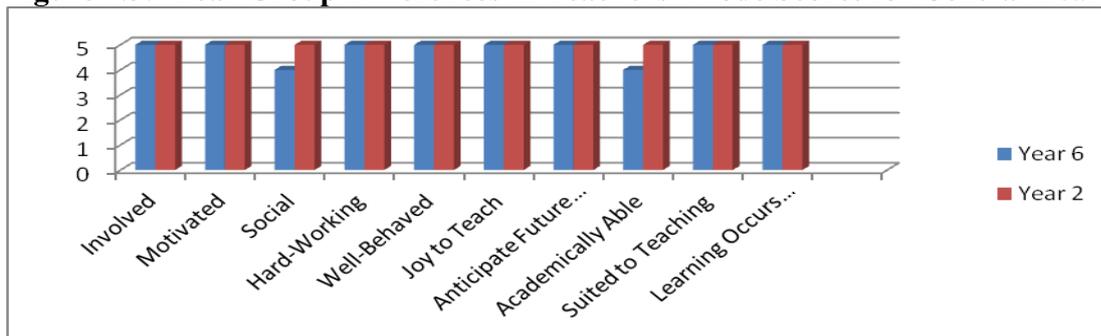
Although greater variation is found in the overall assessment of peripheral learners, Figure 7.4 illustrates that teachers rate these children in a similar way across both year groups. Peripheral children were awarded, on average, the same scores on six of the ten items (involvement, motivation, effort, behaviour, joy to teach and suitability to teaching style), suggesting that teachers' representations of peripheral pupils also transcend Key Stages. For the remaining items, Year 6 teachers awarded more favourable ratings for anticipated future success, perceived academic ability and occurrence of learning outside of the classroom, while Year 2 teachers identified peripheral children as more social.

Figure 7.4: Year Group Differences in Teachers' Mode Scores for Peripheral Learners
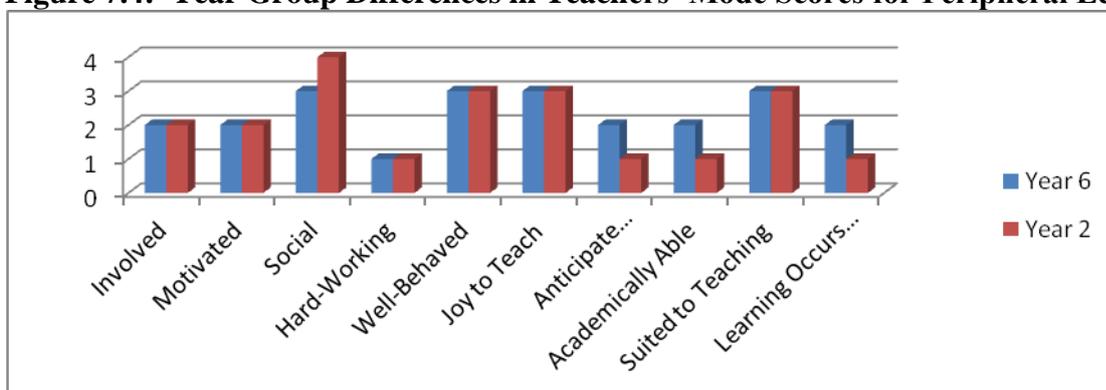
Statistical analyses of the year group differences for teachers' ratings of central children, using independent samples t-tests, revealed a significant difference between the perceived academic ability of central children in Year 6 (*M*=4.19, *SD*=.66) and Year 2 (M=4.63, *SD* =.50); t(30) = -2.12, p=.04). Teachers in Year 2 appear to identify greater academic ability among the central children in their classes. It should, nonetheless, be noted that teachers in both year groups rated, on average, the academic ability of these children as four out of five or higher. Year 2 teachers also reported central pupils as being very well suited to their teaching style (*M* =4.94, *SD* =.25), significantly more so than Year 6 teachers (*M* =4.56, *SD* =.63); t(30) = -2.21, p=.03). Again, caution must be taken, as the average scores for both groups of central children remain relatively high. Exploration of year group differences for peripheral children identified children's sociability to be the only item to yield a statistically significant difference. Year 6 teachers (M=3.19, SD=1.11) rated the peripheral children as less social than the Year 2 (M=4.13, SD=.72) teachers; t(30)=2.84, p=.008).

7.5.2 Differences between higher and lower achieving schools

Differences in teacher ratings in the HA and LA schools were also explored; see Table 7.8.

Table 7.8: Comparison of Mode and Total Scores for Learners in HA and LA Schools

Item	N	School Status	Central Mode / 5	Total / 80	Peripheral Mode / 5	Total / 80
Involved	32	HA	5	74	3	41
	32	LA	5	76	2	28
Motivated	32	HA	5	73	2	38
	32	LA	5	75	2	28
Social	32	HA	5	73	3	59
	32	LA	5	72	4	58
Hard-Working	32	HA	5	74	3	39
	32	LA	5	77	1	29
Well-Behaved	32	HA	5	75	3	59
	32	LA	5	76	3	49
Joy to Teach	32	HA	5	76	3	53
	32	LA	5	76	3	49
Anticipate Success	32	HA	5	73	3	38
	32	LA	5	74	2	39
Able Academically	32	HA	5	72	1	37
	32	LA	4	69	2	39
Well-Suited to Teaching	32	HA	5	75	3	43
	32	LA	5	77	3	48
Learns Outside Classroom	32	HA	5	72	1	39
	32	LA	5	71	2	32

Teachers in the higher achieving schools most frequently awarded a maximum score of 5 to the central pupils for all items. A similar pattern was found in the lower achieving schools for most items except 'academically able', whereby teachers frequently rated these children a '4'. The consistency in scores between the higher and lower achieving schools, as illustrated in Figure 7.5, indicates that these teachers share similar representations of these central pupils, regardless of the type of school in which they work.

Figure 7.5: Higher and Lower Achieving School Differences in Teachers' Mode Scores for Central Learners
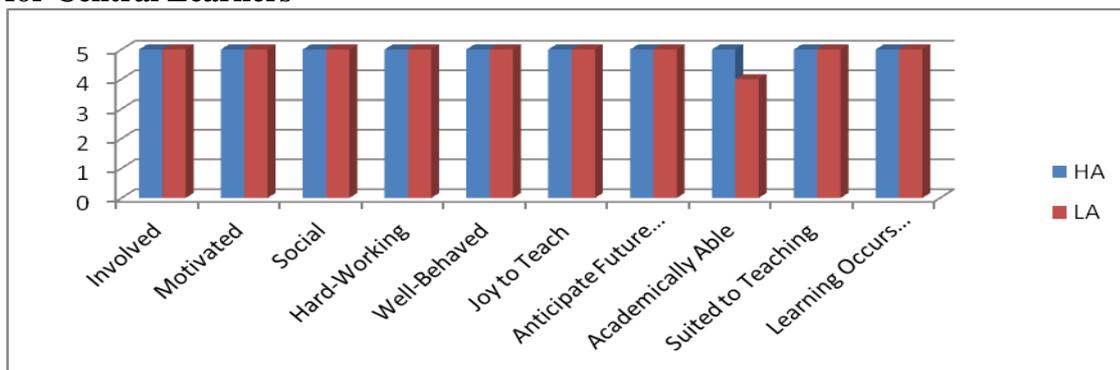
Much greater variation is found among teachers' assessment of peripheral pupils at the higher and lower achieving schools (refer to Fig. 7.6).

Figure 7.6: Higher and Lower Achieving School Differences in Teachers' Mode Scores for Peripheral Learners
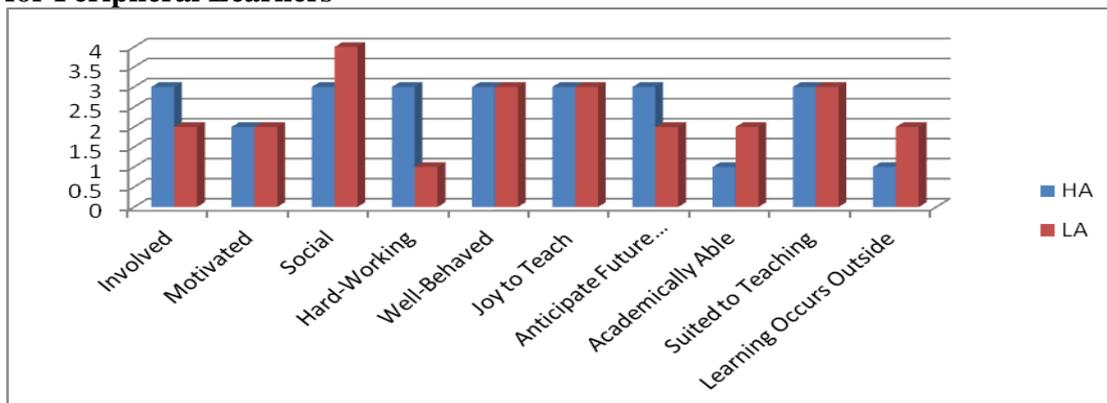
Teachers at the lower achieving schools rate peripheral children more highly in terms of their sociability, academic ability and for perceived occurrence of learning outside of school yet these peripheral children are considered by their teachers to be less involved, not as hard-

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working and are less likely to experience success in the future than peripheral children at the higher achieving schools.

Statistical analysis of teachers' ratings of central learners at the higher and lower achieving schools revealed no significant differences, thus confirming that teachers hold firm representations of these children. Independent samples t-tests did, however, identify statistically significant differences between teachers' conceptualisations of peripheral learners' involvement (HA schools M=2.56, SD=.89, LA schools M=1.75, SD=.58; t(30)=3.06, p=.005) and motivation (HA schools M=2.38, SD=.96, LA schools M=1.75, SD=.68; t(30)=2.13, p=.04). Peripheral learners at the higher achieving schools are perceived as being more involved in learning and motivated than peripheral children in the lower achieving schools.

7.5.3 Summary of teacher rating scale

The findings from the teacher rating scale lend support to the notion that teachers hold very firm representations of central learners. These pupils are considered to be highly involved in learning, motivated, hard working, well behaved, and are generally well suited to their class teacher's pedagogic style. They are expected to achieve success in the future and these children are identified as having opportunities to engage in learning outside of school. Teachers' representations of central learners transcend year groups and school type.

Overall, teachers hold less favourable representations of the peripheral learners in their class; these children are identified as being quite social, they generally demonstrate acceptable behaviour and are considered to be 'okay' to teach. They are, however, awarded the lowest ratings for effort, academic ability and for engagement in learning outside school. Teachers seem to share the view that these children do not work hard in class, they are not as able as their peers and they are further hampered by restricted opportunities to extend their learning outside of the classroom. The next section explores the class teachers' end-of-year school reports sent home to parents of central and peripheral pupils.

7.6 Teacher reports

Teacher comments from 64 school reports (for the 32 central and 32 peripheral children) were subjected to thematic analysis to identify markers used by the Year 6 and Year 2 teachers to distinguish between central and peripheral learners (refer to Chapter 3 for methodological discussion of analytic strategy used). Qualitative analysis of teacher reports, which offers a more nuanced understanding of the representations teacher's hold of the pupils in their classes, revealed a cluster of characteristics that teachers associate with each group of learners. The emerging themes included: *ability* (relating specifically to reading, writing, listening and speaking); *motivation* (namely effort and involvement); *social constructs* (including relationships with others and behaviour); and *personal constructs* (including attitudes, independence, confidence, concentration, character, humour and likeability). Exemplar extracts for central and peripheral children are presented in Table 7.9 and the themes are discussed below.

Table 7.9: Teachers' representations of central and peripheral children identified through thematic analysis of teacher reports

Themes	Central	Peripheral
Ability	'He grasps new concepts quickly and is able to apply and adapt previous learning to good effect' (Chris Fenton, FF6) 'She is talented and clever…she learns new concepts quickly. Her achievements are excellent' (Caron Lake, LB6)	'She is capable of good work, *when* she settles down and puts in the effort' (Pandora Freeman, FF2)
Reading	'He demonstrates a high level of reading comprehension' (Charles Newton, NH6) 'Catherine is an excellent reader and her comprehension is very good' (Catherine Norris, NH2)	'He has received support to improve his literacy skills' (Phoenix Lowe, LB6) 'Phillip's reading has shown good improvement' (Phillip Hadley, HP2)
Writing	'Her writing is lively and varied , conveying meaning in a range of forms for different readers' (Cathleen Lovett, LB6) 'He produces fluent and interesting piece of writing and his spelling is excellent' (Caleb Norhcott, NH2)	'Becoming neater has to be his first priority for work that cannot be read cannot be marked' (Patrick Notton, NH6) 'Paul's writing skills have improved. His handwriting is getting neater (since he has had his glasses)' (Paul Lugg, LB2)
Listening	'He always listens well' (Chris Fenton, FF6) 'She listens with great intensity' (Caroline Hart, HP2)	'She needs to listen with concentration in order to understand the concept being taught, and to know what is expected of her in the follow up session' (Peggy Lee, LB6) 'She needs to develop more sustained listening skills if she is to progress next year' (Petra Fairclough, FF2)

Speaking		
	'He talks with confidence in a wide range of contexts, is confident to speak out and express himself ' (Colin Larson, LB6)	'Pippa is lacking in confidence when speaking' (Pippa Ferguson, Year 6, FF)
	'She has the confidence to contribute during discussion and will ask relevant questions to further her understanding' (Caron Lake, LB2)	'He does have a tendency to chatter' (Parry Foster, Y2, FF)
Knowledge	'Her knowledge bank is vast' (Cerys Hill, HP6)	'His scientific knowledge is vast' (paddy Hunter, HP6)
	'He has a very good knowledge of mathematical concepts' (Caleb Northcott, NH2)	
Motivation Effort	'He always puts in an excellent amount of effort to produce work to a high standard' (Chris Fenton, FF6)	'Palmer needs to put in more effort if he is to achieve more' (Palmer Fitzgibbon, FF6)
	'She can always be relied upon to carry out tasks conscientiously' (Catherine Norris, NH2)	'She can produce some good work *when* she settles down and puts in the effort' (Petra Fairclough, FF2)
Involvement	'She is involved fully in all areas of school life, Carol Francis FF6	'She is interested in everything that goes on around her and this often causes distractions' (Peggy Lee, LB6)
	'She shows interest in topics introduced in school, often bringing in information she has found or researched at home' (Caron Lake, LB2)	'As the year has progressed she has become more involved in class activities' (Poppy Nyman, NH2)
Social Relationship	'He has good relationships with other children' (Colin Larson, LB6)	'Phoenix's relationships with others is satisfactory' (Phoenix Lowe, LB6)
	'She has very good relationships with other children' (Cayla Lawrence, LB6)	'He has a large circle of friends with whom he plays very well' (Phillip Hadley, HP2)
Behaviour	'Her behaviour is a fine example to others' (Cate Fuller, FF6)	'He does not always behave appropriately in the classroom or use appropriate language' (Parry Foster, FF2)
	'She has been a superb role-model: polite, hard-working, helpful' (Cerys Hill, HP6)	'Portia is well-mannered, kind to others and behaves responsibly' (Portia Lloyd, LB2)
Personal Attitude	'Caleb has an excellent attitude to work' (Caleb Norhcott, NH2)	'She adopts a sensible attitude' (Pippa Ferguson, FF6)
	'Cameron demonstrates a very positive attitude to all aspects of school life' (Cameron Farley, FF2)	'She needs to develop a more responsible attitude in school' (Petra Fairclough, FF6)
Independence	'Caroline can plan her own investigations and record results independently in a number of ways' (Caroline Hart, HP6)	'Phoenix's ability to work independently is satisfactory' (Phoenix Lowe, LB6)
	'She enjoys the challenge of searching for a solution by trying out ideas on her own' (Cathleen Lovett, LB6)	'Palmer will require further support' (Palmer Fitzgibbon, FF6)
Confidence	'He works with confidence' (Caleb Northcott, NH2)	'His increased confidence has facilitated good progress' (Paddy Hunter, HP6)

	'She carries out investigations with confidence' (Catherine Norris, NH2)	'She needs to develop more confidence in her own ability' (Petra Fairclough, FF6)
Concentration	Not commented on.	'He can be easily distracted and needs to concentrate on the task set' (Palmer Fitzgibbon, FF6) 'He loses concentration and becomes far more interested in what the others are doing!' (Pablo Nightingale, NH6)
Character	'Chris is very helpful, considerate and thoughtful towards his peers and adults alike' (Chris Fenton, FF6) Caroline is a very polite and thoughtful girl…a very enthusiastic and friendly pupil' (Caroline Hart, HP2)	'Peggy can be a kind and thoughtful pupil, she readily helps others, often at the expense of her own work' (Peggy Lee,LB6) 'Pablo is a happy and lively little boy who enjoys the company of his peers' (Pablo Nightingale, Y2, NH)
Humour	'He has a lovely sense of humour and will often come out with one of his jokes!' (Caleb Northcott, NH2) 'He has a good sense of humour' (Colin Larson, LB6)	'Paul is a happy little boy and has a lovely sense of humour. He is always smiling and makes me smile when I talk to him' (Paul Lugg, LB2) 'She has a great sense of humour' (Portia Lloyd, LB2)
Likeability	'A delight to teach, an ideal student, I am not sure how the school will run without her next year' (Caitlin Nelson, NH6) 'Caleb is an asset to any classroom - a pleasure to teach' (Caleb Northcott, NH2)	'During the year he has become a valued member of the class' (Phillip Hadley, HP2) 'It has been a pleasure to have her in my class; she has a unique but lovely personality' (Portia Lloyd, LB2)

7.6.1 Ability: When referring to central children, teachers frequently comment on their competence and ability, referring to general 'excellent academic talents' (Charlotte Norman, Y6, NH), children being 'very able' (Philippa Luffman, Y2, LB) and 'very capable' (Connie Furlong, Y2, FF). For peripheral children, there is a noticeable absence of commentary on academic ability, except when teachers refer to capability in order to make a point about peripheral children's lack of effort, for example, 'She is capable of good work, *when* she settles down and puts in the effort' (Pandora Freeman, Y2, FF). Instead, teachers emphasise targets, prioritise areas to work on in future and identify specific needs that peripheral children *must* address before successful learning can take place. For example, 'becoming neater has to be his first priority for work that cannot be read cannot be marked' (Patrick Notton, Y6, NH); 'he needs to develop the skills to listen attentively as this hinders his progress' (Parker Lenton, Y6, LB); and 'she needs to develop longer periods of concentration' (Pandora Freeman, Y2, FF).

Teachers consistently lavish superlatives on the reports of central children, identifying competence of the 'highest nature' (Caitlin Nelson, Y6, NH) and an ability to produce work of the 'highest quality' (Cassie Hayes, Y6, HP). Positive adjectives were identified across the reports of central children in reference to reading, writing, listening and speaking skills; the term 'excellent' was used over 60 times to describe the competencies of central children, yet was only used twice to describe peripheral children, both of whom were in Mr Humour's class at Highbury Park.

Central children also appear to possess stable and enduring abilities and competencies; teachers regularly report that these children are *always* capable and knowledgeable (Charles Newton, Y6, NH) and *consistently* produce work of a high standard (Paddy Hunter, Y6, HP). These enduring traits were not evident in the reports of the peripheral children.

7.6.2 Motivation: Teachers ostensibly use motivation as a marker to differentiate between central and peripheral children. Central children are commonly described as being 'well motivated' (e.g. Callum Nicholls, Y2, NH) while peripheral children are not. Teachers habitually refer to effort throughout all reports, referring to it 62 times within the 64 reports. Central children are praised for consistently investing effort in school activities, for always working conscientiously and for engaging themselves in all aspects of school life. Peripheral children, meanwhile, are not. As identified in the previous section, teachers appear to identify these children as having motivational deficits; they are characterised as lacking in motivation and effort. For example, they are often described as 'able but not easily motivated' (e.g. Philippa Luffman, Y2, LB) and as being capable of good work, when settling down and putting in the effort (Preston Farr, Y2, FF). A handful of peripheral pupils are praised for improved involvement (e.g. 'she has become more involved in class activities', Poppy Nyman, Y2, NH) yet teachers infer this is an ongoing process that requires greater effort in order for these children to reach class teachers' expected standards.

7.6.3 Social: Central pupils are repeatedly identified as having very good relationships with other children and teachers, and their behaviour is described as being responsible (Carla Leader, Y2, LB) and exemplary (Cerys Hill, Y6, HP), there are no indications of any undesirable behaviour among these children. There are, however, no clear patterns among teachers' reports on peripheral pupils' social interactions. Some of these children are praised

for having very positive relationships with others, while others are reported as 'satisfactory' (e.g. Phoenix Lowe, Y6, LB). Whereas some peripheral children are 'well mannered, kind to others and behave responsibly' (Portia Lloyd, LB2), teachers identify the behaviour of other peripheral children as inappropriate (Parry Foster, Y2, FF), disruptive (Petra Fairclough, Y2, FF) and unacceptable (Pandora Freeman, Y2, FF).

7.6.4 Personal: Teachers attend to personal constructs including attitudes, independence and confidence to distinguish between central and peripheral children. Teachers consistently report on central learners' favourable personal attributes. Unlike peripheral pupils, these children are characterised as having excellent attitudes to school and work (Clifford Naish, Y6, NH), are able to work independently (Caroline Hart, Y2, HP) and exhibit confidence in their own abilities (Caleb Northcott, Y2, NH). It seems peripheral children are not there *yet,* as teachers identify the need for these children to further develop more responsible attitudes and gain more confidence (Petra Fairclough, Y6, FF) and receive additional support in future learning activities (Palmer Fitzgibbon, Y6, FF).

Teachers also use concentration as a marker to differentiate between groups of learners. While they make no explicit reference to the concentration capabilities of central children, they frequently identify concentration issues among peripheral learners, recognising that these children are easily distracted (Palmer Fitzgibbon, Y6, FF), lose concentration so work is left unfinished (Pascale Neale, Y2, NH) and need to listen with greater concentration (Peggy Lee, Y6, LB) in order to accomplish tasks set. Although teachers appear to draw from these personal constructs to distinguish between central and peripheral learners, some commonalities were found among other personal features. For example, positive personal characteristics were identified for both groups of learners, with teachers praising many children, regardless of their learner status, for exhibiting favourable character traits, such as being kind, polite, helpful and thoughtful (e.g. Carolin Hart, Y2, HP and Peggy Lee, Y6, FF). Children in both groups were also recognised for their 'great sense of humour' (e.g. Colin Larson, Y6, LB and Portia Lloyd, Y2, LB) and for being both likeable and an asset to the class (Caleb Northcott, Y2, NH and Portia Lloyd, Y2, LB).

7.6.5 Summary of teacher reports

Analysis of the teacher reports offers further support that teachers not only maintain firm representations of the central learners in their class but clearly communicate these views to parents in the end-of-year school reports. Clear characteristics emerged for central pupils including being: academically able, highly motivated, investing maximum effort and demonstrating positive attitudes to learning and school life. They are commended for exhibiting desirable pro-social behaviour, for successfully forming positive relationships with peers and staff alike and for being able to work independently and maintain concentration across learning activities. Teachers' representations transcend year group and school type. Teachers do not identify targets or areas for improvement for central children. The message conveyed to these parents is that their children are consistently 'getting it right', as evident in the generous use of superlatives and favourable adjectives which depict these pupils as being highly engaged in learning, successful and recognised as valued members of the school community.

Parents of peripheral children receive mixed reports from teachers. Limited reference is made to their child's academic ability. Instead, emphasis is placed on their effort, or lack thereof. Parents of some peripheral learners, who are identified as possessing greater ability than shown in test results, are politely informed that their children need to invest significantly more effort if they are to ever realise their potential. Teachers appear to identify peripheral learners in terms of having a deficit model of the child; they identify an absence of the features they recognise among the central learners. Unlike the reports of the central children, teachers identify a range of barriers, which seemingly prevent peripheral learners from succeeding. Rather than report these deficits, teachers convey these as targets, which peripheral learners must strive for in order to achieve in the future. These include needing to: settle down, put in more effort, improve handwriting, listen more, chatter less, avoid distractions and concentrate more, gain more confidence, get more involved, try to behave more responsibly and improve language used in school. Teachers appear to identify missing ingredients that, once included, will result in a successful outcome. Notwithstanding, teachers do recognise and report children's strengths, where evident, which generally relate to features of character, humour and likeability. Although the portrait of peripheral pupils is less clear cut than that of central learners, teachers across both year groups and across higher and lower achieving schools share the view that these children can succeed in future *if* they address

particular deficits identified now. The next section further investigates teacher representations of central and peripheral learners through teacher interviews.

7.7   Teacher interviews

This section draws on data from semi-structured interviews with the eight class teachers to gain insight into 'teacher theories' of central and peripheral children. The purpose of teacher interviews was two-fold: to triangulate between the previous quantitative and qualitative instruments used and to further probe some of the issues which emerged throughout the course of data collection (refer to Chapter 3 for methodological justification of the instruments used) in order to understand how teachers make sense of differential behaviour in their classrooms and to gain insight into why some children succeed in school while others do not. Thematic analysis revealed the following dominant themes: (i) inside child characteristics (ability and attitudes), (ii) parental support, (iii) social and cultural experiences, (iv) curriculum and (v) sense of belonging (HP only) in accounting for children's academic success. Each theme will be discussed in turn.

7.7.1   Inside child characteristics: Ability and attitude

Ability: Across the schools and year groups, teachers refer to children's natural, or innate, ability as a prerequisite for success, suggesting that the central children are endowed with a 'God-given' ability while the peripheral children simply are not. When referring to the latter group, teachers agree that although they work hard to help all children achieve, "you can't put in what the good Lord left out" (Mr Humour, HP6), "you can't make geniuses out of the material you've got. If it's not in the child, you can't put it there" (Mrs Heart, HP2), and "it's like a jigsaw puzzle; if you haven't got the basics in place, you just can't do it" (Mr Fairly, FF6). Teachers seem to be stating that some children are simply not capable, due to their limited academic ability, of achieving academic success.

Although all teachers have previously underscored the importance of parental support in helping peripheral children succeed, some teachers infer that certain peripheral children are almost exempt from benefitting from additional adult support. For example, Mrs Funlead (FF2) articulated that: "some children will never achieve anything even if their parents sat in with them every single evening of the week; they just haven't got it in them" (Mrs Funlead,

FF2). Regardless of school type, teachers believe that children's 'natural ability', although not defined at this stage, goes some way explaining the differential academic achievement of pupils in their classrooms.

Attitudes: Teachers identify pupils' individual attitudes as key contributors to academic success. In fact, pupil attitudes are considered to be the main determinant of pupil engagement by Mrs Heart, the Year 2 teacher at Highbury Park. Some teachers actually suggest that attitude is more important than ability; as Mr Nowledge asserts, "The thing I find most frustrating is to have a very able child with a bad attitude. I'd far rather have a child with a good attitude that I can work with. It's very difficult the other way round" (NH6).

Some teachers move beyond the notion of individualistic attitudes of pupils, referring instead to broader social and cultural attitudes about work that filter down to the children, ultimately impinging on their learning outcomes. Teachers explain that for some children, "the work ethos isn't there" (Mr Fairly, FF6). Mrs L'Enthuse (LB6) suggests that:

> "Because so many parents in the area are on benefits, children have no work ethic at all and, unfortunately, it's a case of well, 'the state will look after me…it owes me because it owes me a job and it owes me a living, it owes me all these sorts of things'. Life *owes* them rather than them having to work to get something. They know their life isn't going to change one iota if you go out and graft from 9-5 every day or if you sit at home watching daytime TV because the state will give you what you need and will make sure you go to these different places (Florida and Spain). These children will grow up and become disaffected, disenchanted parents and they will wonder why they can't get a job; they are going to pass on the same messages to their offspring which is a bit depressing really" (Mrs L'Enthuse, LB6).

All teachers referred to these inside-child characteristics (ability and attitude) first, before contemplating additional explanations for pupils' differential academic success. Parental support was commonly identified as the next prominent factor in accounting for why some children succeed in school while others do not.

7.7.2 Parental support

Broad school differences were noted when teachers discussed their experiences of parental support. Teachers at the higher achieving (HA) schools reported how "parents are very supportive" (Mr Nowledge, NH6). Mr Humour at Highbury Park agrees, stating, "parental

support is fantastic. I've worked in so called posh schools where parental support is not as good as it is here". At these HA schools, attendance at parents evening is high; "27 of 29 parents attended the last parents evening... [They know] we talk of a triangle between teacher, parent and child; the three have to work in harmony together in order to maximise the child's potential" (Mr Nowledge, NH6). The Year 2 teachers confirmed that parental support was also strong in KS1. In their experience, parents provided both academic and behavioural support, for example, "rules and regulations at home match those in school" (Mrs Heart, HP2).

In contrast, all teachers at the lower achieving (LA) schools were exacerbated about the limited parental support they experience despite their best efforts to reach out to parents and promote parental engagement. Mrs L'Enthuse (LB6) reported that it was not uncommon for only 7 out of 21 parents to attend parents evening. According to Mrs Funlead (FF2):

> "We can't get parents involved in coming in to school. I think they feel intimidated and they don't want to be shown up, which is understandable... you are talking several generations of unemployment and, because of that, their self-esteem has gone and they think they can't cope".

Unlike teachers at the HA schools, these teachers do not benefit from parents working in partnership with them to manage children's behaviour. While teachers tell children that physical violence is not the solution to managing conflict, their parents often tell them that it is; they receive conflicting messages and, as Mrs L'Enthuse (LB6) expressed, they are most likely to believe what their parents tell them, which can make behaviour management in school rather challenging. Teachers at LA schools also experience conflict in terms of academic expectations: "as much as we try to give them the message that they can achieve, they go home and 10 minutes later, Mum or Dad has said something to knock them back again" (LB6).

In addition to striking school differences, teachers identified stark differences in the parental support of central children compared with peripheral children. Mrs L'Enthuse's (LB6) bold view that central children "have an idea from home that education is important and parents have high expectations of them, the other (peripheral) parents just don't care at all" was expressed by other teachers from both HA and LA schools.

Parental support for central children: According to the eight class teachers, central children appear to have a home context with family members who push them, which was not identified among the peripheral children. Central parents stress the importance of doing well in school and really value the education process (Mrs L'Enthuse, LB6) and the encouragement and support they provide is considered to be one of the main factors in their success (Mrs Noble, NH2). According to Mrs Heart (HP2), "if parents value education then the children are more likely to want to learn, whereas the parents who weren't educated themselves, they don't value education, and their children aren't very motivated either".

There is consensus among teachers that parents of central children ensure "homework is always completed on time, everything you give comes back" (Mr Fairly, FF6); and parents and SATs evenings are always well attended (Mr Nowledge, NH6). These children have a lot of encouragement at home, they receive a lot of support and parents are eager for them to persevere and do their very best in school (Mr Fairly, FF6; Mrs Noble, NH2). They are more supported, encouraged to read books, to ask questions, taken to places where they can learn, find out and investigate things (Mrs Heart, HP2). Miss Lovejoy (LB2) reasoned, "when parents are involved, children work hard to get (further) parental encouragement" (LB2); teachers agree that strong parental support makes a real difference to the children in their classes. For example:

> "One little boy who's not particularly bright, academically, has absolutely worked his socks off. He has been supported by his mother and father; they do his homework with him…he tries so hard. Now he has made progress that he never would have if he'd had a poor home background because he would have just been left to get on…the achievement he has made has been really good this year" (Mrs Heart, HP2).

Parental support for peripheral pupils: Teachers hold strong representations of parental support for peripheral children. Teachers across both HA and LA schools agree that these parents offer little to no support at home (Mrs L'Enthuse, LB6). In contrast to parents of central children, peripheral parents "don't care and actually counteract what you have already done. For these children, if you are looking for parental support, there isn't any" (Mrs Heart, HP2). Peripheral pupils "have less support and family don't regard education as important" (Mr Nowledge, NH6). Teachers agree that for these children, their parents are actually "the key barrier to (their) success" (Mr Fairly, FF6); "they come to school and they're tired, up all hours watching TV, not read to, don't have books, don't go to the library" (Mrs Noble, NH2);

"they are rushed in the morning, have no breakfast; if you're hungry and thirsty, you can't concentrate… In contrast, "you can guarantee (central children) were in bed early, given a good breakfast and come in completely fresh…bathed and everything" (Miss Lovejoy, LB2).

Teachers were in complete agreement that parents of peripheral children have extremely limited expectations; they do not have "any expectation of being able to do anything themselves and therefore I don't think they have any expectations for their children to be able to do anything" (Mrs Funlead, FF2). Some teachers said it doesn't help that they see "Mum sits at home smoking all day, so think why can't I? Also, they get the message at home, 'well I wasn't very good in school anyway so I can't expect anything from you' – they're not getting the right message" (Mrs L'Enthuse, LB6). Mrs Heart (HP2) believes such low expectations relate to parents' experiences of work, stating: "education is not valued by parents who had multiple low skilled jobs so they don't see the value in education; there is an assumption that there will be something (a job) out there so there is no need to work ". Other teachers divulged that some parents "don't mind if their children have jobs when they're older and are essentially telling their children 'it doesn't matter if you don't come to school, don't do well, if you attend lessons at all or if you stick to the rules of the school. It doesn't matter'… many in this school miss days regularly, every Monday or Friday" (Mrs Funlead, FF2). Mr Nowledge (NH6) is in agreement, "one (peripheral) pupil had 25% absence throughout the year so, in effect, one day in four isn't going to help and when she was in (school) she was often late or tired".

In addition to limited support and low expectations, teachers suggest parents of peripheral children regularly make excuses why they or their children cannot engage in learning (Mr Fairly, FF6). Parents who say they "lost homework, can't do it, didn't have time etc." are usually parents of peripheral children (Mrs Noble, NH2). According to Mr Fairly (FF6), these parents are reactive rather than pro-active: "Parents only come in if something goes wrong, they come down to criticise rather than to help. Partnership isn't something they have any idea of. When we opened, one father told me: 'it's not a partnership, you are paid to do your job'!" (FF6).

7.7.3 Social and cultural experiences

Teachers divulged that Coalshire is rather a unique locale, with some describing it as "a very curious area to work in" (Mrs Funlead, FF2) while others say "I live out of Coalshire and my son's school experience, and what he did after school was *totally* different from the children in this area" (Mrs L'Enthuse, LB6). Teachers commonly assert that Coalshire children's cultural experiences are incredibly limited; they might go on trips to McDonalds or theme parks but do "not go far and they don't see other cultures" (Miss Lovejoy, LB2), sadly "*very few children go to castles as a trip out for a weekend or go to a museum*" (Mr Fairly, FF6). Mrs Funlead (FF2) says she is actually "quite appalled by their lack of general knowledge…they haven't got a clue because they spend all their time watching TV and playing PlayStations instead of going out exploring on a walk". According to Mrs L'Enthuse:

> "They mostly hang around street corners, ride their bikes and a little gang of them go over the park; by the nature of that they get problems. A lot of them call a friend, hang around, find a tip, make a cabin, find an empty house and go in, set a fire or break windows. That's the type of thing they do" (Mrs L'Enthuse, LB6).

Other teachers explain that children resort to playing video games or causing trouble, simply because they have such limited opportunities to do anything else. Mr Humour (HP6) explains:

> "Coalshire has a massive drugs problem and nothing for the children to do outside school. There are no clubs because adults are too afraid to take the risk of contributing to a child's life in case of false accusations made against them. As a result of this, "some little mites experience things they shouldn't; drugs and all sorts; quite a number experience things they shouldn't" (Mrs Funlead, FF2).

Teachers acknowledge that participating in positive outside school activities has far-reaching consequences, aside from keeping children away from mischief. Miss Lovejoy explains some of the educational and social benefits of attending local clubs:

> "I don't think they (parents) realise how much it (social and cultural experiences) helps. You can tell the difference between a child who has good experiences and gets taken out…they can draw on their experiences to write imaginative pieces, others have limited vocabulary…You can see the   difference between the children who are involved in a local church group, which gives them opportunities to go on trips and see what's going on   elsewhere. Those who do go to clubs follow rules and structure. The other children (who do not attend these clubs) only encounter rules and regulations in school and not at home (Miss Lovejoy, LB2).

While all teachers express concern that many children have limited social and cultural experiences, it must be acknowledged that *some* children (namely central pupils) "have very good social and cultural experiences, while others do not" (Mrs Heart, HP2).

7.7.4 Curriculum

Teachers believe that some children succeed simply because they are better suited to the curriculum on offer than others. All teachers openly shared their dissatisfaction with the curriculum, with some politely describing it as "too restrictive or prescriptive" (Mrs Funlead, FF2), or "too prescriptive and "vastly overloaded…as it stands doesn't address all the different learning styles" (Mrs L'Enthuse, LB6), while others suggested the curriculum is ill-conceived and totally inappropriate. For example:

> "The National Curriculum is rubbish! It doesn't benefit, it excludes a lot of the children…it's a joke, absolute junk! It's too broad, not balanced, it's irrelevant. Whoever put it together was drunk! It's rubbish, Nic, to be honest with you. You can't cover it" (Mr Humour, HP6).

There was consensus among teachers that there are far too many subjects for a primary school and, instead, there should be a more structured curriculum in the core maths, science and English (Mr Humour, HP6; Mr Fairly, FF6) or literacy, numeracy and IT (Mrs L'Enthuse, LB6) which would ultimately benefit more children. Teachers also agreed that their pupils would profit from meaningful topic work rather than having numerous discrete foundation subjects to cover with limited time; by having to cover such a broad curriculum, teachers agree the foundation subjects are the first to be dropped. As Mrs L'Enthuse confirms, "Welsh is the first to be dropped, then music; do I care if a child knows a pentatonic scale if they can't do fractions and decimals?" (LB6).

Teachers identified that the National Curriculum particularly disadvantages peripheral children; believing instead that a skills based curriculum would be a superior option:

> "The shame of it is that when children are disaffected, it is because they have skills that they could develop that are not offered (in the current curriculum)"   These children may be skilled as artisans rather than academics and would see the point in learning if the curriculum related to skills they might need as a mechanic, for example (Mr Fairly, FF6).

Teachers are clearly dissatisfied with the curriculum in its existing state, expressing real concern for the peripheral children in particular, who they believe are openly disadvantaged by the overly broad, unbalanced and restricted curriculum. The central children, meanwhile, appear to be less affected by curriculum issues.

7.7.5   Sense of belonging

Few teachers identified 'sense of belonging' as a possible explanation for some children's academic success. While Mr Fairly, the Year 6 teacher at Fallowfield, acknowledged that "schools that have the best improvement really are at the heart of the community; they get people and parents in and the school belongs to them. They have a sense of ownership" (FF6), he regrettably explained that his lower achieving school has been unsuccessful in achieving this.

Meanwhile, both teachers at Highbury Park recognise that giving pupils and parents a sense of belonging plays a crucial role in children's academic success. Both Mr Humour and Mrs Heart explain that children and parents are valued and respected at Highbury Park and, in turn, feel like valuable members of the school community and subsequently look kindly upon the school. Mr Humour explains how belonging to a strong community of learners impacts on success:

> "Success is achieved by making children proud to belong to the school…If they feel part of the group then they want to do well for the team and that motivates them…You can influence achievement…by making sure they contribute, by making them feel wanted and making them feel appreciated". At Highbury Park, "They've got a sense of belonging. They've got a family outside of school and they've got a family inside of school. They want to be part of the team and the team that play together, stay together. For some children, the most stable thing in their life is the Crew" (Mr Humour, HP6).

Staff at Highbury Park recognise and strive to promote a sense of community both within the school and within the broader locale.

7.7.6   Summary of teacher interviews

The semi-structured interviews revealed firm teacher theories of central and peripheral children. Regardless of school type (HA or LA) and Key Stage, teachers draw on similar

features when making sense of the differential behaviour of pupils in their classrooms. Teachers suggest that central children possess a natural or innate ability that is required for academic success; they possess positive individual attitudes to learning and are situated in a family environment whereby members hold positive social attitudes to learning. Central children are also blessed with strong parental support; parents of these children seem to value education, maintain high expectations, provide outside-school learning opportunities such as reading with the child or working together on homework, and generally work in partnership with the schools. Teachers believe that central children are better suited to the curriculum, despite the consensus that it is overly prescriptive and overloaded.

Teachers paint a far bleaker picture for the peripheral children, who do not possess natural academic ability, do not demonstrate positive attitudes to learning or behaviour and, for these children, their parents are actually viewed as barriers to their academic success. Parents of peripheral children are described as having limited to no expectations for their children to do well in school, don't appear to value education, readily excuse themselves or their children from fully engaging in the learning process and have minimal engagement with teachers which prevents any form of partnership being formed. Absenteeism rates are significantly higher among this group of learners.

In addition to the firm representations of central and peripheral learners held by teachers, clear school differences were observed regarding parental support and engagement with teachers. At the higher achieving schools, teachers across both year groups expressed delight at the high levels of parental support they experience. At these schools, most parents work in close partnership with class teachers to enable their children to achieve their potential. However, at the lower achieving schools, parents are reluctant to engage with school staff, despite their best efforts, and some parents unfortunately counteract the work teachers are doing by giving children conflicting messages or not providing appropriate structures needed by the children to learn, e.g. being given breakfast before school or ensuring children have sufficient sleep. All teachers recognised the pivotal role played by parents when explaining why some children succeed in school while others do not. Only three teachers identified school community and 'sense of belonging' as playing a significant role in children's school success. Mr Fairly (FF6) acknowledged that this is an important factor yet admitted it is something Fallowfield is striving to achieve, with difficulty. However, both teachers at

Highbury Park, Mr Humour and Mrs Heart, attributed much of the school's success to the sense of belonging that the school has created and maintained over the years. These teachers believe that because children and parents feel valued, respected and recognised as members of the school community, they are more inclined to engage with teachers and support their children's learning.

7.8   Summary

This chapter set out to investigate why some children in an underachieving locale succeed academically while others do not from the perspective of class teachers. In trying to understand the discursive constitution of pupil identities (Youdell, 1993), this study has identified that irrespective of teachers' intentions, class teachers classify different groups of pupils and hold very firm representations of those who do and those who do not succeed, thus supporting existing assertions that teachers seek to classify groups of pupils (Becker, 1952; Laws and Davies, 2000; Archer, 2008) with remarkable consensus regarding 'ideal' pupil traits (Cohen, 1971; Schaefer, 1973). While early sociological literature focused on social class composition and the ideal pupil (Becker, 1952), more recent literature suggests that teachers also need to conceptualise 'problem' pupils as an essential component in seeking a construction of the 'normal' child (Monk, 2000), which is believed to provide a significant yardstick in teacher-pupil relationships (Waterhouse, 1991). It appears that every one of the eight teachers in this study was able to draw from and articulate their own conceptualisation of central (i.e. ideal) children and peripheral (i.e. problem) pupils, with some consistency.

The sequentially triangulated quantitative and qualitative research instruments employed in this chapter revealed that teachers classify learners according to predominantly individual factors. Teachers readily associated children's 'God-given' innate academic ability with ideal central learners (as was found by Pearson, 1998). However, ability as a construct was more problematic when applied to peripheral pupils; teachers instead referred to the capability of these pupils, often indicating that peripheral children do not work to their full potential. Teachers commonly used other individual constructs, including involvement, motivation, attitude to work and effort as well as pedagogic factors, including children's suitability to pedagogic style as broad markers to distinguish between central and peripheral learners. Behaviour was also used as a marker by teachers, supporting existing literature that

conformity and obedience are widely accepted constructs of the 'ideal pupil' (Raina, 1975; Verkasalo, 1996; Ohuche, 1987).

While the markers used by teachers were overwhelmingly and consistently positive for central pupils, a deficit model (Collins, 1988; Dudley-Marling, 2007) was seemingly applied to peripheral children. Educational deficit models discussed within the literature are based on the normative development of pupils whose families and communities have equipped children for school (Harry & Klingner, 2007). While Reid & Valle (2004) argue that acceptance of human variation should override the need to seek some kind of learner pathology, teachers appear to be interpreting peripheral learners as deficient in a variety of ways, including limited ability, poor behaviour, lack of effort or limited concentration. In attempting to explain peripheral pupils' lack of involvement in learning, teachers consistently identified an absence of supposed innate individual factors that first need to be identified and then applied in order for success to be achieved for these pupils. While this deficit perspective may be attractive to teachers, as it ostensibly absolves them of responsibility for peripheral children's lack of engagement because the problem itself is framed as a within-child factor, there has been an emergence of a critical discourse challenging the deficit model in recent years. However, these discussions have predominantly occurred outside the socio-political context of schooling (Nieto & Bode, 2008 cited in Gorski, 2010). A further critique of the deficit model adopted by teachers in this study is that it fails to examine institutional barriers that influence pupils' engagement in learning. Moreover, it is not necessarily the case that peripheral pupils are in some way innately deficient but that the factors teachers recognise as important for success are not evident among peripheral learners.

Teachers in this study theorised that strong parental support also plays a critical role in learner involvement. Across all schools, teachers identified central children's parents as: (i) being pro-active in seeking support for their child, (ii) valuing education, (iii) possessing positive attitudes to learning, (iv) supportive of school initiatives to help children succeed (v) engaged in attending parent-teacher events, and (vi) creating effective structures to support learning, including implementing appropriate sleep patterns and ensuring children stat the day with breakfast. Although these may be considered basic parental duties, teachers recognised that peripheral children were not always in receipt of such parental support. Instead, teachers reported peripheral parents to: (i) be reactive rather than proactive, choose not to attend

school meetings unless absolutely necessary, (ii) provide limited parental support, (iii) not value education and (iv) excuse children's lack of engagement rather than support involvement in learning.

This chapter also revealed that teachers maintain high expectations for the future success of central pupils through the academy and beyond. Central children are expected by teachers and their families to successfully participate in higher education and find secure professional employment while peripheral pupils even as young as 7 years are expected to work in low skilled jobs at the dirty end of the factory, *if* they find employment at all. Teachers also recognised opportunities to engage in out-of-school learning as a potential mediator of school success. Central pupils are afforded considerably greater social and cultural experiences to further their knowledge of the outside world while peripheral pupils reportedly have restricted opportunities to extend their learning outside of school.

This chapter has also revealed that teachers are moving beyond the boundary of the classroom in an attempt to place an explanation on differential academic achievement. According to some teachers, peripheral pupils are deprived of opportunities for acquiring knowledge held to be valuable in school (Gorski, 2010). However, one school, Highbury Park, stood out in recognising the value in creating a 'sense of belonging' for both pupils and parents in the wider community. Despite similar diversity in pupils' social and cultural differences (Trueba, 1988), as found at the other schools, this institution acknowledges the social and cultural capital of all learners, including both central and peripheral children, rather than justify underachievement in terms of pathologies in peripheral children's socio-cultural backgrounds. This has resulted in the successful maintenance of a strong community of learners at Highbury Park.

This chapter has also revealed that girls in this study were more readily identified as central learners than boys who are more commonly identified as peripheral learners, which conflicts with traditional views that the dominant identity of the ideal pupil is male, white and middle class (Archer, 2008). It has further revealed that teachers experience and interpret the learning identities of different children in similar ways; teachers' representations of central and peripheral learners transcend year group and school type (i.e. higher and lower achieving schools), thus suggesting that individual attributes possessed by each group are widely

recognised by different teachers in different classroom contexts. However, it is not known from the data presented in this chapter how teachers' interpretations and representations of the learners in their classroom informs their pedagogical relationships with pupils, or how this might affect children's views of themselves as learners (Hempel-Jorgensen, 2009), whether positive or negative (Stevens et al., 2008). From a socio-cultural perspective, it is accepted that teachers cannot remain completely neutral in their impact on pupil engagement in learning, as teachers generate particular sets of circumstances and contexts within which interaction with each child takes place (Filer & Pollard, 2000; Rogoff & Lave, 1999). It is, therefore, necessary to now adjust the exploratory lens away from teachers and move the focus onto children, as documented in the next chapter.

CHAPTER 8   CHILDREN

8.0   Introduction

The performance-driven UK education system outlined in Chapter 1 places demands on *all* pupils to master the content of lessons yet little is known about why some children achieve this with ease while other children struggle to meet these demands. While the previous chapter sought to identify teacher explanations of why some pupils within an underachieving locale succeed in school while others do not, differential learning experiences from the perspective of the child has not yet been fully considered. This chapter is positioned within the individual plane of analysis and moves the analytical lens from the class teachers onto the child in order to establish why some children are seemingly better equipped to meet national benchmark targets than others. Remaining firmly within a socio-cultural framework, this chapter acknowledges that the classroom cultures constructed by each of the eight teachers (as outlined in Chapter 4) provide a context for pupils' cognitive development in which pupils become more cognisant of the cultural heritage embedded in the curriculum (Newman, Griffin & Cole, 1989). It is widely accepted among socio-cultural theorists that the social and cultural tools used by children subsumes their cognitive processes (Rogoff, 1990) and their participation in culturally organised activities precedes their psychological development (Seeger, Voigt & Vaschexcio, 1998; Lave & Wenger, 1991). It is further accepted that developmental change involves simultaneous constructive processes (as advocated by Piaget & Inhelder, 2000) within a social process of cultural transformation (Vygotsky, 1978). It is within the interpsychological arena where children interact with culturally constructed learning materials that intrapsychological transformations take place. This chapter will, therefore, build on the empirical work presented in the previous chapters to explore what children bring to school activities from other everyday contexts.

This chapter begins with an introduction to some of the children who participated in this study. A sample of eight children, comprising four children from each year group including two central and two peripheral children, one of each from a HA and LA school, have been selected to illustrate some of the characteristics of central and peripheral learners. A summary profile is documented for each child, with data drawn from: (i) teacher interviews, (ii) teachers' end-of-year school reports, (iii) child interviews, (iv) children's responses to the

post-research SATs questionnaire (as discussed in Chapter 6), and fieldnotes taken throughout the period of data collection (refer to Chapter 3 for methodological details).

Attention will then turn to the English and mathematics research SATs test performance of the central and peripheral children (as identified by class teachers in Chapter 7). Although research SATs results were briefly presented in Chapter 5, this analysis was conducted within the institutional plane of analysis and it is not yet clear whether central and peripheral children perform differently in the scholastic tasks undertaken within this study. Although there are inherent issues with comparing data from the research SATs (as previously outlined in section 5.5), the research SATs results for these central and peripheral pupils are briefly presented here to identify any differential performance between these groups. Despite these results being predominantly quantitative in nature and presented at central/peripheral group level, these findings are important as they not only provide a context for the end-of-year actual SATs test presented in the next chapter but they also throw light on the findings from the specifically designed research instruments presented in this chapter.

The instruments presented in this chapter were developed to try and identify why some children are better able to successfully engage with artificial and strongly framed research testing material (Varenne & McDermott, 1998) than others. The first *picture task* instrument (found in Appendix M) required children to look at eight sets of three pictures and identify which two pictures in each set were most alike and then stipulate why (methodological details can be found in Chapter 3). This task was designed to identify whether children were able to recognise academic (English and mathematics) concepts in everyday inside and outside school activities. Data are presented for each classroom in Year 6 and Year 2 and differences between central and peripheral pupils are noted.

The second *sorting task* instrument is then presented. This instrument comprised 25 picture cards detailing a range of 'in school' and 'out of school' English and mathematics activities (refer to Appendix N and Chapter 3). Children were asked to sort the cards into groups (however they deemed fit) and were then asked to sort the cards a second time, generating data for two sorts. The total and mean number of categories identified by children in each of the two sorting tasks is presented for each class in Year 6 and Year 2. Differences in the number of sorting classifications for central and peripheral children are also presented.

Although these quantitative data are useful in establishing broad group differences, they do not reveal *how* children classified the pictures in the sorting activity. Cluster analyses in the form of dendograms are, therefore, presented next to illustrate the categories identified by children in each of the eight classes, first for Year 6 and then for Year 2. Focus then turns to the groupings identified by central and peripheral children in each year group. A summary of the explanations provided by children for each category is then presented to justify the choices made by pupils in this activity.

Data from the third *children's social and cultural experiences* (CSCE) scale is then presented. This 85-item Likert-scale instrument was designed to identify the breadth and depth of each child's unique social and cultural experiences; including the frequency of visits to museums, beaches, libraries, foreign destinations etc. (refer to Appendix A and Chapter 3 for further details). Findings from this instrument are presented to throw light on any class and year group differences and group differences for central and peripheral differences are also observed. First, however, profiles of the eight central and peripheral learners from each year group will be outlined.

8.1   Children's profiles

One might expect this chapter to begin with detailed analysis of central and peripheral children's responses to the English and mathematics research SATs, particularly given this thesis explores pupil motivation and academic achievement from a socio-cultural perspective. However, the comprehensive analysis presented in Chapter 6, which addressed the differential responses of children artificially and temporarily classified as 'achievers' and 'underachievers'[17], revealed paralleled patterns as the central children were included within the achieving group while peripheral children were incorporated within the underachieving group. Thus, the presentation of data for central and peripheral pupils' self-reported responses to the research SATs tests would merely replicate the existing analysis already presented earlier in this thesis and has, therefore, been excluded from this chapter. It is, however, important to illustrate some of the responses given by central and peripheral pupils, particularly when working within the individual plane of analysis. Hence, key information

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[17] Children who reached the expected Key Stage benchmarks were identified as achievers while those who did not were classified as underachievers. The methodological issues surrounding use of these taxonomies has already been discussed; refer to Chapters 2 and 6.

has been selected from interview and questionnaire data to exemplify the differential learning experiences, attitudes, home support and broader social and cultural experiences of the children within this study.

The following criteria were, therefore, considered to present the eight pupil profiles: (i) school attendance; (ii) teacher comment on school report; (iii) child's attitude to work as determined by the class teacher; (iv) strengths and (v) weaknesses as specified on children's school reports; (vi) child's score on the English research SATs tests (out of 50 for children in KS2 and out of 27 for children in KS1); (vii) whether the child was interested in and enjoyed the English comprehension test story; (viii) whether or not the child believed he/she tried their best; (ix) if the child reads at home; (x) child's belief about their competence in English; (xi) if the child believes he/she will need to use English outside of the school institution or in the future; (xii) child's score on the mathematics research SATs test (out of 40 for pupils in KS2 and out of 30 for KS1 children); (xiii) the child's reported enjoyment of the maths test; (xiv) if the child tried their best in the maths test; (xv) whether or not the child engages with maths activities at home; (xvi) child's belief about their competence in mathematics; (xvii) child's belief regarding the need to use maths outside of school or in the future; (xviii) child's enjoyment of school; (xix) child's perceptions of learning; (xx) the child's perceptions of their teachers; (xxi) child's preferred work practice; (xxii) child's confidence in their academic ability; (xxiii) child's perceptions of tests, including SATS; (xxiv) response to homework; (xxv) how the child spends his/her free leisure time; child's travel experiences; and (xxvi) the child's future career aspirations. In addition, (xxvii) pertinent fieldnotes are included and the child's responses to the sorting activity for sort one (xxviii) and sort two (xxix) are noted. For comparative purposes, the eight illustrative pupil profiles are presented in Tables 8.1 and 8.2. The pseudonyms, school and status as a central and peripheral child has also been identified for each profile. Central pupils are highlighted in blue while red font is used to identify the peripheral children.

Table 8.1: Y6 pupil profiles of central and peripheral children at HA and LA schools

Year 6	HA Schools		LA Schools	
Name	**Caitlin Nelson**	**Paddy Hunter**	**Phoenix Lowe**	**Carol Francis**
School	NH	HP	Lowerbridge	Fallowfield
Status	Central	Peripheral	Peripheral	Central
Attendance	97%	86%	86%	95%
Teacher comments:	Delight to teach, mature, helpful, thoughtful	Paddy is a true character! A superb pupil. He has astounded teachers with the excellent progress he has made this year	A popular pupil, willing to help out. He has made progress in dealing with conflict situations both inside and outside the classroom.	A capable and popular girl who works well in all lessons. She listens well and has become involved in all areas of school life
Attitude to work	Very hard-working	He has produced work of a high standard in the last academic year	He tries hard in maths and works with enthusiasm in science	Puts in maximum effort
Strengths	Has natural academic skills, copes well with demanding work	He has participated fully in the life of the school and has matured into a reliable, sensible, hard-working young man.	The change in his behaviour is to be commended. He has made some progress in literacy	She puts in an excellent amount of effort to produce work of a high standard. Excellent progress made in literacy
Weaknesses	None	None	He needs to concentrate more fully, is easily distracted and needs more effort to complete work	None
English SATs score	33/50	15/50	9/50	31/50
Enjoyed story	Yes but prefer reading about domestic animals	No, I'd prefer it to be about football or girls. I didn't like any parts; I'm not interested in whale sea creatures, only sharks	I hated it because it was all too hard. I don't like whales and sea creatures, I prefer football and tigers. It would be better if it was easier	Yes, because I like animals and I enjoy English because there is more than one answer
Tried best	Yes, I always do	I gave up as I couldn't do it; it was too hard; I know nothing about whales.	No, I gave up. I didn't rush as I did not understand it.	Yes, I tried hard to get good marks
Read at home	Every night, I own about 30 books	I read at home about once a week and I own 20 books	No, I never read but I have about 20 books. I like picture books best	I read once a week and have 4-10 books but by myself
Good at English	Yes, good at reading, writing and spelling	No, rubbish. Better at spelling.	No, not good at reading or spelling	Yes, good at all English
Use English in future	Yes, I will need English when I'm older, to work as a teacher or a manager	No, I won't need English in future – I hope I never have to use English	Yes, for football. But I never use English outside the classroom	Yes, I will use English to be a lawyer and outside school to read books

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Maths rsch. SATs score	33/40	12/40	4/40	11/40
Enjoyed sums	Yes, especially the easy questions. I didn't understand all of the hard questions	I didn't want to do this test as I thought it was hard	No because I don't know my tables	No, because some of them I didn't understand
Tried best	I tried hard as I like to do my best. If I didn't know the answer I guessed, but guessed carefully	I gave up because it was hard but wanted to try to be ready for my SATs	I tried to get a high score. My teacher nagging me makes me try hard	I tried my best because I want to get a Level 5 in SATs.
Do maths at home	Yes, SATs practice. Mam and Dad help	My Mam makes me work hard and practice maths	No	Only practice before SATs tests
Good at maths	Yes – I like to get the best marks but I also like to get the same marks as my friends as I feel sorry for them when they get less marks	I'm not very good at maths	I hate maths 'cause it's hard.	I'm ok at maths but Mr Fairly will say I've done well
Use maths in future	Yes, to work in a shop, to sell things or work as a manager or as a 'high quality working person'	Yes, when I finish my education and go to art college	If you want to be a teacher.	Yes, to be a lawyer and when helping to make things like bird-houses
Enjoy school	Yes – it's fun	I enjoy playing with friends but not work	I enjoy school as we play football and games	It's ok – sometimes it's boring
Learning perceptions	Yes, I enjoy learning	It's not cool to work hard in school because it's boring	It's cool to work if you get a high score (in tests)	It's cool to work hard in school as you get better jobs in the future
Views on teachers	Love funny teachers like Mr Nowledge. Dislike strict teachers	Teachers encourage me to do well. I'll be sad to leave Sir (Mr Humour) when I leave Y6. He's a good teacher as he lets us talk when doing work but tells us off when we're naughty	Teachers are good if they're funny	Good teachers are funny, kind, helpful and are 'up-to-date'
Preferred work practice	Prefer individual work as I can express my own ideas. I like hard work to challenge myself and easy work to get the correct answers	I like reading aloud as I like annoying everyone	I like easy work and don't like hard work.	I prefer group work as it's easier and friends help you and prefer easy work as you get it done quicker
Academic confidence	I think I do well and Mr Nowledge will say I've done well.	I think I have done rubbish and my teacher will think I've done terrible as well.	I don't like reading aloud as I might get stuck and other children might make fun of me	I'm good at English and science because they're easier than maths

Tests	I really enjoy tests. I try to beat my brother's score.	It's scary doing tests; I get nervous which affects me	SATs is important as they help you learn for the comp.	SATs are not important; they just assess how we done in school. The pressure and stress is not worth it. I enjoy test 0/10 because it's nerve-racking
Homework	Enjoy homework as get bored at home. I bought my own SATs revision book.	My mother helps. I used the SATs CDs once a day but not spellings.	My step-mam reads with me if I have homework	Practice SATs revision before the tests
Leisure time	Family outings, Playstation, reading, shooting, DVD, playing, after-school clubs	Playing Playstation, football, park, shooting, construction, basketball, cricket, colouring	Playing football, playing with my dog, Playstation, watching videos and hanging out with my friends.	Family outings, shopping, DVDs, playing with friends,
Travel experiences	Been to other countries and England and Wales	Places in Wales, England, Spain	Travelled to London and Liverpool to football matches	Travelled to England and Wales
Future career aspirations	Want to be a vet (9/10) but think I'll be a teacher or nursery nurse	I want to be a copper policeman (6/10) 'cause you can catch people and put 'em in jail if they're naughty	Footballer (10/10)	I want to be a lawyer /stock exchange worker (10/10) because it's exciting but I think I will be a till worker
Fieldnotes	Caitlin was Head Girl and often chosen to represent the school	Paddy's father, a policeman, passed away prior to Y6	Phoenix commented that his dad 'acquires' anything he ever wants (TVs/laptop/ Playstation etc.)	Carol was Head Girl and was regularly given additional 'responsible' duties by her class teacher
Sort 1 categories	Numbers/measuring /reading/ money/ writing/ toys/ learning	Measuring/ toys and plants/ reading/ taxi and bus, testing (eyes)/ writing/ counting/ water, tickets	Games/ outside/ reading/ writing/ buying	Reading/ transport/ learning/ writing/ enjoyable activities
Sort 2 categories	Numbers/measuring money/ writing/ toys/ learning	Reading/ measuring/ adding/ water/ writing/ buying and paying/ travelling/ doing tests	Outside/ building/ writing/ buying/ games/ transport/ reading	Reading/ transport/ learning/ writing/ enjoyable activities

The illustrative pupil profiles of the four Year 2 children are presented in Table 8.2.

Table 8.2: Y2 Pupil profiles of central and peripheral children at HA and LA schools

Year 2	HA Schools		LA Schools	
Name	Caleb Northcott	Phillip Hadley	Caron Lake	Palmer Foster
School	NH	HP	Lowerbridge	Fallowfield
Status	Central	Peripheral	Central	Peripheral
Attendance	98%	91%	97%	95%
Teacher comments:	Well motivated, an asset!	Lively, popular child	Lovely girl, kind, pleasant, polite, talented, gentle	Capable *when* he puts in the effort
Attitude to work	Excellent	Worked hard this year. Needs to continue making progress	Excellent – works very hard	Tendency to chatter and needs to develop concentration
Strengths	Humour, polite, well-behaved, 'soaks-up' info.	Developing reading and writing. Working to expected level	Exemplary behaviour, conscientious, clever, brings in additional research from home to support learning material in school	Can sometimes meet task requirements.
Weaknesses	None.	Needs to practice reading and writing	Quiet nature but still contributes well and asks relevant questions when needed	Does not always behave appropriately. Needs to improve language, listening and develop mature attitude to stay out of trouble
English research SATs score	25/27	16/27	25/527	13/27
Enjoyed story	Yes (5/5)	Yes (5/5)	Yes (5/5)	Yes (5/5) but would not like to read more about dogs. Prefer dragons.
Tried best	Yes (5/5) but was easy	Not fully (3/5)	Yes (5/5) I didn't need to rush	Yes (5/5)
Read at home	All the time with both parents. I own over 100 books!	Yes, I own lots of books. Enjoy reading	Read a lot at home with Mam and Dad. Own approx. 80 books	No – I don't ever read with anyone. I don't like reading.
Good at English	Yes, I'm good at all areas of English	I'm not good at spelling or writing.	Yes, I'm good at reading, writing and spelling	Yes – I'm good at all English
Maths research SATs score	31/36	15/36	16/36	12/36
Enjoyed sums	Yes (5/5)	Not really (3/5)	Yes (5/5)	No, l (1/5)

Tried best	Yes (5/5)	Quite (2/5)	Yes (5/5)	Yes (5/5)
Do maths at home	Yes, number games with parents & gramps	Dad helps with money but never number games or shopping	Yes, parents help with maths. Play number games and help with shopping	No – never.
Good at maths	Yes (5/5). I like maths	So-so (3/5)	Yes – teacher will say I've done well	No – I don't like it.
Enjoy school	Enjoy school (10/10) – helps my brain keep working	Yes – enjoy seeing my friends every day	Yes (10/10) as school is fun, exciting and you can do work.	No (1/10) as all you do is work. School is boring.
Learning perceptions	Enjoy learning	Don't like writing - it's hard	Enjoy learning	No, it's boring
Views on teachers	Like teacher as she doesn't shout	None.	I like my teacher; she's kind/ gives different work	Teachers who don't shout are good.
Preferred work practice	Prefer working alone as get work done quicker. Prefer hard work – easy work is boring	Like easy work as I know I might get some (answers) right	Hard work is more fun and you learn more. Prefer working alone as you can work out the answer easier.	Hard work is rubbish; prefer group work as they help me. Don't like working alone as I can't do it.
Academic confidence	I'm good at school work – think I'll get full marks	Think I've done better on the English test than maths test	Think I got full marks on both tests.	Not good at maths. Do ok at spellings.
Tests	Like doing tests	Didn't try very hard	Prefer hard tests. Don't get nervous	Hate tests (1/10); they are boring.
Homework	I write stories for fun, reading	Never. No one helps.	Mam and dad help with homework.	Never, work is boring.
Leisure time	Bike, park, theme parks, Kids Club	Football, scooter, rugby	Brownies, Girls Brigade, Outings, holiday	Spend time on Playstation and drawing pictures.
Travel experiences	Travelled to different countries	Been to America, France, England	England and Spain	None
Career aspirations	Teacher (10/10)	None (1/10)	I'm not sure if I want a job (5/10)	Don't want a job (1/10)
Fieldnotes	Teacher said gifted child	None of note	Independently researched work	None
Sort 1 categories	Numbers / reading	Inside / calendar / outside	Reading/showing/ buying/working/ 'lining'/giving	Books/ponds/ maths/toys/ plants / looking
Sort 2 categories	Reading / numbers / classroom / outdoors / library / shops	Inside it's nice and warm / all outside where it's cold and windy.	Measuring/working /buying / giving / reading/looking /working	Maths / paying / numbers / tickets / books / ponds / plants

8.1.1   Summary of pupil profiles

Although it is not appropriate to undertake detailed comparative analysis based on the small sample of profiles presented here, a broad overview of general observations (which supports previous data analysis) is provided to highlight some of the differences between the perceptions and experiences of central and peripheral children. School attendance rates (calculated at the end of each academic year) are consistently lower for peripheral than central children. Teachers frequently identify weaknesses of peripheral children but rarely do so for central pupils; the deficit model (as outlined in Chapter 7) is apparent in these profiles. Central children consistently outperformed peripheral peers on the research SATs tests and were more likely to enjoy the content of the SATs tests, i.e. whales in KS2 and dogs in KS1. Peripheral children complained the most that they neither enjoyed the test nor found the subject of the English story interesting. As Paddy Hunter (HP6) denoted: "I'd prefer it to be about football or girls" while Phoenix Lowe (LB6) articulated: "I don't like whales and sea creatures, I prefer football and tigers". Peripheral children were most likely to report that they didn't try their best to complete the research SATs and were more likely to give up, particularly when they found the content challenging. It is worth noting that central children also reported finding the maths research SATs test challenging and didn't always understand the content (possibly because it had not been covered in class at the time of the tests being undertaken).

Central children generally have greater belief in their own academic ability while peripheral children were less confident in their overall English and maths competence. Only peripheral children reported never or rarely reading at home and children in Year 6 reported owning fewer books than children in Year 2; this is perhaps because their estimates are more realistic than those of the younger children. Central children were the only pupils to divulge that they enjoy the challenge of hard work while peripheral pupils frequently reported that easy work was preferable. The Year 6 children selected in these profiles all agree that maths might be needed in the future, but only for certain careers, such as being a teacher, lawyer or 'working as a high quality person'! Year 6 central and peripheral children commonly identify humour as a key characteristic of good teachers while Year 2 pupils frequently identify 'not shouting' as the most desirable characteristic. There are mixed views regarding the importance of tests; some children recognised SATs as useful for "helping you learn for the comp" (Phoenix Lowe, LB6), while others asserted that SATs are not important and "the pressure and stress is

not worth it" (Carol Francis, FF6). Only central children identified enjoyment from doing tests, while peripheral pupils were the only group to actively 'hate' doing tests. Central children have the highest career aspirations (i.e. wanting to be vets, lawyers etc.) yet, interestingly, don't necessary believe they will achieve this. For example, "I want to be a vet but think I will be...a nursery nurse" (Caitlin Nelson, NH6) or "I want to be a lawyer/stock exchange worker...but think I will be a till worker" (Carol Francis, FF6). This, perhaps, could reflect broader socio-historical and cultural influences common within Coalshire. The only children to state they didn't want a job in future were peripheral pupils. Observations of children's responses to the sorting task are presented in section 8.4. The next section outlines central and peripheral children's research SATs results.

8.2 Children's research SATs results

Although central and peripheral children remain at the heart of this chapter, in addition to presenting research SATs results for these children, data for the remaining classmates (hitherto referred to as 'remaining class') are also provided to clarify the positioning of central and peripheral children, in terms of attainment, within their respective year groups. The overall results for Year 6 children are presented in Tables 8.3 (English) and 8.4 (mathematics) below, while the results for Year 2 are illustrated in Tables 8.5 and 8.6, respectively. The percentage of pupils achieving each Level (Levels 5-2 in KS2 English and mathematics and Levels 3-N[18] for English and Levels 4-N for mathematics in KS1) is reported for central pupils, peripheral children and the remaining classmates for each year group.

Table 8.3: Year 6 English Research SATs levels for Central, Peripheral and remaining class

Level	Central (N=16)		Peripheral (N=16)		Remaining class (N=71)	
	%	N	%	N	%	N
5	56	9	-	-	28	20
4	44	7	25	4	59	41
3	-	-	50	8	10	7
N*	-	-	25	4	-	-

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[18] Level N indicates that children have fallen short of any accepted level.

Table 8.3 reveals that 100% (*N*=16) of Year 6 central children reached the required Level 4[19] in English, despite these tests being completed mid-way through the year. In fact, half of the central children reached the highest boundary; Level 5. The only children who failed to secure any level were peripheral children (*N*=4). None of the peripheral children secured the Level 5 and only 25% of peripheral children reached the expected Level 4 benchmark standard in English.

Table 8.4: Year 6 Maths Research SATs levels for Central, Peripheral and remaining class

Level	Central (N=16)		Peripheral (N=16)		Remaining class (N=71)	
	%	*N*	*%*	*N*	*%*	*N*
5	6	1	-	-	-	-
4	38	6	6	1	33	23
3	56	9	69	11	63	44
2	-	-	-	-	1	1
1	-	-	25	4	3	2
N*	-	-	-	-	-	-

Table 8.4 indicates that, overall, fewer children achieved Level 5 results in mathematics than in English. While central pupils outperformed both their remaining classmates and their peripheral peers, only 44% of central children reached the accepted benchmark Level 4 although this is substantially better than the mathematics results for peripheral children, where 94% failed to reach the expected standard. It must, however, be reiterated that at the time of testing, pupils had not completed the entire mathematics curriculum. The research SATs results are presented for central, peripheral and the remaining class of Year 2 children in Tables 8.5 and 8.6.

Table 8.5: Year 2 English Research SATs levels for Central, Peripheral and remaining class

Level	Central (N=16)		Peripheral (N =16)		Remaining class (N =63)	
	%	*N*	*%*	*N*	*%*	*N*
3	56	9	13	2	23	14
2	19	3	13	2	38	24
1	25	4	37	6	23	14
N	-	-	37	6	16	10

Three quarters (75%) of children secured Level 2 or better in English compared with only a quarter (26%) of the peripheral pupils (and 61% of remaining classmates achieving Level 2).

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[19] The accepted benchmark set by the Government is Level 4 or above for KS2 and Level 2+ in KS1

Table 8.6: Year 2 Maths Research SATs levels for Central, Peripheral and remaining class

	Central (N=16)		Peripheral (N=16)		Remaining class (N=63)	
Level	%	N	%	N	%	N
4	19	3	-	-	5	3
3	38	6	6	1	35	22
2	31	5	38	6	27	17
1	12	2	50	8	27	17
N	-	-	6	1	6	4

In maths, 88% of central pupils achieved Level 2 or higher while 44% of peripheral children achieved this benchmark standard. It is clear that central children consistently outperform their peers in both subjects and this transcends year groups. Having identified that children in Year 6 performed better in the English research SATs than the mathematics assessment (while children in Year 2 did not follow this pattern) statistical analyses will now be presented to determine whether there are significant differences between central and peripheral children's performance on their respective English and mathematics tests. Mean scores for the respective research SATs results are presented in Table 8.7 and 8.8 for each year group.

Table 8.7: Summary of Mean Year 6 Research SATs Scores for Each Group

Status	Research SATs Test	Range of Scores	Mean	Std.	t	df	Sig.
Central (N=16)	English	18-42	32.00	7.65	7.47	15	.000**
	Maths	7-33	18.25	7.34			
Peripheral (N=16)	English	4-27	14.31	6.18	3.32	15	.005**
	Maths	3-16	9.94	4.48			
Remaining class (N=71)	English	8-46	26.54	8.16	13.37	70	.000**
	Maths	2-25	14.75	5.17			

**$p<.01$

Table 8.8: Summary of Mean Year 2 Research SATs Scores for Each Group

Status	Research SATs Test	Range of Scores	Mean	Std.	t	df	Sig.
Central (N=16)	English	8-27	21.25	6.05	.66	15	.522
	Maths	11-35	20.25	6.52			
Peripheral (N=16)	English	2-26	12.19	7.40	-.48	15	.636
	Maths	5-22	13.06	3.91			
Remaining class (N=63)	English	1-27	17.05	7.24	.62	61	.536
	Maths	4-30	16.38	5.59			

Paired-samples t-tests identified statistically significant differences ($p<.01$) between all Year 6 pupils' scores in the English and mathematics research SATs in every Year 6 class (thus supporting the comparative school analysis in Chapter 5). These findings indicate that at the time of the research SATs test, all children in Year 6 demonstrate a greater readiness to pass end-of-year English SATs assessments than mathematics tests. Table 8.7 confirms that central children secure the highest mean scores in both subjects while the peripheral children achieve lower scores than the remainder of the class. Table 8.8 reveals that a similar pattern is found among Year 2 pupils, with the children who were identified as central learners by their class teachers clearly outperform all peers, while peripheral children appear to be the poorest performing group. There were no statistically significant differences in the academic performance of any Year 2 group for each test.

Although the t-tests outline differences between the test results for each respective group, they fail to indicate whether there are significant differences between the academic performance of central versus peripheral children in each test. A multivariate analysis of variance (MANOVA) test was therefore employed to explore these differences for each year group. A significant main effect was found for the research SATs results for Year 6 central children who performed significantly better than their peripheral peers [Wilks' Lambda=.676, $F(4,198)=10.71$, $p=.000$, partial eta squared = .18]. When the Year 6 results for English and maths were considered separately using a Bonferroni adjusted alpha level of .025, both English [$F(2,100)=22.60$, $p=.000$] and mathematics [$F(2,100)=9.44$, $p=.000$] reached statistical significance. A significant main effect was also found for Year 2 children [Wilks' Lambda=.836, $F(4,180)=4.22$, $p=.003$, partial eta squared = .09] with both English research SATs [$F(2,91)=6.56$, $p=.002$] and mathematics [$F(2,91)=7.11$, $p=.001$] reaching statistical significance.

8.2.1   Exploring HA and LA school differences

Although the overall performance of central and peripheral children in each Key Stage has been presented, it is not yet clear whether there are school differences for central and peripheral learners in the higher achieving (HA) and lower achieving (LA) schools. Broad differences for all children in the HA and LA schools were presented in Chapter 5 (see section 5.5.3), but the following section offers a brief exploration of school differences in the

mean scores for central and peripheral children specifically. The results for Year 6 children are displayed in Table 8.9 while Table 8.10 presents the Year 2 research SATs results.

Table 8.9: Mean Year 6 English and mathematics Research SATs scores for central and peripheral children and remaining classmates

Subject	Status	Higher Achieving Schools (HA)		Lower Achieving Schools (LA)	
		M	*SD*	*M*	*SD*
English	Central (*N*=8)	30.75	8.65	33.25	6.86
	Peripheral (*N*=8)	15.13	6.29	13.50	6.26
	Remaining class (*N*=71)	27.75	8.68	25.91	7.90
Maths	Central (*N*=8)	16.75	8.60	19.75	6.04
	Peripheral (*N*=8)	11.38	3.38	8.50	5.18
	Remaining class (*N*=71)	15.17	5.58	14.53	4.99

Table 8.10: Mean Year 2 English and mathematics Research SATs scores for central and peripheral children and remaining classmates

Subject	Status	Higher Achieving Schools (HA)		Lower Achieving Schools (LA)	
		M	*SD*	*M*	*SD*
English	Central (*N*=8)	24.38	3.93	18.12	6.38
	Peripheral (*N*=8)	9.50	7.78	14.88	6.36
	Remaining class (*N*=71)	18.14	6.93	15.54	7.53
Maths	Central (*N*=8)	24.50	6.30	16.00	3.16
	Peripheral (*N*=8)	14.38	3.81	11.75	3.77
	Remaining class (*N*=71)	17.43	5.43	14.53	5.57

The research SATs results for children at the HA and LA schools were analysed using multivariate (MANOVA) analysis but no main effects were found for Year 6 children. Inspection of the mean scores reveals that central children at the HA schools achieve higher

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grades in the English and maths assessments than children at the LA schools but the peripheral pupils at LA schools outperform their central peers in the English research SATs but not in mathematics. A different picture was found when comparing the research SATs results for children in Year 2, where a significant main effect was established [Wilks' Lambda=.881, $F(2,91)$=6.12, $p<.003$, multivariate partial eta squared =.12]. When the Year 2 results for English and maths were considered separately using a Bonferroni adjusted alpha level of .025, the only subject to reach statistical significance was mathematics [$F(1,92)$=11.38, $p=.001$], with Y2 children at the HA schools performing significantly better than children at the LA schools.

8.2.2 Summary of children's research SATs performance

It is clear from these findings that central pupils (N=32) are most likely to reach expected benchmark levels (i.e. Level 4+ in KS2 and Level 2+ in KS1) in scholastic assessments, even when tested prematurely in the school year. Within the sample of 213 pupils, peripheral pupils (N=32), appear to be the least likely to secure the expected grades. It could be argued that teachers consider pupils' academic performance as a marker of pupil involvement. It is also apparent that all Year 6 children (regardless of their teacher ascribed status) performed significantly better in the English research SATs test (which, are embedded within a strong narrative) than the mathematics test (which contained decontextualised and compartmentalised test material). This finding could be worthy of further investigation and may be an important consideration when delivering learning material and assessing children on their subject knowledge. Children in Year 2 did not perform significantly better in either assessment but it is not yet clear why. Finally, it is apparent that there are no HA and LA school differences in the English and mathematics research SATs results for Year 6 children but Year 2 children at the higher achieving schools performed significantly better in mathematics than their LA school counterparts. No differences were observed for English. Having presented the research SATs data for central and peripheral pupils, attention will now turn to the findings of the picture task, which explored whether children were able to identify academic concepts in everyday English and mathematics activities.

8.3 Children's identification of academic concepts

The aim of this instrument was to explore the differential socio-cognitive resources used by central and peripheral children when engaging in a novel task. Focus remains on children's

ability to identify academic concepts[20] appropriated from their immediate culture. As documented in Chapter 3, the picture task activity given to the 213 pupils participating in this study required children to look at eight sets of three images and identify the two pictures in each set that appear to be the most similar. Three of the questions (Q2, Q5 and Q6) clearly depicted English activities and three depicted mathematics related activities (Q1, Q3 and Q4). The images included in this instrument comprised both inside academic activities (e.g. writing at a school desk and calculating sums on a computer) and outside *applied* academic activities including reading a newspaper in the park and paying for a taxi fare. The final two questions (Q7 and Q8) could be classified as either English or mathematics as they contained both numbers and written word (e.g. reading place names and/or times on a bus timetable; refer to Appendix M). Children were then required to justify their decision by writing the reason for each set.

Pupils gave a range of justification responses which required coding. While some children immediately spotted 'English' and 'mathematics' academic concepts, others referred to specific activities such as 'reading', for example. All responses which included 'reading', 'writing' etc. were coded as 'English' and all responses which identified features of mathematics (including counting and measuring) were coded as 'maths'. Children were given one mark for identifying academic concepts (refer to Chapter 3 for coding framework). Children were not awarded marks when they spotted surface features from the images, such as 'men', or 'eyes' and these responses were marked as incorrect. Figures 8.1-8.2, below, illustrate the percentage of children in each Year 6 class who identified academic concepts in the eight picture task questions.

Fig. 8.1: Y6 Identification of English
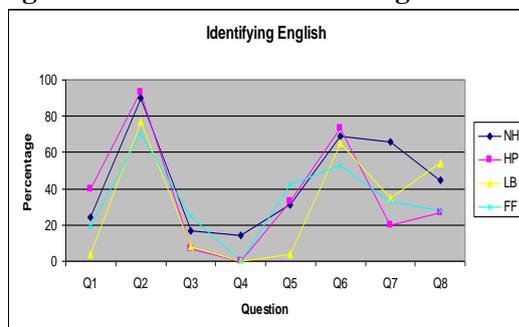
Fig. 8.2: Y6 Identification of Maths

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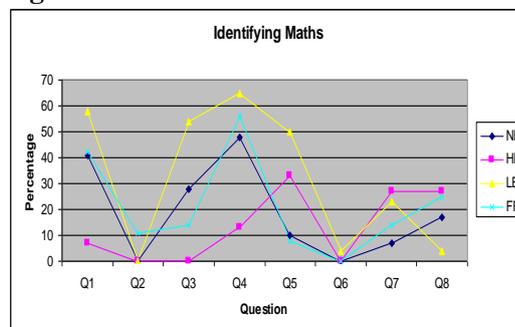
[20] Academic concepts are broadly defined as recognition of English and mathematics related activities. Differences between this broad definition and Vygotsky's (1978) explanation of academic 'scientific' concepts can be found in Chapter 2 and are also addressed in the end of Chapter 8 discussion.

Fig. 8.3: Y2 Identification of English

Identifying English
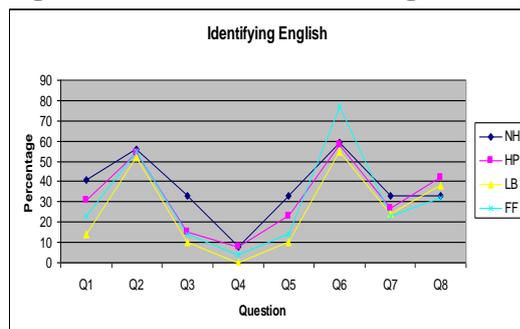
*English concepts: Q2, Q5, Q6

Fig. 8.4: Y2 Identification of Maths

Identifying Maths
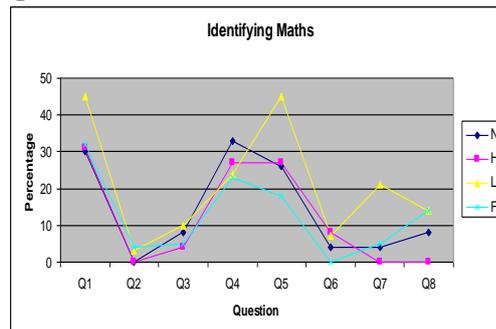
*Mathematics concepts: Q1, Q3, Q4

Figures 8.1 and 8.3 reveal fairly consistent patterns in children's ability to identify English activities across the four schools for both year groups while Figures 8.2 and 8.4 suggest that the pattern is less clear for mathematics. There appears to be greater variation in children's ability to recognise mathematics in wider everyday contexts, such as using money to pay for goods or services or calculating the score on a dart board. School differences also appear to emerge. Consistent with the research SATs results documented in Chapter 5, children in Highbury Park appear to be less adept at identifying mathematics concepts in applied contexts, while children at Lowerbridge appear to be more skilled in recognising applied maths in outside school activities. It is not yet clear whether Mrs L'Enthuse's (LB6) cramming and practice tests have played a role, or whether the high proportion of children with SEN in Mr Humour's (HP6) class have impacted on these findings.

The lack of consistency in pupils' identification of English or mathematics concepts for Q7 and Q8 necessitated their preclusion from subsequent analyses. To aid analysis, aggregate scores for English (i.e. Q2, Q5 and Q6) and mathematics (Q1, Q3 and Q4) are presented herewith; Tables 8.11 and 8.12, below, outline the proportion of children from each class whom correctly identified academic concepts.

Table 8.11: Percentage of Year 6 pupils identifying English and mathematics academic concepts in each school

School	NH	HP	LB	FF	Y6 TOTAL
N	N=29	N=16	N=27	N=36	N=108
English	63	66	49	55	58.3
Maths	39	7	59	37	35.5

Year 6 children at Lowerbridge (LB) did not identify English activities as readily as their counterparts at Highbury Park (HP), which is interesting as children at LB outperformed the Year 6 children at HP in the research SATs tests. It appears that Mrs L'Enthuse is successfully equipping her class with the knowledge and skills to pass tests but that they are not necessarily recognising English concepts outside of the classroom as well as children at other schools in the locale. Conversely, as established in Chapter 5, Mr Humour seeks to protect his class from the pressures of the testing situation and despite performing poorly on the research SATs tests; children at Highbury Park are seemingly equipped with an awareness of English-related academic concepts outside of the classroom. An inverse pattern is found for mathematics, as the children at Lowerbridge were most able to recognise mathematics concepts while children at Highbury Park were least adept at identifying maths concepts outside of the school arena. The Year 2 findings are presented in Table 8.12.

Table 8.12: Percentage of Year 2 pupils identifying English and mathematics academic concepts in each school

School	*NH*	*HP*	*LB*	*FF*	*Y2 TOTAL*
N	*N=27*	*N=25*	*N=25*	*N=19*	*N=95*
English	49	45	39	49	45.5
Maths	24	21	26	20	22.8

Less marked differences were found when comparing the class results for Year 2 (as outlined in Table 8.12), although similar patterns were observed; the lowest scores for children's recognition of English concepts were found among Year 2 children at Lowerbridge but these children secured the highest scores for maths recognition. The total mean scores have also been included in Tables 8.11 and 8.12 to determine any year group differences.

8.3.1 Year group differences in children's recognition of academic concepts

The mean scores were calculated for each Year group to determine whether children in Year 6 were better able to recognise English and mathematics concepts than younger children. The scores are presented in Table 8.13.

Table 8.13: Mean scores for Year 6 and Year 2 demonstrating group differences in the recognition of academic concepts

Year Group	Academic concept	M	SD
Year 6 *(N=108)*	English	58.25	7.72
	Mathematics	35.50	21.44
Year 2 *(N=95)*	English	45.50	4.73
	Mathematics	22.75	2.75

As expected, more children in Year 6 identified English activities (*M*=58.3) than younger children in Year 2 (*M*=45.5), indicating developmental differences between the two groups. As an illustrative example, 85% of children in Year 6 recognised that reading a book and reading a bus timetable require English skills (as shown in Q2) whereas only 54% of children in Year 2 identified these pictures as English activities. As expected, younger children were less able to identify academic English concepts than older children, as illustrated in Fig. 8.5, below.

Figure 8.5: Year group differences in pupils' recognition of English and maths concepts
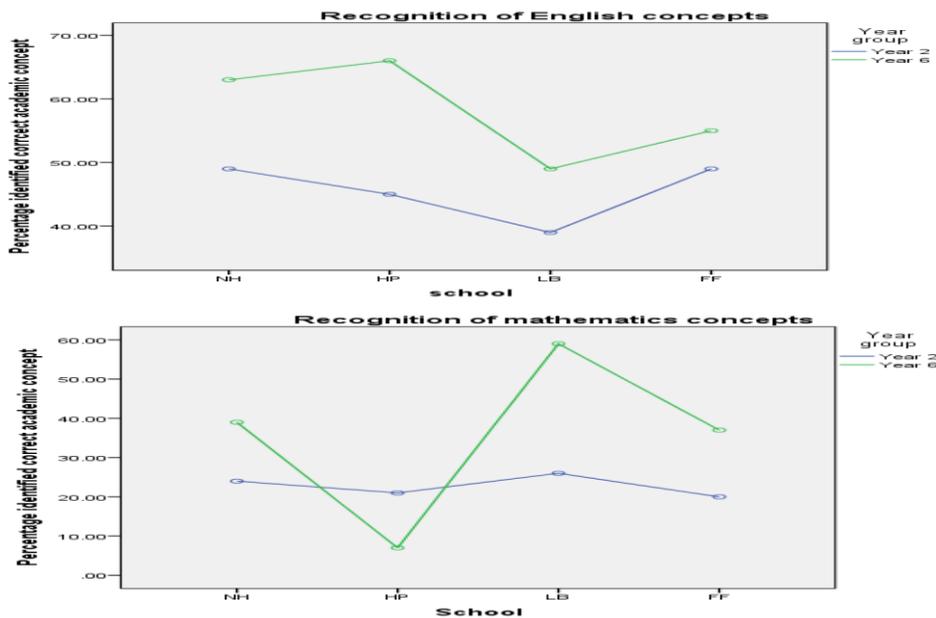
Children in Year 2 frequently identified surface features, such as pairing the two images in Q2, which have 'a boy' in the picture. T-test analysis confirmed significant differences between Year 6 and Year 2, [$t(6)$=2.82, p=.03] in children's identification of English activities.

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Upon first inspection, developmental differences also appear to emerge for mathematics and it would seem sensible that children in Year 6 are more likely to recognise mathematics concepts (*M*=35.5) than children in Year 2 (*M*=22.8), as outlined in Fig. 8.5. However, this difference was not statistically significant; an independent samples t-test revealed that there were no year group differences for mathematics (*p*=.28).

Although exploration of the general recognition of English and maths groupings identified by pupils is useful in determining whether children are able to identify academic concepts in the outside world, it is not clear from the previous analyses exactly how many pupils identified the correct pairings of English and mathematics activities *and* labelled the pairing with the correct academic concept. The next section, therefore, briefly outlines the mean scores for the whole instrument (6 questions), then offers brief analysis for English and mathematics separately. Attention will first be paid to school classroom differences, then year group differences.

8.3.2 School differences in identifying correct pairings and academic concept

Differences in children's ability to identify and label the correct academic concepts (English or mathematics) for each Year 6 class are presented in Tables 8.14 and classroom differences for Year 2 children are presented in Table 8.15.

Table 8.14: Mean scores for Year 6 children's correct identification of pairings and academic concept

Year 6	North Higherbank (N=29)		Highbury Park (N=16)		Lowerbridge (N=27))		Fallowfield (N=36)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Total / 6	**3.28**	1.33	**2.00**	.85	**3.46**	1.84	**2.72**	1.58
English /3	**2.31**	.93	**1.93**	.80	**1.85**	.97	**1.72**	1.00
Maths / 3	**.97**	.68	**.07**	.26	**1.62**	1.17	**1.00**	.99

The class differences presented here appear to be consistent with the results of the research SATs presented in Chapter 5, as children at North Higherbank and Lowerbridge identified the highest number of correct pairings and recognised the correct academic concept for each pairing, while children at Highbury Park identified the fewest pairings.

Table 8.15: Mean scores for Year 2 children's correct identification of pairings and academic concept

Year 2	North Higherbank (N=27)		Highbury Park (N=25)		Lowerbridge (N=25)		Fallowfield (N=19)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Total / 6	**2.35**	2.26	**1.81**	1.27	**2.03**	1.21	**1.73**	1.16
English /3	**2.00**	1.90	**1.65**	1.06	**1.76**	.99	**1.45**	.86
Maths / 3	**.33**	.62	**.15**	.37	**.28**	.53	**.27**	.55

Similarly, in Year 2, children at North Higherbank and Lowerbridge were best able to identify academic concepts within this task, while children at Highbury and Fallowfield fared less well.

It is clear that children are better able to identify English than mathematics concepts regardless of which class or school year they are in, thus indicating that pupils in this locale are better able to recognise the need to use English in outside school, everyday activities than mathematics. As previously observed, developmental differences are also evident here. Classroom and year group differences are presented in Figure 8.6.

Fig. 8.6: Histogram showing class and year group differences in children's identification of correct pairings of English and mathematics academic concepts
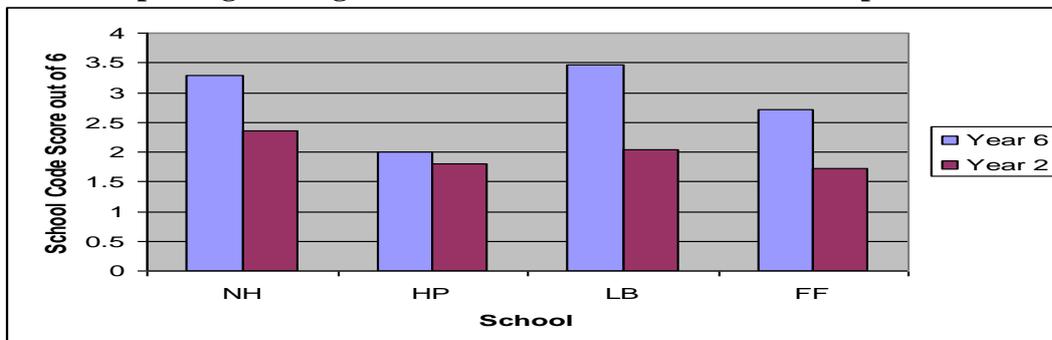
Figure 8.6 shows that variation in total scores (out of a possible 6) is greater among children in Year 6 than Year 2. However, it is not clear from these aggregate scores whether classroom differences emerge for children's ability to recognise English or mathematics. These differences can be seen in Figures 8.7 and 8.8, below, where separate analyses for academic subject are presented.

Fig 8.7: Breakdown of Year 6 school differences for English and mathematics academic concept identification
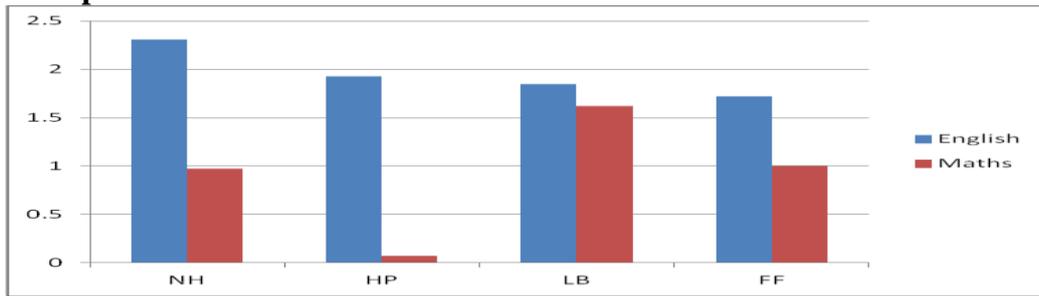
Fig 8.8: Breakdown of Year 2 school differences for English and mathematics academic concept identification
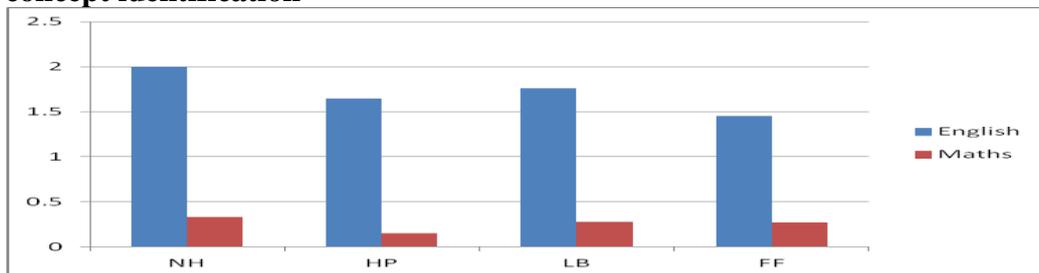
There is limited variation in children's recognition of English concepts across both schools and year groups. Nonetheless, most English concepts are identified by children at North Higherbank (HA school) while the fewest number of English school codes are identified at Fallowfield (LA school) in each year group. As previously noted, children across all classes are more adept at identifying English school activities inside and outside of school than mathematics activities.

8.3.3 Multivariate analysis exploring group differences in children's recognition of academic concepts

Two-way between-groups multivariate analysis of variance exploring school and year group differences were conducted and statistically significant differences were identified for both school [F(2, 209)=6.48, p=.000; Wilks' Lambda=.83; partial eta squared = .09] and year group [F(2, 209)=19.17, p=.000; Wilks' Lambda=.84; partial eta squared=.16] on the combined dependent variables (total school academic concept score, English concept score and mathematics concept score). When the academic concept scores were considered separately for each school, statistically significant differences were found for the following: (i) Total school academic concept score [F(3, 209)=3.73, p=.01; partial eta squared=.05] for

school differences; (ii) Total school academic concept score [$F(1, 209)$=3.73, p=.000; partial eta squared=.08] for year group differences; (iii) Mathematics[21] concept score [$F(3, 209)$=9.66, p=.000; partial eta squared=.13] for school differences; (iv) Mathematics concept score [$F(3, 209)$=38.25, p=.000; partial eta squared=.16] for year group differences. These findings indicate that children in some classes are, for whatever reason, better able to recognise outside school mathematics concepts than children in other classes. These differences transcend year groups. Examination of the English code scores revealed no significant school difference (p=.07) or year group difference (p=.14), thus supporting the earlier assertion that all children across both year groups are better able to recognise English in inside and outside school contexts.

Having established school and year group differences in pupils' recognition of academic concepts and school and year group differences for recognition of mathematics concepts, focus now moves to central and peripheral pupils.

8.3.4 Central and peripheral pupils' recognition of academic concepts

To determine whether any differences emerged in central and peripheral children's ability to identify academic concepts, the percentage of children who correctly identified English and mathematics concepts for each question (as outlined in section 8.1) has been calculated for Year 6 (see Figures 8.9 and 8.12) and Year 2 (refer to Figures 8.11 and 8.12).

Fig. 8.9: Y6 Identification of English
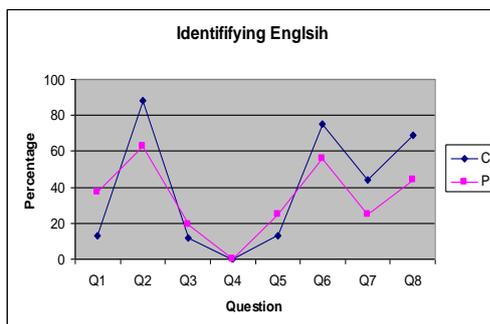
English: Q2, Q5, Q6

Fig. 8.10: Y6 Identification of Mathematics
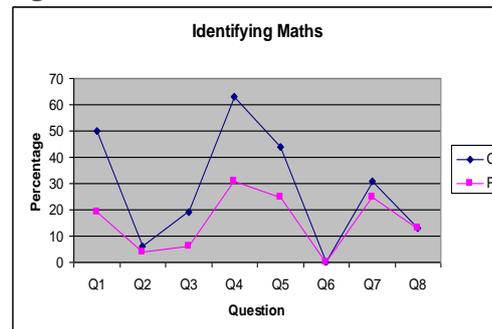
Mathematics: Q1, Q3, Q4

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[21] A more conservative alpha level of .01 was set for mathematics in response to Levene's sig.<.05.

Fig. 8.11: Y2 Identification of English

Identifying English
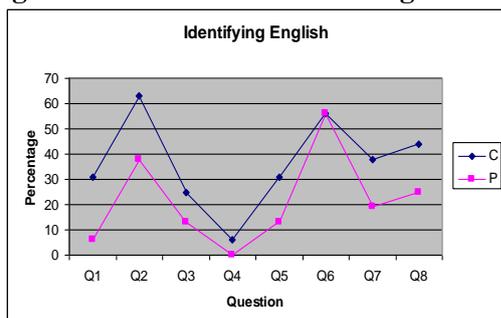
English: Q2, Q5, Q6

Fig. 8.12: Y2 Identification of Maths
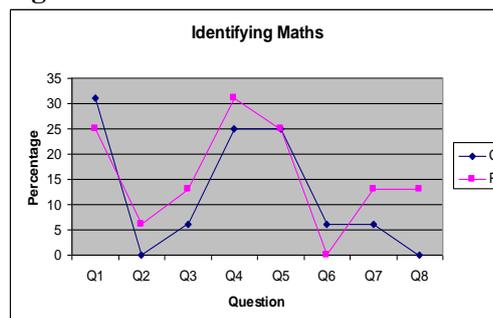
Identifying Maths

Mathematics: Q1, Q3, Q4

The aggregate English and mathematics scores for central and peripheral children are presented in Table 8.16[22]

Table 8.16: Percentage of Year 6 Central and Peripheral pupils identifying English and mathematics academic concepts in each school

	Year 6		Year 2		TOTAL	
School	*Central*	*Peripheral*	*Central*	*Peripheral*	*Central*	*Peripheral*
N	N=16	N=16	N=16	N=16	N=32	N=32
English	59	48	50	36	55	42
Maths	44	19	62	23	53	21

Although aggregating the scores for children in Year 6 and Year 2 might be considered problematic due to the developmental differences that have been previously been outlined, the total scores have been included here to demonstrate that across the sample, central children are fairly consistent in recognising both English and mathematics academic concepts (circa 55% of central pupils, overall), while peripheral pupils, overall, are twice as likely to recognise English concepts outside of their immediate classroom arena than mathematics concepts. Table 8.16 further reveals that central children in Year 6 and peripheral pupils in Year 2 are more adept at identifying English academic concepts than mathematics concepts. However, central children in Year 2, for whatever reason, were most likely to recognise mathematics activities in inside and outside school activities. Having presented overall data for this picture task instrument, it is not yet clear whether central and peripheral children differed in their employment of socio-cognitive resources to identify paired English and mathematics concepts ***and*** identify them correctly, which is required to confirm that children

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[22] As noted previously, the ambiguous nature of Q7 and Q8 necessitated their exclusion from subsequent analysis.

are recognising curriculum related markers within the pictures. The following section will, therefore, present analysis for central and peripheral pupils' identification of correct pairings *and* labelling of English and mathematics concepts.

8.3.5 Status differences in identifying correct pairings and academic concept

Differences in central and peripheral children's ability to identify *and* label the correct pairings of English and mathematics concepts (as outlined in section 8.2.4) are presented separately for Year 6 and Year 2 pupils in Tables 8.17 and 8.18.

Table 8.17: Mean Y6 scores for identification of pairings and academic concept

Year 6	Central (N=16)		Peripheral (N=16)	
	M	*SD*	*M*	*SD*
Total / 6	**3.38**	1.50	**1.94**	1.00
English /3	**2.06**	.93	**1.50**	.82
Maths / 3	**1.31**	1.01	**.44**	.63

Table 8.18: Mean Y2 scores for identification of pairings and academic concept

Year 6	Central (N=16)		Peripheral (N=16)	
	M	*SD*	*M*	*SD*
Total / 6	**1.81**	1.28	**1.69**	1.45
English /3	**1.50**	1.03	**1.38**	1.09
Maths / 3	**.31**	.48	**.31**	.60

Tables 8.17 and 8.18 reveal that the most marked differences in children's ability to spot pairings of academic concepts *and* identify the concept correctly appear among Year 6 children (refer to Fig. 8.13, below). Central children consistently perform better in this task than peripheral pupils but the gap is most noticeable in mathematics, where, on average, central pupils scored 1.31 out of 3 while their peripheral peers scored .44 out of 3. In Year 2, there is limited variation with .12 difference in English scores and identical results (i.e. a score of .31) for mathematics, as illustrated in Figure 8.14.

These histograms support the previous observation that there is greater variation among Year 6 children than children in Year 2. There are no clear developmental differences for English as Year 2 pupils appear to perform as well as Year 6 peripheral pupils and all only lag marginally behind the Year 6 central pupils in correctly identifying English academic concepts. Peripheral children in Year 6 do not appear to perform any better than either group of Year 2 pupils in identifying mathematics school codes. Although the differences between central and peripheral children appear less marked than the classroom difference noted in Section 8.4, multivariate analysis was, nonetheless, conducted to confirm this observation.

Fig. 8.13: Histogram showing differences in Year 6 central and peripheral children's mean academic concept identification scores
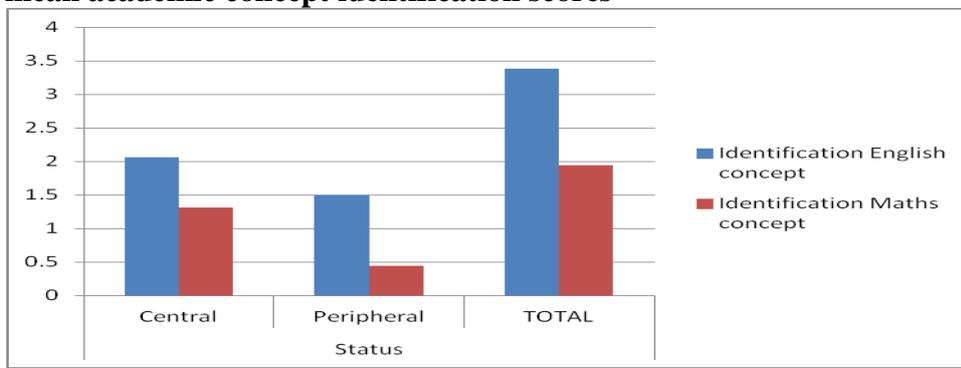
Fig. 8.14: Histogram showing differences in Year 2 central and peripheral children's mean academic concept identification scores
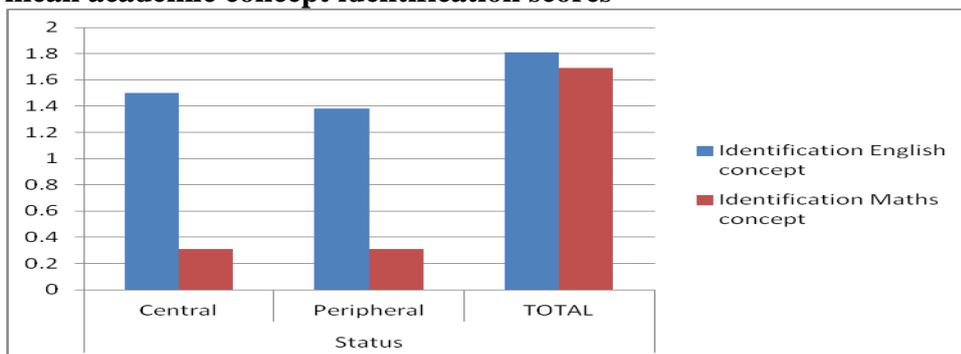
8.3.6 MANOVA analysis: Central/Peripheral recognition of academic concepts

MANOVA analyses revealed a significant difference between central and peripheral pupil status (independent variable) and academic concept recognition scores (dependent variable) for children in Year 6 [$F(3, 28)=5.30$, $p=.011$ Wilks' Lambda=.73; partial eta squared (*pes*) = .27]. However, when examined separately, only maths [$F(1,30)=8.60$, $p=.006$, *pes*=.22] and

total score (English and maths recognition score out of 6) [$F(1,30)=10.19$, $p=.003$, $pes=.25$] reached statistical significance. There was, therefore, no status (central or peripheral) difference found for Year 6 pupils' recognition of English concepts. No statistically significant differences were found for English or maths recognition among Year 2 children.

8.3.7   Exploring the relationship between central and peripheral children's academic concept recognition score and research SATs results

The relationship between children's English and mathematics research SATs results and their overall score on the academic concept recognition (picture task) was examined. Pearson's Product Moment Correlational analysis revealed a moderately strong relationship between children's scores on this test and their English research SATs results ($r=.58*$, $p=.000$, $n=64$) but a weak relationship for maths ($r=.29*$, $p=.02$, $n=64$). Although these results suggest that the more adept children are at recognising English concepts, the better they appear to fare in the research SATs assessment, it is not clear from this aggregated analysis whether differences emerge for central and peripheral pupils. Separate Pearson's correlations for central and peripheral children in Year 6 and Year 2 were, therefore, conducted to outline any relationships between children's research SATs results and their recognition of English concepts (as identified in Qs 2, 5 and 6) and mathematics concepts (from Qs 1, 3 and 4) in addition to the total recognition score (i.e. all 6 questions); these are presented in Table 8.19.

Table 8.19: Correlational analysis outlining the relationship between central and peripheral pupils' recognition of academic concepts (English and mathematics) and research SATs scores.

Year Group	Pupil Status		English SATs/ English recognition score	Maths SATs / Maths recognition score	English SATs / Total recognition score	Maths SATs / Total recognition score
Year 6	Central (*N*=16)	Pearson Sig.	**.49** .06	**.33** .21	**.62*** (.01)	**.34** (.20)
	Peripheral (*N*=16)	Pearson Sig.	**.59*** (.02)	**-.08** (.76)	**.43** (.10)	**.45** .08
Year 2	Central (*N*=16)	Pearson Sig.	**.21** (.43)	**-.07** (.80)	**.26** (.34)	**.06** (.82)
	Peripheral (*N*=16)	Pearson Sig.	**.44** (.09)	**.16** (.55)	**.45** (.08)	**.30** (.26)

The most notable result appears to be the moderate to strong correlations found for English research SATs results and children's recognition of English concepts among Year 6 pupils ($r=.49$ for central pupils and $r=.59$ for peripheral children). In contrast, there does not appear to be any relationship between children's recognition of mathematics concepts and their scores on the mathematics research SATs test. This is, perhaps, unsurprising given the aforementioned issues identified for this maths assessment.

8.3.8   Summary of picture task instrument

This instrument sought to measure children's ability to recognise academic concepts in everyday inside school and outside school activities and found that some children were able to draw on socio-cognitive resources that enabled them to recognise English and mathematics concepts more than others. However, overall, children were better equipped to identify English concepts than mathematics, particularly in out-of-school contexts. When school differences were explored, North Higherbank and Lowerbridge fared better than Highbury Park and Fallowfield; these findings are consistent with the research SATs (as outlined in section 5.5.2). School and year group differences were found for overall academic concept recognition scores (i.e. where children correctly identified and labelled all English and mathematics concepts) and maths recognition (i.e. Qs 1, 3 and 4) but there were no school and year group differences for English; namely because most children were able to recognise English reading and writing activities. However, developmental differences were observed for English, with more children in Year 6 identifying English concepts than Year 2 pupils, as expected, but there were no year group differences for maths, thus confirming that children in both Key Stages struggled to identify mathematics concepts in applied settings, such as using mental arithmetic to calculate payment for goods or services. While a moderately strong relationship was found between children's English SATs results and their recognition of English concepts in everyday activities, no relationship was found for maths. The findings generated by this picture task are interesting but the instrument is, nonetheless, restrictive as it demands a forced-choice response from children who may have identified different groupings if permitted the freedom to group the images differently. For this reason, children were given a sorting activity to complete; attention will now turn to the sorting task.

8.4   Sorting Task

This thesis firmly argues that no scholastic task can be disembedded from contexts such as classroom, school as institution, experiences within families, and living within a particular locale (as explored within different planes of analysis in the previous empirical chapters). In accordance with the theoretical principles of Vygotsky (1994), who sought to understand how academic concepts develop in the mind of the child who undergoes school instruction, the empirical work presented in this section seeks to examine whether children are able to transfer knowledge and skills across contexts. For example, whether children's everyday understandings are appropriated (Leont'ev, 1981) to bridge children into academic tasks in school settings. The primary aim of this instrument was to identify whether central children are better able to clearly identify English and maths related activities than peripheral pupils and to investigate whether there is any relation between classroom/school type and pupils' ability to recognise English and mathematics concepts. As previously outlined, children sorted the 25 images (comprising inside school and outside school English and mathematics related activities) however they wanted in sorts 1 and 2. The categories identified and the justifications given by children were recorded.

Given the complexity of data generated by this sorting activity, these data are organised in the following way: the total number of sorts identified by children in each classroom in Year 6 and Year 2 is examined first (presented in section 8.4.1) and will reveal patterns in children's responses to this sorting activity. The sorting classifications for each classroom are then illustrated in the form of categories identified using cluster analysis dendograms (shown in section 8.4.2) and the mean number of groupings identified in each class is identified (section 8.4.3). A summary of the categories is presented (section 8.4.4) along with exemplar justifications provided by pupils. More detailed analysis exploring children's recognition of abstract academic skills and contexts rather than surface features within this task are then presented (section 8.4.5) before statistical analyses exploring school and year group differences are provided (section 8.4.6). A summary of classroom differences is presented (section 8.4.7) before attention turns to central and peripheral children's responses to this task (presented in sections 4.7-8.4.11). Data for central and peripheral children follows the same structure as outlined for classroom analysis.

8.4.1   School & year group differences in the total and mean number of sorting groups identified by children

Differences in the mean number of sorts for children in Years 6 and 2 at each school were explored and the results are presented in Tables 8.20 and 8.21.

Table 8.20: Total and mean number of sorts in each Year 6 class

	North Higherbank (N=29)		Highbury Park (N =15)		Lowerbridge (N =25)		Fallowfield (N =36)	
Sort No.	S1	S2	S1	S2	S1	S2	S1	S2
Total Sorts	185	182	110	108	157	148	235	234
Mean Sort	6.4	6.3	7.3	7.2	6.3	5.9	6.5	6.5

Table 8.21: Total and mean number of sorts in each Year 2 class

	North Higherbank (N =27)		Highbury Park (N =25)		Lowerbridge (N =29)		Fallowfield (N=22)	
Sort No.	S1	S2	S1	S2	S1	S2	S1	S2
Total Sorts	193	185	138	118	196	196	136	127
Mean Sort	7.1	6.9	5.5	4.7	6.8	6.8	6.2	5.8

The highest mean number of overall sorts was found in Mr Humour's Year 6 class (M=7.3) while the fewest overall mean sorts were found at LB6 (M=6.1). In Year 2, the fewest mean number of sorts was also found at Highbury Park (M=5.1), while children in NH2 identified the most sorts, on average (M=7.0). The mean number of sorts identified by children in Year 6 and 2 in each of the four schools is illustrated in Figures 8.15 and 8.16.

Fig. 8.15 Year 6 mean sorts in each school
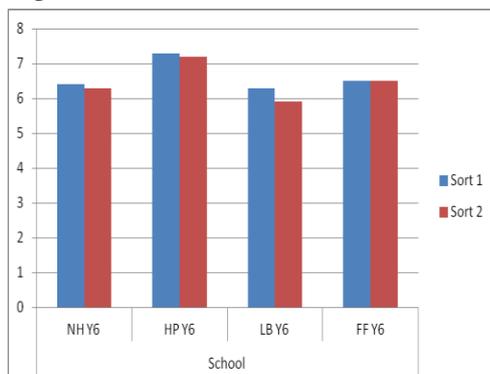
Fig. 8.16: Year 2 mean sorts in each school
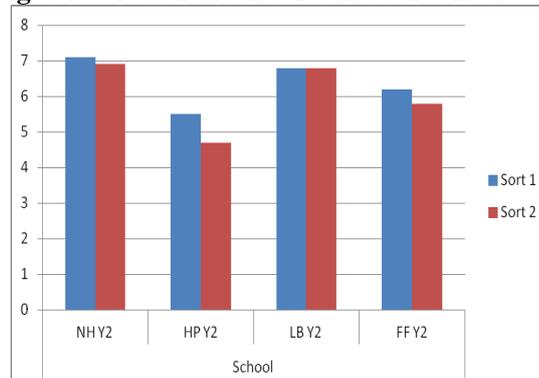
Figures 8.15 and 8.16 reveal few school differences; the mean number of sorts in most Y6 classes clusters around the 6.6 mark, with Y2 classes identifying, on average, 6.2 sorts. Although the Year 2 children at Highbury Park identified the fewest number of sorts, the overall absence of variation between Year 6 and Year 2 suggests no identifiable developmental differences. Exploratory multivariate analysis of variance confirmed no significant differences between the four schools or two year groups. Focus will now turn to the specific categories identified by children in each class.

8.4.2 Dendograms illustrating the sorting classifications for the eight classes

Cluster analyses were undertaken to identify the relatively homogeneous groups of categories based on children's responses to the sorting activity. These groupings are presented in the form of dendograms (i.e. branching diagrams that represent the relationships of similarity among the categories identified by children in each class). The dendograms indicate the distance between groups clustered in particular steps. In accordance with preliminary analysis and advice provided by Langfelder et al. (2007), the analytical decision was made to select a distance (static tree cut) at the lowest level of 5 (as illustrated with a red line on each dendograms). It is worth noting that children were asked to sort a second time because of the cognitive demands placed on them during the second sort may reveal notable socio-cognitive resources being drawn on to formulate each category. Clusters of categories formed within the prescribed cut-off are presented in Figures 8.17-8.48. The sorting classifications for Year 6 children across the 4 classrooms are presented in Figures 8.17-8.20 for Sort 1 first and Figures 8.21-8.24 illustrate the categories identified by Year 6 children for Sort 2. The results identified for children in Year 2 are then presented in Figures 8.25-8.28 (Sort 1) and Figures 8.29-8.32 (Sort 2).

The picture cards (*N*=25) identified within each cluster are presented beneath each dendogram for each class. The researcher and an independent assessor separately labelled each of the identified groups (as detailed in Chapter 3) and reached agreement on the group names presented below.

Fig. 8.17: North Higherbank Year 6 Sort 1
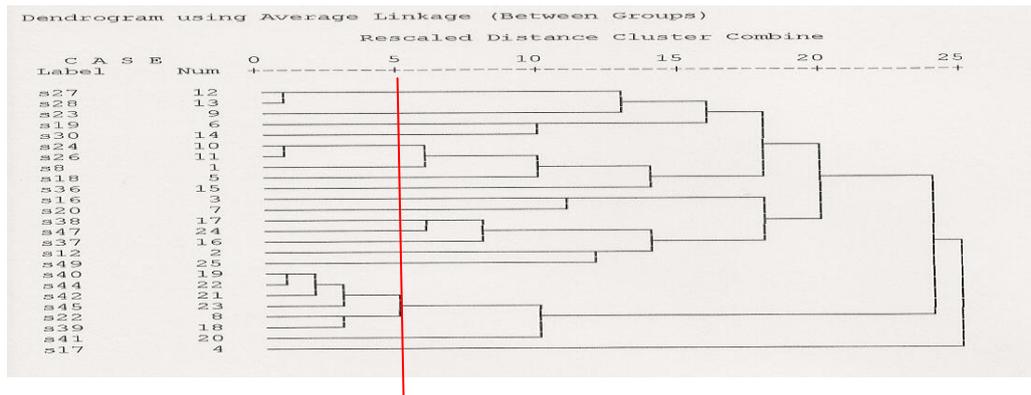
Measuring (MI, MO)
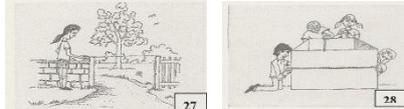
Numbers (MI, MI)

Reading (MI, EI, EI, EI, EI, EO)

Fig. 8.18: Highbury Park Year 6 Sort 1
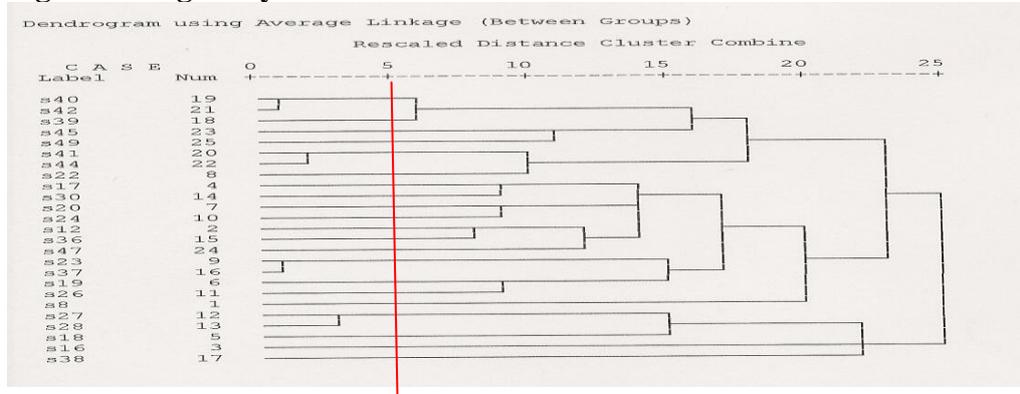
Collaborative reading (EI, EI)
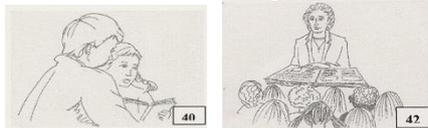
School lessons (MI, EI)
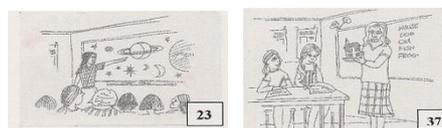
Books (EI, EI)
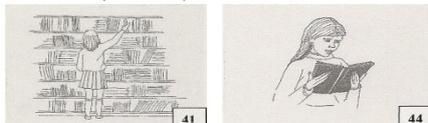
Measuring (MI, MO)
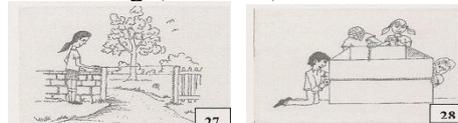
Fig. 8.19: Lowerbridge Year 6 Sort 1

Dendrogram using Average Linkage (Between Groups)
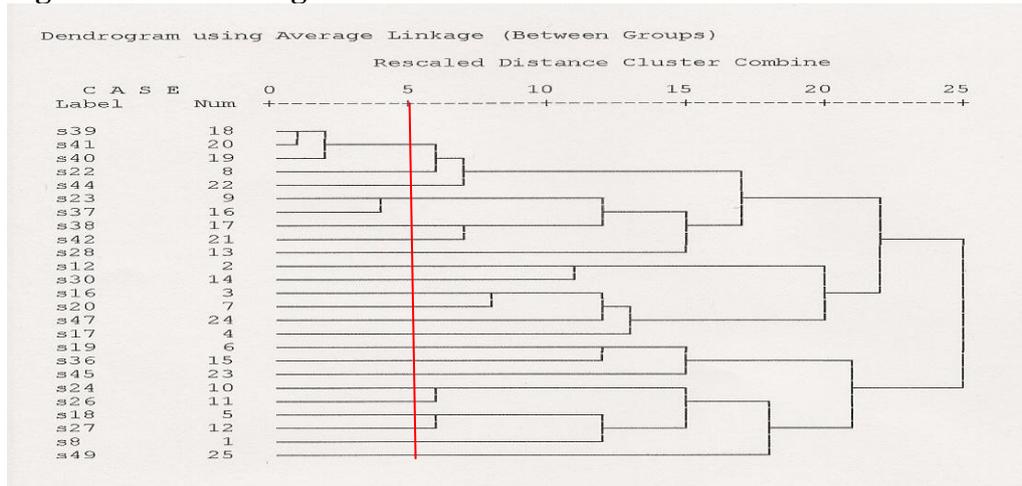
Books (EI, EI, EI)

School lessons (MI, EI)

Fig. 8.20: Fallowfield Year 6 Sort 1

Dendrogram using Average Linkage (Between Groups)
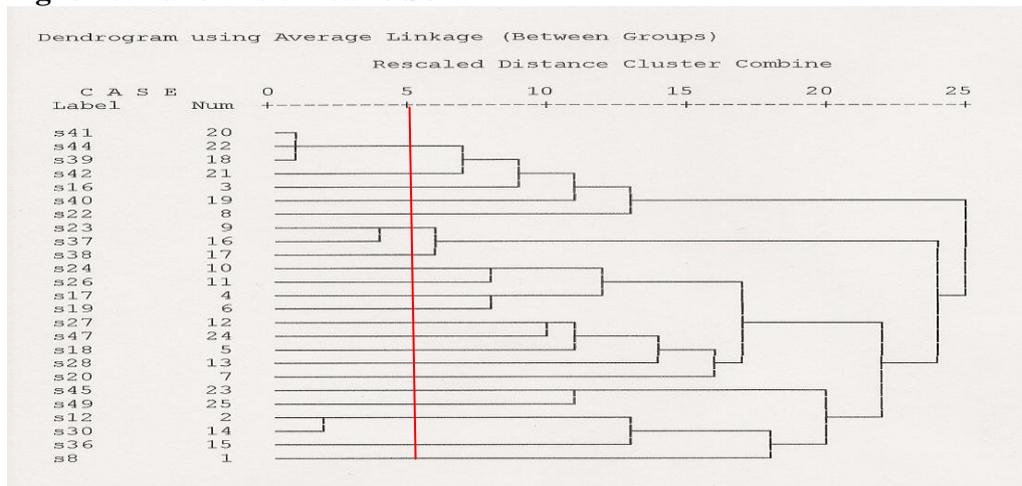
Books (EI, EI, EI)

School lessons (MI, EI)

Transport (EO, MO)
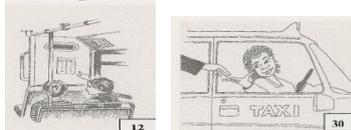
Fig. 8.21: North Higherbank Year 6 Sort 2
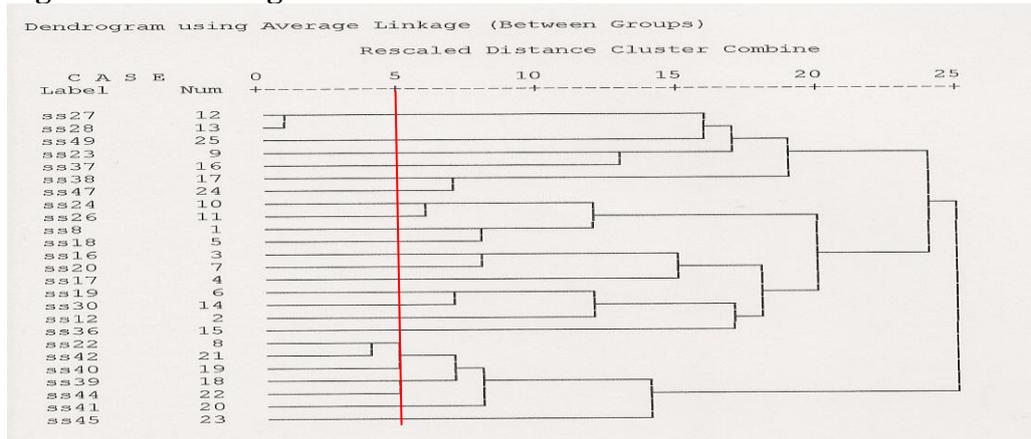
Measuring (MI, MO)

Collaborative reading (MI, EI, EI)

Books (EI, EI)

Fig. 8.22: Highbury Park Year 6 Sort 2
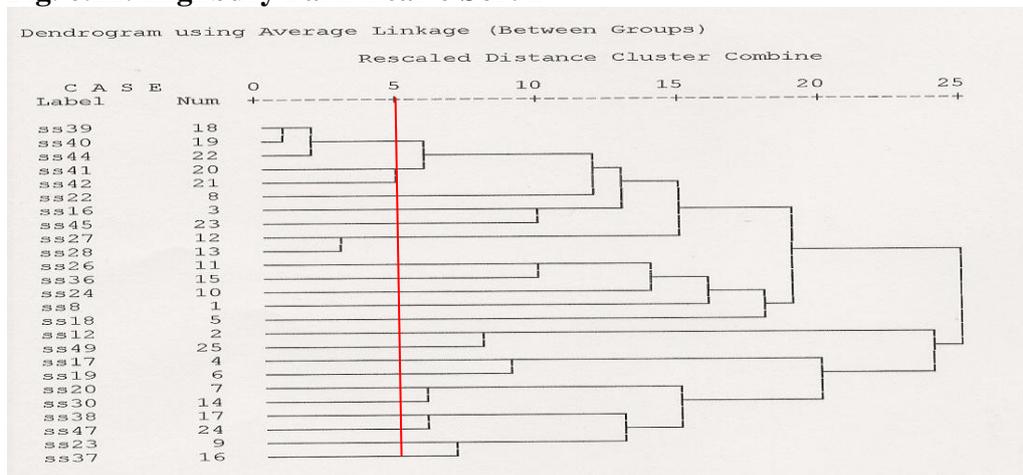
Reading (EO, MI, EI)

Measuring (MI, MO)

328

Fig 8.23: Lowerbridge Year 6 Sort 2
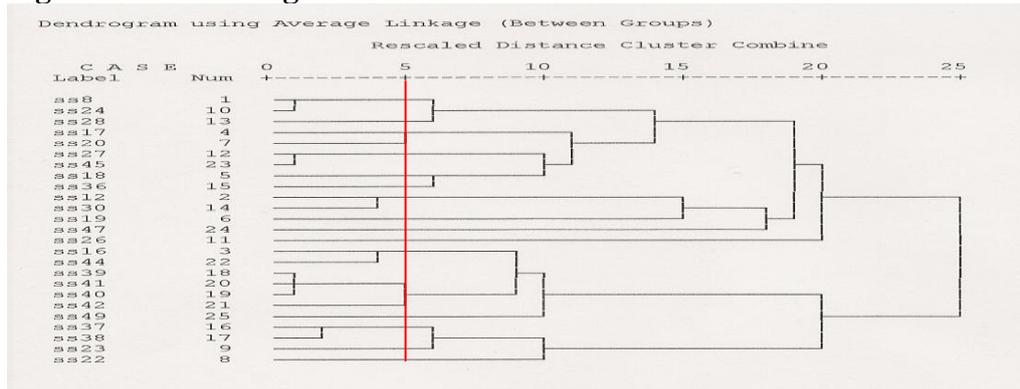
Numbers (MO, MI)

Spending money (MO, MO)

Outdoor activity (MO, EO)
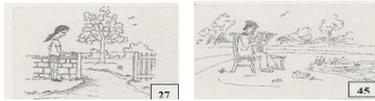
Books (EI, EI, EI, EI)

Written work (EI, EI)
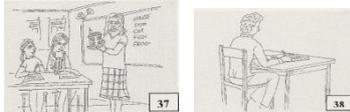
Fig 8.24: Fallowfield Year 6 Sort 2
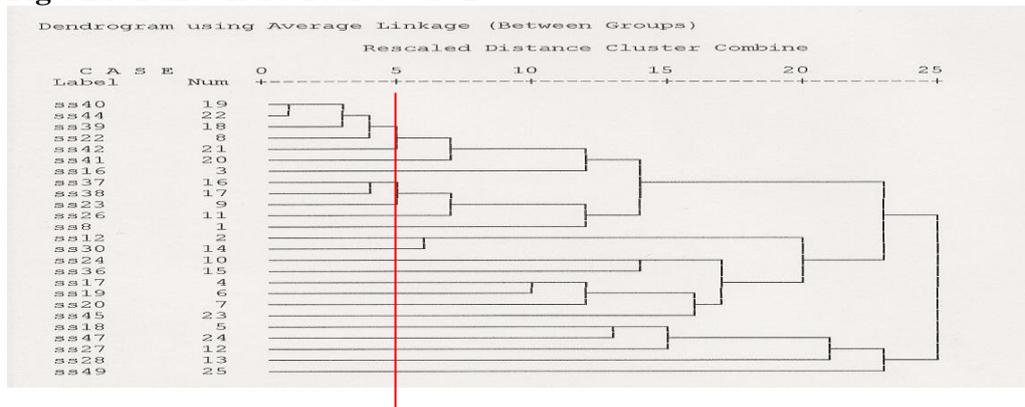
Books (EI, EI, EI, MI, EI)

School work (EI, EI, MI)

Fig. 8.25: North Higherbank Year 2 Sort 1


```
Dendrogram using Average Linkage (Between Groups)

                          Rescaled Distance Cluster Combine

    C A S E          0         5        10        15        20        25
  Label      Num     +---------+---------+---------+---------+---------+
   s39        18
   s44        22
   s16         3
   s42        21
   s20         7
   s41        20
   s27        12
   s28        13
   s26        11
   s12         2
   s47        24
   s49        25
   s22         8
   s40        19
   s38        17
   s45        23
   s36        15
   s37        16
   s24        10
   s8          1
   s18         5
   s30        14
   s19         6
   s23         9
   s17         4
```
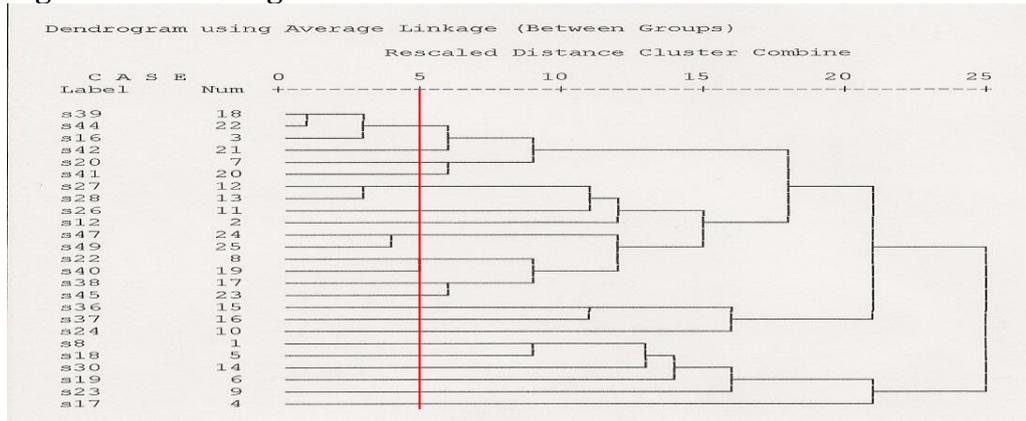
Reading (EI, EI, EO)

Measuring (MO, MI)

Out of school literacy (EO, EO)

Fig. 8.26: Highbury Park Year 2 Sort 1


```
Dendrogram using Average Linkage (Between Groups)

                          Rescaled Distance Cluster Combine

    C A S E          0         5        10        15        20        25
  Label      Num     +---------+---------+---------+---------+---------+
   s39        93
   s40        94
   s44        97
   s42        96
   s41        95
   s22        83
   s38        92
   s16        78
   s20        82
   s47        99
   s12        77
   s26        86
   s8         76
   s36        90
   s24        85
   s28        88
   s37        91
   s23        84
   s49       100
   s27        87
   s45        98
   s19        81
   s30        89
   s17        79
   s18        80
```
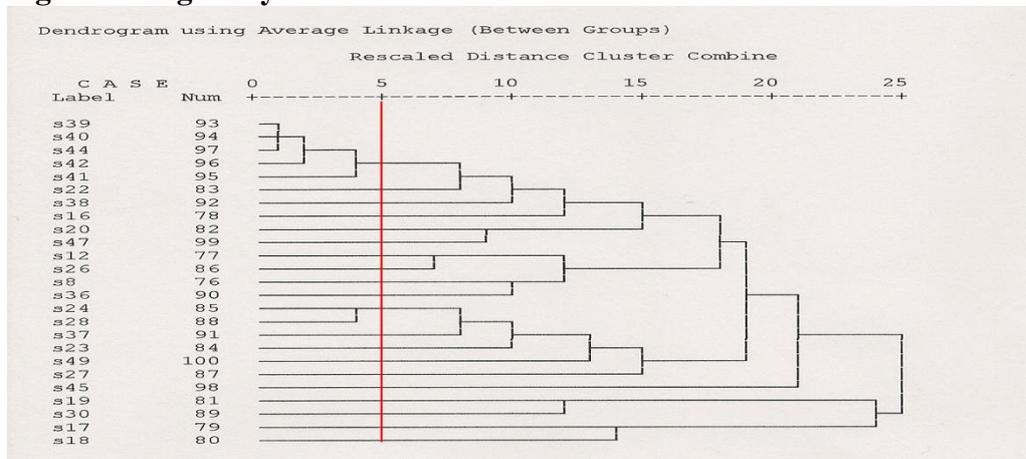
Books (EI, EI, EI, EI, EI)

Identifying numbers (MI, MI)

Fig. 8.27: Lowerbridge Year 2 Sort 1
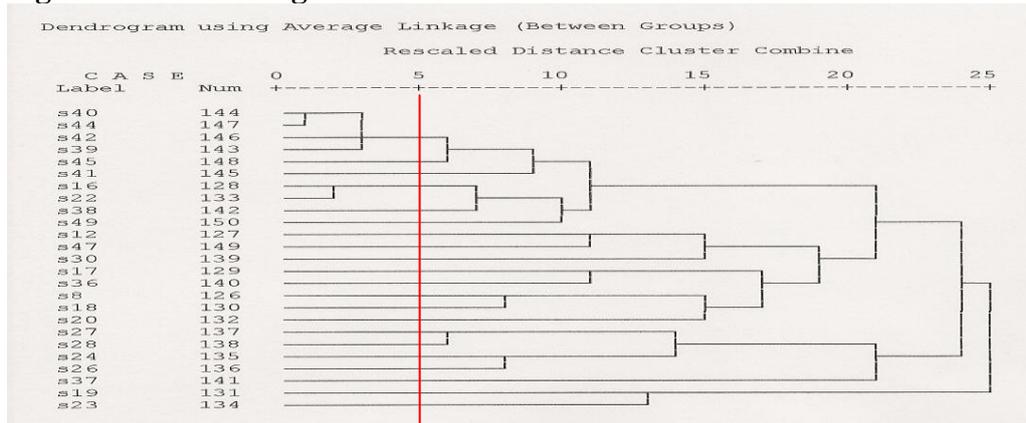
Reading (EI, EI, EI, EI)
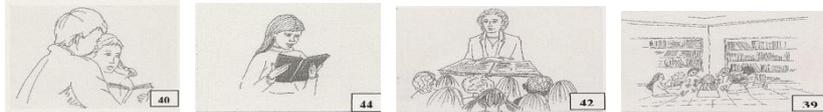
Books (EO, MI)
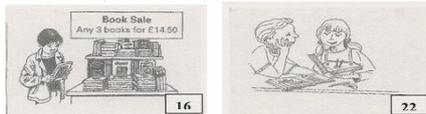
Fig 8.28: Fallowfield Year 2 Sort 1
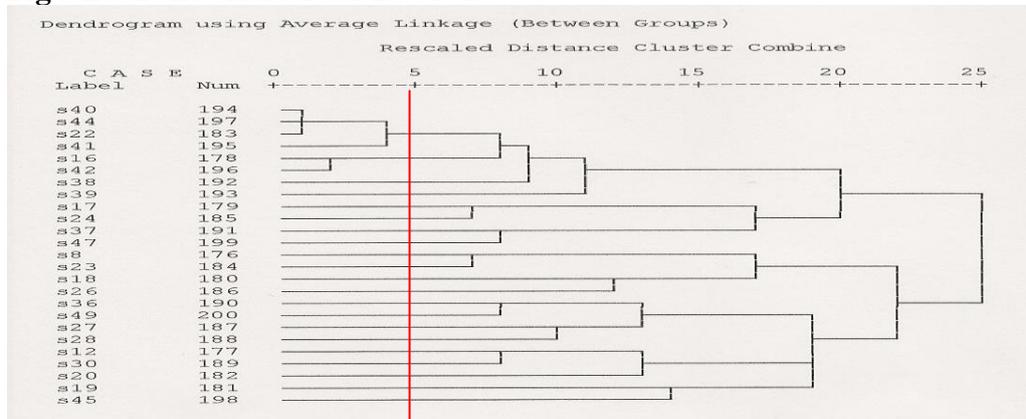
Reading (EI, EI, MI, EI)

Out of school reading (EO, EI)

331
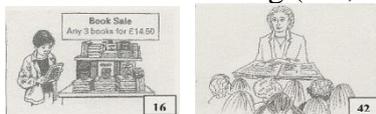
Fig. 8.29: North Higherbank Year 2 Sort 2
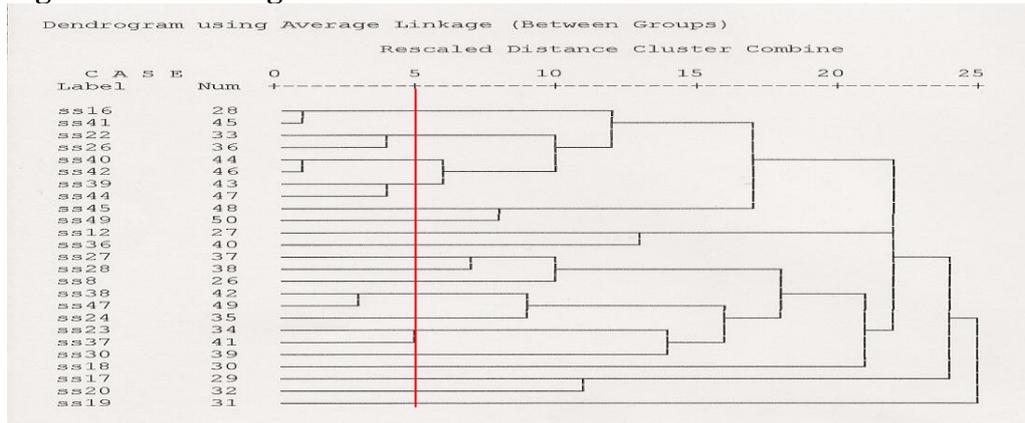
Books (EO, EI)
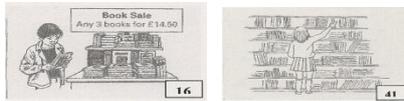
School work (MI, MI)

Collaborative reading (EI, EI)

Reading (EI, EI)

Writing (EI, EO)
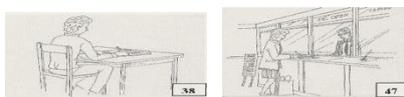
School lessons (MI, EI)

Fig. 8.30: Highbury Park Year 2 Sort 2
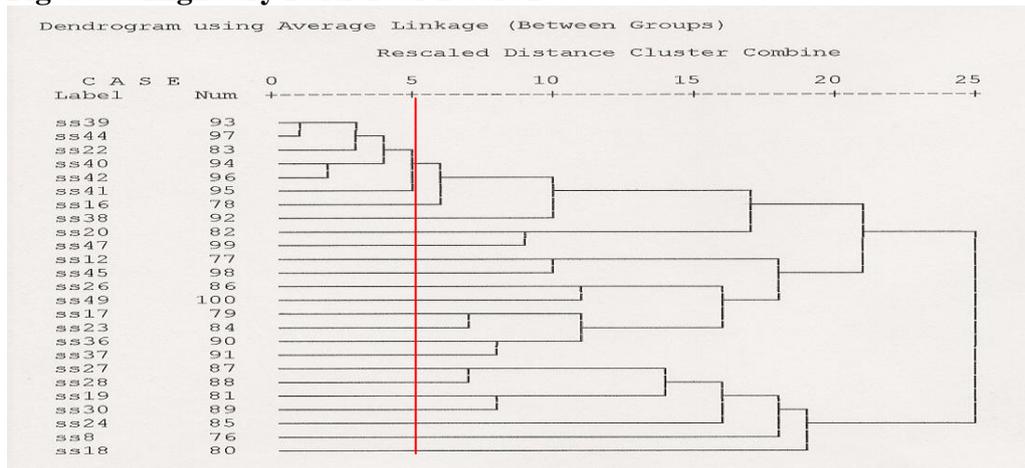
Reading (EI, EI, MI, EI, EI, EI)

Fig. 8.31: Lowerbridge Year 2 Sort 2
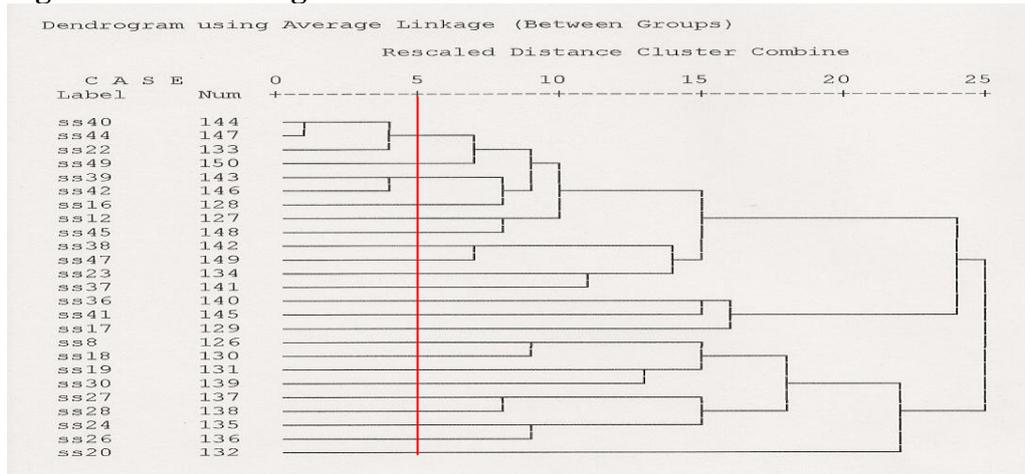
Reading (EI, EI, MI)

Collaborative reading (EI, EI)

Fig. 8.32: Fallowfield Year 2 Sort 2
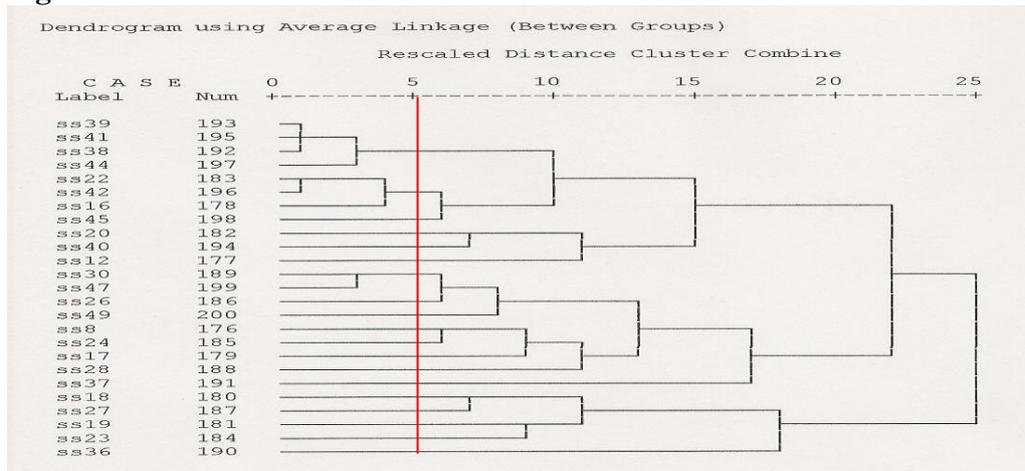
Literacy (EI, EI, EI, EI)
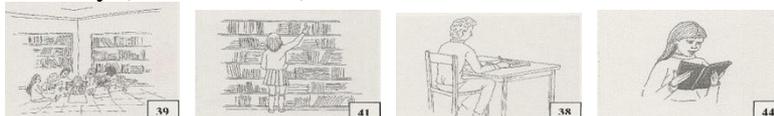
Reading (MI, EI, EO)

Out of school maths (MO, EO)
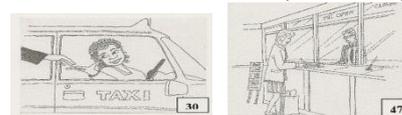
It is clear that most children across the four Year 6 and four Year 2 classrooms were readily identifying groupings that either contained books or incorporated reading activities, while fewer mathematics groupings were identified across the classrooms.

8.4.3 Total groupings identified in each sort for each class

Before a summary of the specific groupings identified by each class is presented in Table 8.24, a brief summary of the total number of groupings identified by each cluster analysis is outlined in Table 8.22 for the Year 6 classes and Table 8.23 for the Year 2 classes.

Table 8.22: Total number of groups identified in each Year 6 class (*N=108*)

	North Higherbank *N=29*	*Highbury Park* *N=16*	*Lowerbridge* *N=27*	*Fallowfield* *N=36*
	Y6	**Y6**	**Y6**	**Y6**
Sort 1	3	4	2	3
Sort 2	3	2	5	2
Total	**6**	**6**	**7**	**5**

Table 8.23: Total number of groups identified in each Year 2 class (*N=95)*)

	North Higherbank *N=27*	*Highbury Park* *N=25*	*Lowerbridge* *N=25*	*Fallowfield* *N=19*
	Y2	**Y2**	**Y2**	**Y2**
Sort 1	3	2	2	2
Sort 2	6	1	2	3
Total	**9**	**3**	**4**	**5**

Tables 8.22 and 8.23 reveal little variation between the Year 6 classes (*M=6*, range = 5 to 7 groups). Lowerbridge Year 6 is identified as the class with the most number of groupings (*N=5*) and is the only Year 6 class with a higher number of groupings for Sort 2. Given that LB6 was the highest achieving class from the research SATs test, it is perhaps surprising to find limited agreement in the groupings identified by children in this class. Although the number of groupings identified in Year 2 ranged from 3-9 groups, the mean of 5.25 was not dissimilar from the average grouping for Year 6. This, too, is perhaps surprising as it was expected that younger children would find it harder to identify coherent groupings than older children.

The groupings identified by children in each of the eight classes are summarised in Table 8.24.

Table 8.24: Sort 1 and sort 2 groupings identified in each class

	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
	Y6	**Y2**	**Y6**	**Y2**	**Y6**	**Y2**	**Y6**	**Y2**
Sort 1	Measuring	Reading	Collaborative reading	Books	Books	Reading	Books	Reading
	Numbers	Measuring	School lessons	Identifying numbers	School lessons	Books	School lessons	Out of school reading
	Reading	Out of school literacy	Books				Transport	
			Measuring					
Sort 2	Measuring	Books	Reading	Reading	Numbers	Reading	Books	Literacy
	Collaborative reading	School work	Measuring		Spending money	Collaborative reading	School work	Reading
	Books	Collaborative reading			Outdoor activity			Out of school maths
		Reading			Books			
		Writing			Written work			
		School lessons						

At first glance, it appears that some of the category names appear to be very similar, for example, *literacy* (identified by children in FF2, Sort 2, which includes a child sat writing at a desk) and *written work* (identified by LB6 pupils in Sort 2 which also includes images of children writing at desks). However, inter-rater agreement was reached in differentiating between these categories as the *literacy* grouping also contained images of children reading. Similarly, it was necessary to differentiate between groupings characterised by *books*; groups classified by individuals *reading*; and groupings consisting of *collaborative reading*. Although the groupings were ultimately labelled by the researcher and independent rater, it is important to note that these were first informed by children's justifications of their groupings; a selection of qualitative extracts taken from children's reported explanations is presented below.

8.4.4 Children's justifications of their sorting categories

Although the previous analysis is useful in identifying the groupings generated by children in this study, it is not clear whether children categorised certain cards together because, for example, they identified the mathematical concept of measuring, or whether they grouped these cards together for a different reason. A sample of responses given by children is, therefore, provided to throw light on the markers children were using to sort the cards into categories; these can be found in Table 8.25. The categories have been grouped according to academic subject, i.e. (i) *English* [including books, reading, collaborative reading, literacy, written work, out-of-school reading and out-of-school literacy]; (ii) *mathematics* [including numbers, measuring, spending money and out-of-school maths]; (iii) *school* [including school work and school lessons]; and *other* [comprising outdoor activity and transport]. Although the analytic focus remains on exploring classroom differences in this section, it is worth noting that children's pseudonyms reveal their status (i.e. central children's names begin with C and peripheral children's names commence with P. The school and year group are also noted in parentheses). Children's justifications have been split into two categories: (i) appropriate identification of academic concept and (ii) justification based on surface or 'other' feature (the coding framework is discussed in Chapter 3).

Table 8.25: Sample of children's justifications of categories; organised according to whether or not child has identified academic concept (English, maths, school)

	Identification and justification of academic concept	Justification based on surface or other features
English		
Books	~ "reading books" (Catherine Norris, NH2) ~ "reading" (Chelsey Locke, LB2)	~ "all books" (Parry Foster, FF2) ~ "all of it's to do with books" (Corey Farrant, FF6)
Reading	~"they're mainly to do with reading" (Clifford Naish, NH6) ~ "these are all associated with reading things: like books, newspapers, eye tests and reading what date it is on the Calendar" (Carol Francis, FF6) ~ "all of 'em are reading" (Chris Fenton, FF6) ~ "they're all reading" (Christine Hemmingway, HP2)	
Collaborative reading	~ "they're all reading" (Caron Lake, LB2) ~ "all reading" (Pascale Neale, NH2)	~ "this is the eyes pile" (Pierre Haine, HP2)
Literacy	~ "they're all to do with English: reading and writing" (Connor Lewis, LB6)	~ "all these to do what they wanted to do" (Cara Ford, FF2)

Written work	~ "the people in this pile are all writing" (Cassie Haynes, HP6) ~ "they are all writing" (Clifford Naish, NH6)	~ "They have to make something and then write on the box" (Pandora Freeman, FF2)
Out-of-school reading		~ "inside and it's nice and warm" (Phillip Hadley, HP2) ~ "toys" (Philippa Luffman, LB2) ~"all looking" (Pablo Nightingale, NH2)
Out of school literacy		~ "places you can go" (Cayla Lawrence, LB6) ~ "giving money" (Coral Hudson, HP6)
Mathematics		
Numbers	~ "They are all about maths and numbers" (Cerys Hill, HP6) ~ "there are numbers in each of these cards" (Colin Larson, LB6) ~ "these are all about numbers" (Caleb Northcott, NH2)	~ "they're all looking at stuff" (Palmer Nisbett, NH2) ~ "they're all using their hands" (Paige Naylor, NH6)
Measuring	~ "they're both measuring" (Connie Furlong, FF2) ~ "measuring is separate to numbers and reading because you are using both" (Caitlin Nelson, NH6)	~ "they're being naughty" (Petra Fairclough, FF2) ~ "they're lining" (Caron Lake, LB2) ~ "they are sellotaping" (Peggy Lee, LB6)
Spending money	~ "They're all using money or paying" (Camilla Hawkins, HP6) ~"these involve using money to pay" (Colin Larson, LB6)	
Out of school maths		~ "all looking at stuff" (Cara Ford, FF2) ~ "they're all happy" (Preston Farr, FF2) ~"dunno" (Ciarian Fenton, FF2)
School		
School work	~ "they are working in school; the teacher is reading and the children are having lessons" (Camilla Hawkins, HP6) ~"they're working in school and using information" (Chris Fenton, FF6)	
School lessons	~ "these are all about school: they're learning about space and all about the house" (Cayla Lawrence, Lowerbridge, Year 6) ~"they're teaching" (Polly Harper, HP6)	
Other		
Outdoor activity		~ "outside" (Phoenix Lowe, LB6)
Transport		~ "they're working" (Paige Naylor, NH6) ~"travelling" (Paddy Hunter, HP6) ~"bus and taxi" (Phoenix Lowe, LB6) ~"they both in like cars" (Preston Farr, FF2)

Analysis of justifications of the categories identified by the 213 children across sorts 1 and 2, revealed that although children were categorising groups of cards that adults identified as out of school maths, out of school reading and literacy, children were not able to recognise these

clearly applied academic concepts in this way. Instead, for these particular groupings, children were drawing on surface features such as 'toys' or 'looking' when labelling these groups.

Children across schools were, however, readily able to recognise more abstract concepts, including schoolwork and school lessons. Reading categories were identified by many children; only some failed to spot reading as an activity and focused more on the surface feature of books as the defining characteristic of the grouping. Clear differences emerge across the mathematics grouping in particular; some children are quick to identify abstract mathematics concepts such as measuring, while other children do not. Instead, these children label the groups as 'lining' things up or as 'sellotaping', despite selecting identical cards to the children who identify the measuring activities. It is possible that because the measuring cards included outside activities, the children who draw on surface features are not able to recognise inside school activities in the outside world. Similarly, with the 'written work' grouping, some children recognised 'writing' as the common denominator, while other children struggled and instead provided a narrative in an attempt to link the cards, e.g. Petra Fairclough (FF2) linked a child making something in one card with children writing on a box on the other card. Although analysis of central and peripheral children's responses to the sorting task is presented later in the chapter (see section 8.4.7), it is evident from the sample justifications presented in Table 8.25 that central children were most likely to recognise academic concepts while justifications based on surface or other features were most commonly found among the peripheral group.

It is apparent that some children draw on abstract academic concepts when asked to categorise cards while other children do not but it is not yet clear why. Having situated this thesis within a socio-cultural framework, it is anticipated that the decontextualised thinking needed to recognise such abstract academic concepts is acquired through systematic instruction in educational settings (Vygotsky, 1994), so classroom differences may well emerge. Analysis of the differences in the proportion of children in each class who could recognise abstract concepts, as opposed to surface features or 'other' (namely narrative explanations) was therefore undertaken. The unique teaching practices and classroom cultures created by each of the eight teachers (as outlined in Chapters 4 and 5) was explored to identify whether or not it relates to children's ability to identify abstract concepts.

8.4.5 Investigating classroom differences in children's recognition of abstract academic concepts

The results for the Year 6 classes are presented in Table 8.26 while the percentage of Year 2 children identifying abstract concepts is outlined in Table 8.27. The number of sorts identified by children is presented in parentheses beneath the sort number.

Table 8.26: Year 6 sorting categories as percentages *(N=108)*

	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
	S1 (185)	S2 (181)	S1 (109)	S2 (108)	S1 (157)	S2 (149)	S1 (239)	S2 (235)
Abstract	39	39	40	38	30	31	31	31
Surface	61	60	59	61	69	68	67	68
Other	0	1	1	1	1	1	2	1
Total	100	100	100	100	100	100	100	100

Table 8.27: Year 2 sorting categories as percentages *(N=95)*

	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
	S1 (194)	S2 (186)	S1 (142)	S2 (126)	S1 (194)	S2 (186)	S1 (137)	S2 (128)
Abstract	32	31	24	21	23	24	18	17
Surface	66	66	76	77	77	76	80	81
Other	2	3	0	2	0	0	2	2
Total	100	100	100	100	100	100	100	100

The most notable finding for Year 6 is the apparent differences in the percentage of children recognising abstract concepts between the higher achieving schools (North Higherbank and Highbury Park; $M=39$[23]) and the lower achieving schools (Lowerbridge and Fallowfield; M=31). The mean score for Year 2 children in the HA schools is also higher (M=27) compared with children in the LA schools (M=21).

To better illustrate classroom differences in children's identification of (i) abstract, (ii) surface features and (iii) other (narrative) explanations, the percentages have been presented as line graphs in Figures 8.33-8.36.

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[23] The mean scores presented here combine recognition of abstract concepts across both sorts 1 and 2.

Fig 8.33: Year 6 school differences sort 1
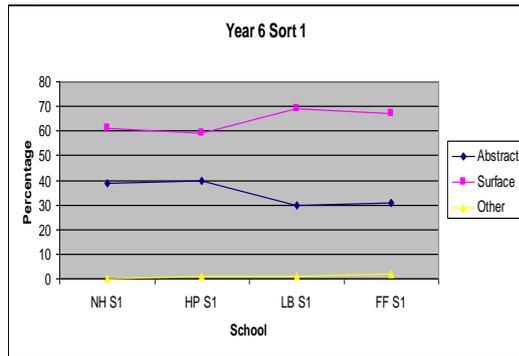
Year 6 Sort 1

Fig 8.34: Year 6 school differences sort 2
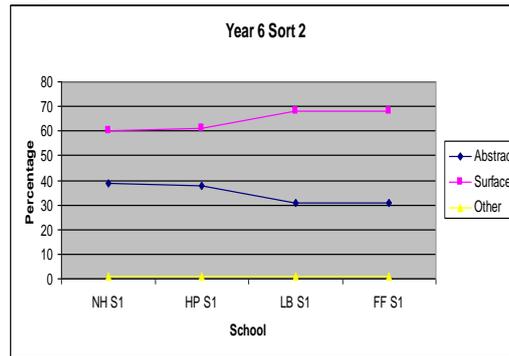
Year 6 Sort 2

Fig 8.35: Year 2 school differences sort 1

Year 2 Sort 1
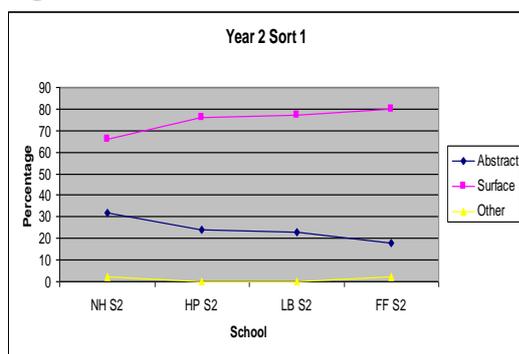
Fig 8.36: Year 6 school differences sort 2

Year 2 Sort 2
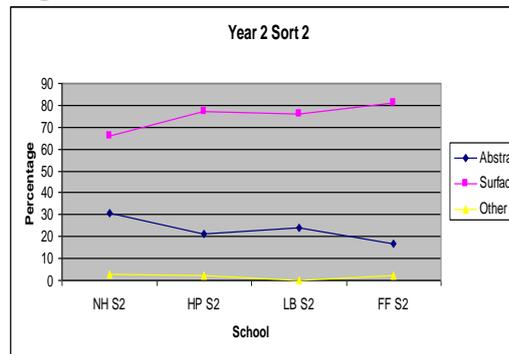
It is evident that across all schools and both year groups, children identify surface features more frequently than abstract concepts. Very few children attempted to offer a narrative to explain seemingly unconnected groupings of cards. Having explored the total number of abstract categories identified in the sorting task, attention now turns to the mean number of abstract groupings identified by children in each Y6 and Y2 class, which is documented in Table 8.28.

Table 8.28: Mean number of abstract academic groupings for children in each class

		North Higherbank		*Highbury Park*		*Lowerbridge*		*Fallowfield*		*Total*	
		M	SD	**M**	SD	**M**	SD	**M**	SD	**M**	SD
Y6	**S1**	**2.48**	1.12	**2.93**	1.03	**1.88**	1.27	**2.08**	1.16	**2.27**	1.20
(N=108)	**S2**	**2.41**	1.27	**2.73**	.80	**1.84**	1.34	**2.03**	1.18	**2.19**	1.23
Y2	**S1**	**2.30**	1.32	**1.36**	.91	**1.52**	.78	**1.14**	.94	**1.60**	1.09
(N=95)	**S2**	**2.11**	1.28	**1.08**	.86	**1.52**	.74	**1.00**	1.07	**1.46**	1.08

Similar patterns are found for Year 6 when analysing the sorting data at this level. It is noteworthy that Y6 children at Highbury Park identified the most abstract groupings (despite

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achieving the poorest research SATs results) while Y6 children at Lowerbridge identified the fewest abstract groupings in both sorts (despite securing the most favourable research SATs results). As anticipated, the mean scores were lower for children in Y2 than Y6 but the difference in the mean scores is, perhaps, smaller than perhaps expected.

8.4.6   Statistical analysis of school and year group differences

Multivariate analysis of variance was undertaken to explore classroom differences in Year 6 and Year 2 children's recognition of abstract academic concepts. MANOVA analyses revealed statistically significant differences for: (i) School: [$p=.003$; $df=3$; $N=213$; $F=3.36$; Wilkes Lambda=.91; partial eta squared=.05]; (ii) Year: [$p<.000$; $df=1$; $N=213$; $F=15.32$; Wilkes Lambda=.87; partial eta squared=.13]; and School*Year [$p=.041$; $df=3$; $N=213$; F=2.21; Wilkes Lambda=.94; partial eta squared=.03]. It can therefore be concluded that in Year 6 and Year 2, children's recognition of abstract academic concepts differs according to classroom; perhaps classroom culture can explain some of these differences.

The estimated marginal means computed within the MANOVA analysis account for the unequal sample size for the different classes. This is important as, for example, there were only 16 pupils in HP6 compared with 36 pupils in FF6. The estimated means (which account for unweighted samples) are presented in Figures 8.37 (for Sort 1) and 8.38 (Sort 2).

Fig. 8.37: Identification of abstract concepts in Sort 1
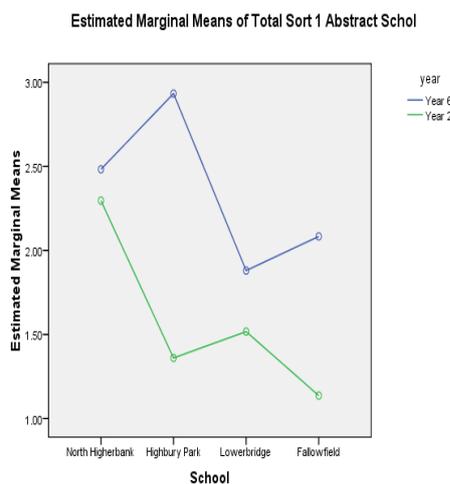
Fig. 8.38: Identification of abstract concepts in Sort 2
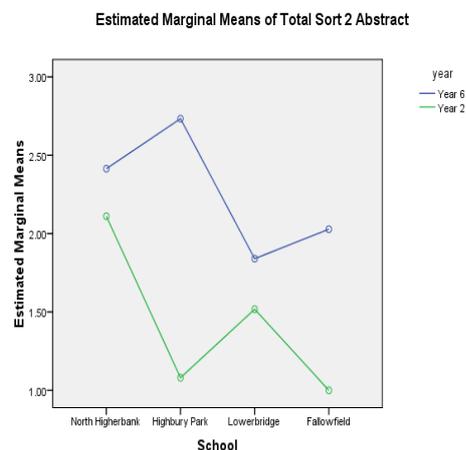
8.4.7 Summary of classroom differences in children's recognition of concepts

In sum, few differences emerged in the mean number of sorts across the classrooms in Year 6 (*M*=6.6) and Year 2 (*M*=6.2), which is, perhaps, somewhat surprising as younger children were expected to identify more pairings and less coherent groupings than they actually did. The categories identified by children in each of the eight classrooms, as presented in the dendograms, appear to reveal that most children identified groupings based on academic concepts, including: reading, measuring, numbers etc. in Year 6 and similar categories in addition to out of school literacy in Year 2. The only classes to identify non-academic conceptual groupings were both lower achieving schools, i.e. LB6 identified an 'outdoor activity'[24] grouping while 'transport'[25] was identified as a category for children in FF6. However, analysis of children's justifications revealed that although the clusters identified in the dendograms typically represented academic concepts (as labelled by the researcher and an independent adult rater), not all children were drawing on socio-cognitive resources to recognise abstract academic concepts within the images. The frequently identified 'measuring' category provides the best example: some children were reading mathematical markers to immediately spot that measuring was taking place in both inside school and outside school environments. Other children, meanwhile, were selecting these cards as a group but were justifying their selection as a 'sellotaping' activity or because children were 'lining up' things in the cards, i.e. focusing on surface features and not recognising the academic concept within the image.

Analysis of HA and LA school differences revealed interesting findings; namely, that children in HA schools were more able to recognise abstract academic concepts than their LA counterparts across both Key Stages. The findings for HP6 are particularly interesting as the initial analysis (in section 8.4.1) indicated that children in this class identified the highest mean number of groupings in Year 6, which may suggest that children were identifying less coherent groupings than children in other classes. However, when the analytic lens adjusted to investigate the percentage of abstract groupings identified in each class, Mr Humour's 'Crew' fared better than all other Y6 classes, despite also performing poorest of all Y6 classes in the research SATs tests. The context in which the research SATs tests were

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[24] Outdoor activity grouping comprised an image of children measuring outdoors and a picture of a man reading a newspaper in the park.
[25] Transport grouping comprise images of children on a bus reading the timetable and a taxi driver receiving payment for a fare.

undertaken (as outlined in Chapter 5) cannot be ignored; Mr Humour's reluctance to test his class prior to the SATs appeared to be detrimental to the Crew, *when* measured on scholastic (research SATs) tests. However, this instrument has revealed that when assessing children's ability to recognise abstract academic features as required for 'higher mental functioning' (Vygotsky, 1987), the socio-cognitive resources being used by the Crew helped them to identify English and mathematics academic concepts in outside school applied settings more readily than any other Year 6 class.

Having investigated classroom differences in children's responses to the sorting task, the focus now shifts to the important issue of exploring whether differences can be found between central and peripheral children's ability to recognise academic concepts. This section will follow the previous structure; first addressing differences in the mean sorts, then presenting the groupings identified using cluster analysis, before examining differences in pupils' recognition of abstract academic concepts.

8.4.8   Total and mean sort differences for central and peripheral pupils

Differences in the mean number of sorts between the central and peripheral children were explored and are presented in Tables 8.29 (Y6) and 8.30 (Y2).

Table 8.29: Total and mean number of sorts for central and peripheral pupils in Year 6

	Central (N=16)		*Peripheral (N=16)*		*Non-Focus (N=73)*	
Sort No.	S1	S2	S1	S2	S1	S2
Total Sorts	100	99	110	104	477	469
Mean Sort	6.3	6.2	6.9	6.5	6.5	6.4

Table 8.30: Total and mean number of sorts for central and peripheral pupils in Year 2

	Central (N=16)		*Peripheral (N=16)*		*Non-Focus (N=73)*	
Sort No.	S1	S2	S1	S2	S1	S2
Total Sorts	95	91	108	105	460	430
Mean Sort	5.9	5.7	6.8	6.6	6.6	6.1

The mean number of sorts for central pupils in Year 6 (*M*=6.3) is slightly lower than the overall mean sorts for peripheral children (*M*=6.7). In Year 2, central children identified, on average 5.8 sorts while peripheral children identified 6.7. The mean sorts for central, peripheral and the remaining class members are presented more clearly in Figures 8.39 - 8.40.

Figure 8.39: Mean sorts for central, Peripheral, remaining class in Year 6
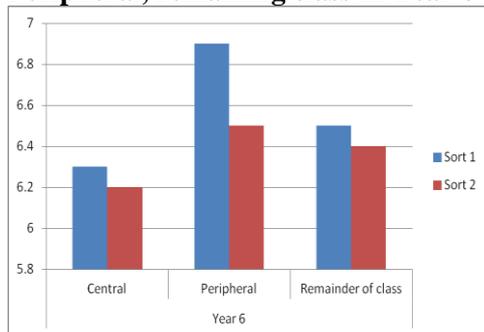
Figure 8.40: Mean sorts for central, peripheral, remaining class in Year 2
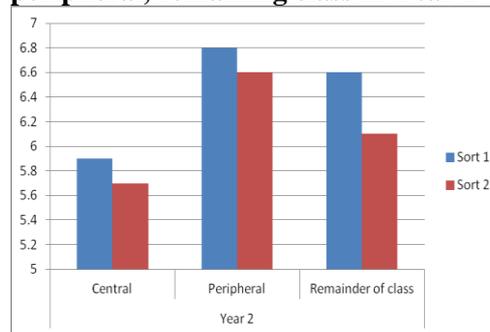
Although Figures 8.39 and 8.40 reveal a slight increase in the mean number of sorts for peripheral pupils compared with central peers in both year groups, the difference is clearly not significant; as confirmed with exploratory t-test analyses for Year 6 Sort 1 [$t(30) = 1.0005$, *p*= .660] and Sort 2 [$t(30)= -.445$, *p*=.660] and for Year 2 Sort 1 [$t(30) = -.873$, *p*= .390] and Sort 2 [$t(30)= -.873$, *p*=.415].

It is evident that analysis of the mean number of sorts fails to throw light on understanding differences between central and peripheral pupils; focus, therefore, now shifts to the groupings identified by children in the first and second sort in each class. School differences are explored first then attention turns to the groupings identified by central & peripheral children.

8.4.9 Sorting classifications of central and peripheral children

Cluster analysis (as explained in section 8.4.2) was undertaken to explore any differences in the groupings identified by central and peripheral children in the sorting activity. The sorting classifications for Year 6 children are presented in Figures 8.41-8.42 (Sort 1) and Figures 8.43-8.44 (Sort 2). The results identified for children in Year 2 are presented in Figures 8.45-8.46 (Sort 1) and Figures 8.47-8.48 (Sort 2). As previously outlined, the dendogram cut off point of 5 was maintained for analysis of central and peripheral children's groupings of sorting cards.

Fig. 8.41: Year 6 Central Pupils Sort 1
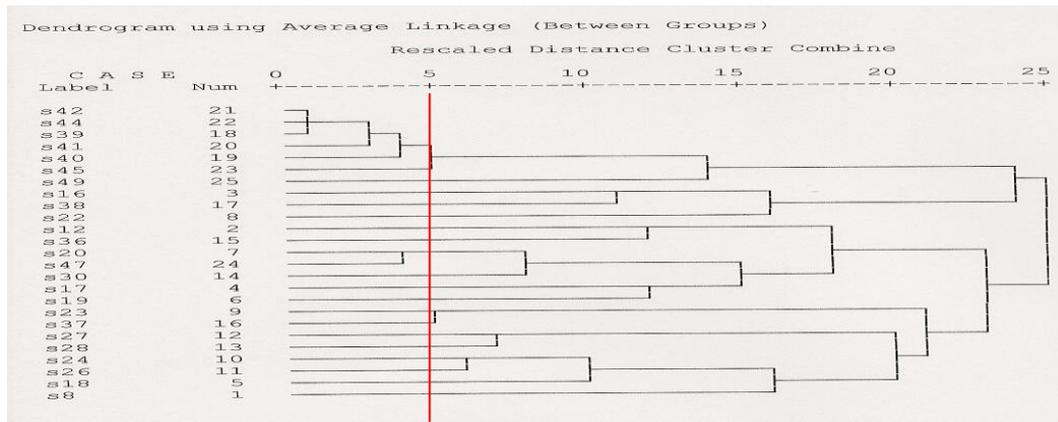
Reading (EI, EI, EO, EI, MI, EO)
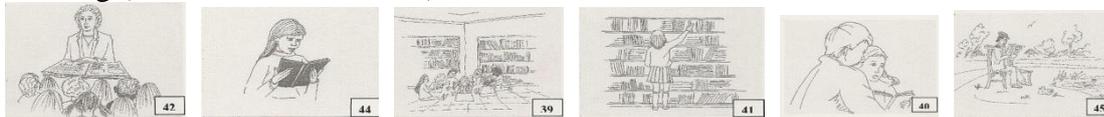
Out of school literacy (MO, EO)
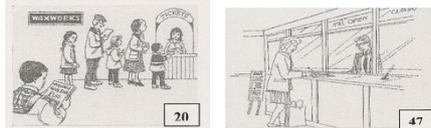
School lessons (MI, EI)

Fig. 8.42: Year 6 Peripheral Pupils Sort 1
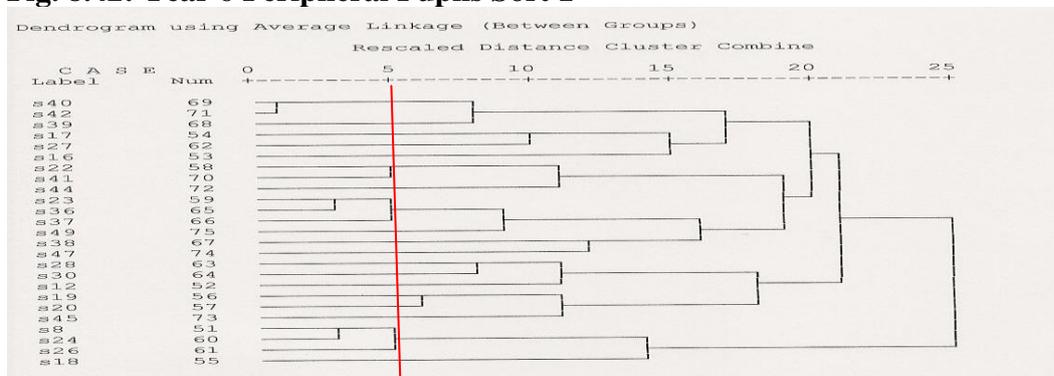
Collaborative reading (EI, EI)
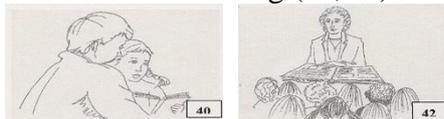
Books (MI, EI)
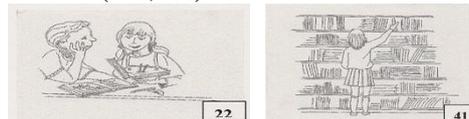
School lessons and games (MI, EO, EI)

Numbers (MO, MI, MI)

Fig. 8.43: Year 6 Central Pupils Sort 2
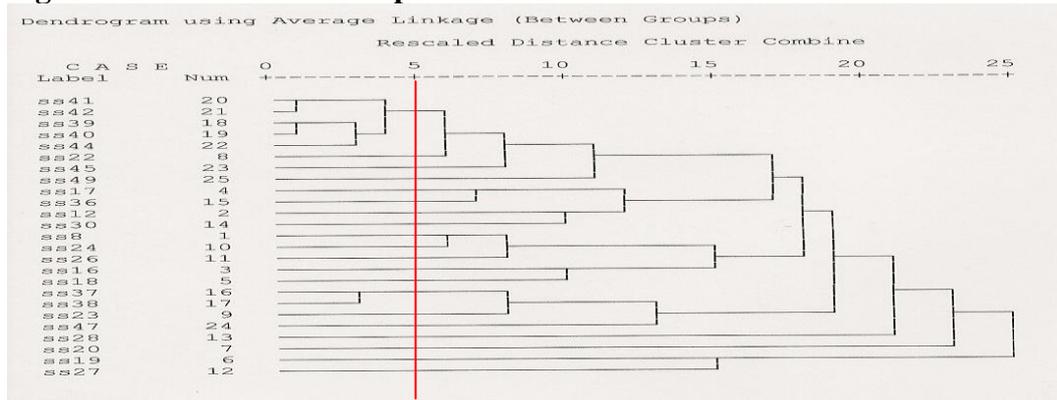
Reading (EI, EI, EI, EI, EI)

School work (EI, EI)
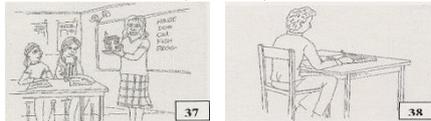
Fig. 8.44: Year 6 Peripheral Pupils Sort 2
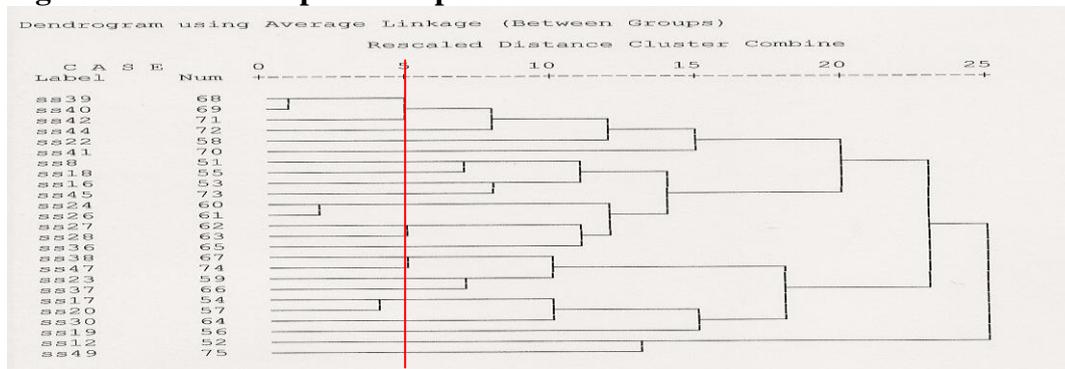
Collaborative reading (EI, EI, EI)   Numbers (MI, MI)

Measuring   Writing   Spending money
(MI, MO)   (EI, EO)   (MO, MO)

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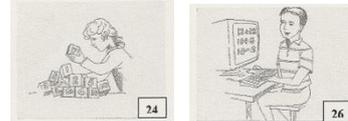
Fig. 8.45: Year 2 Central Pupils Sort 1
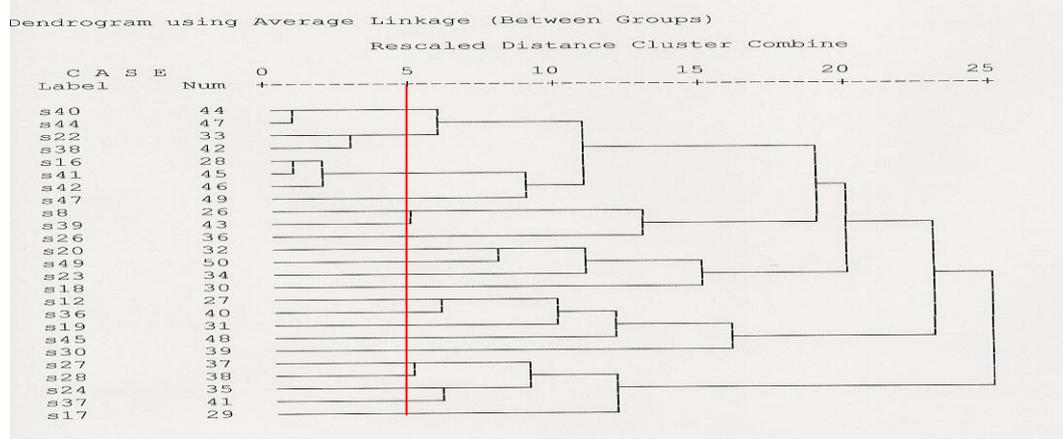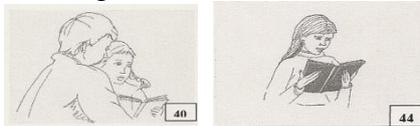
Reading (EI, EI)

School work (MI, EI)
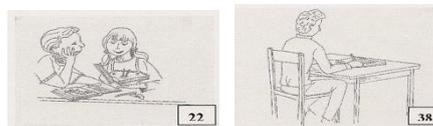
Books (EO, EI, EI)

Measuring (MO, MI)

Fig. 8.46: Year 2 Peripheral Pupils Sort 1
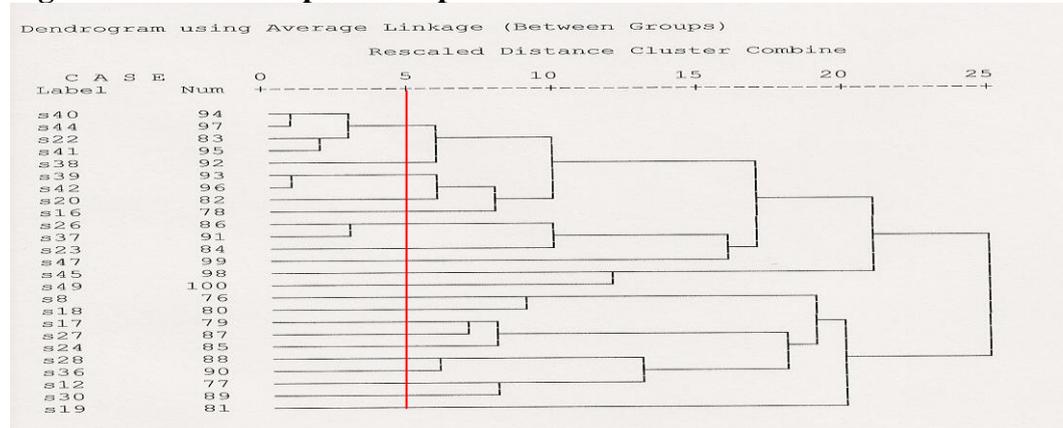
Reading (EI, EI, MI, EI)

Collaborative reading (EI, EI)
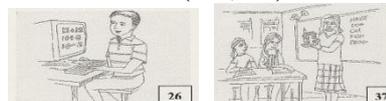
School work (MI, EI)

Fig. 8.47: Year 2 Central Pupils Sort 2
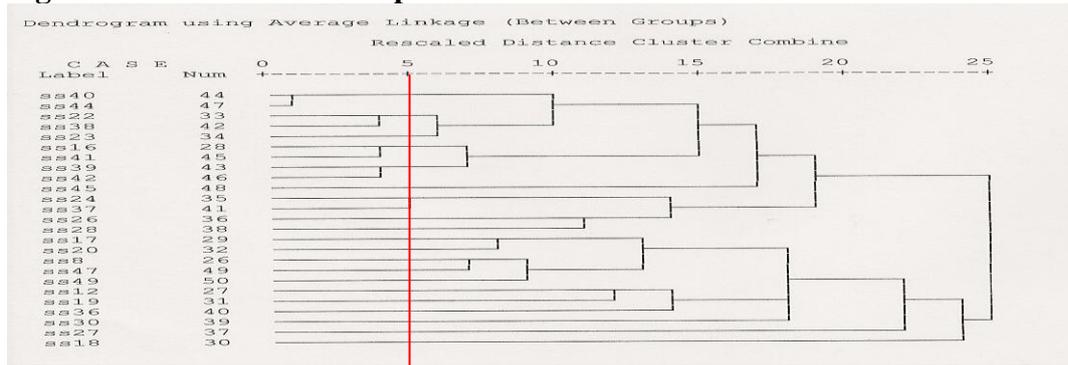
Reading (EI, EI)

School work (MI, EI)

Books (EO, EI)

Collaborative reading (EI, EI)

Learning with toys (MI, EI)

Fig. 8.48: Year 2 Peripheral Pupils Sort 2
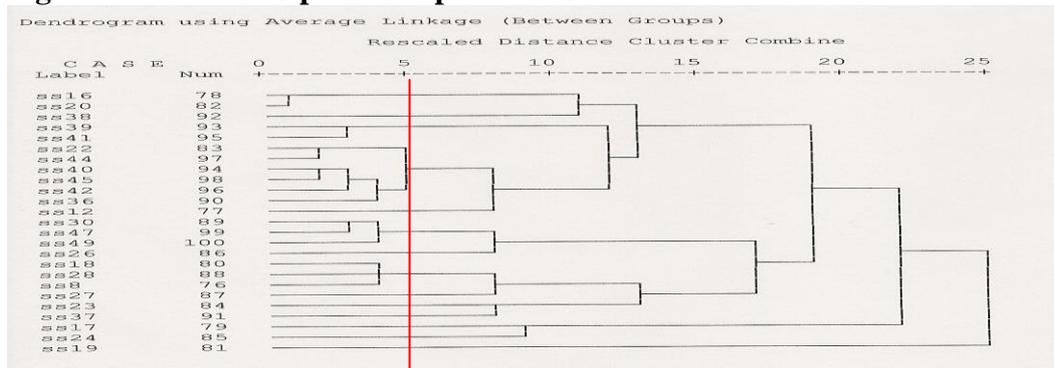
Literacy (EO, MO)

Library (EI, EI)

Reading (MI, EI, EI, EO, EI, MO)

Jobs (MO, EO, EO)

Numbers (MO, MI, MO)

8.4.10 Total groupings identified in each sort by central and peripheral pupils

Before summarising the specific categories identified by central and peripheral children, as presented in Table 8.32, a summary of the total number of groupings identified by the cluster analysis is outlined in Table 8.31 for central and peripheral pupils in Year 6 and Year 2.

Table 8.31: Total number of groups identified by central and peripheral pupils

	Year 6		Year 2	
	Central	**Peripheral**	**Central**	**Peripheral**
Sort 1	3	4	4	3
Sort 2	2	5	5	5
Total	5	9	9	8

It is evident that in Year 6, peripheral children identify more groupings overall than central pupils, but this difference is not witnessed among children in Year 2. A summary of the groupings identified by central and peripheral children in each year group is presented in Table 8.32.

Table 8.32: Groupings identified by central, peripheral and non-focus pupils

	Central		*Peripheral*	
	Y6	**Y2**	**Y6**	**Y2**
Sort 1	Reading	Reading	Collaborative reading	Reading
	Out of school literacy	School work	Books	Collaborative reading
	School lessons	Books	School lessons & games	School work
		Measuring	Numbers	
Sort 2	Reading	Reading	Collaborative reading	Literacy
	School work	School work	Numbers	Library
		Books	Measuring	Reading
		Collaborative reading	Writing	Jobs
				Numbers
		Learning with toys	Spending Money	

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The exemplar justifications provided by central and peripheral pupils have already been presented in Table 8.25. As previously stated in section 8.4.3, some children appear to recognise academic concepts while others do not. It is, however, interesting that the children who are more adept at identifying abstract concepts are commonly those identified in Chapter 7 as central children. More often than not, the peripheral pupils are reading surface features from the images and using these when asked to justify the groupings they identified in the sorting task. For example, when central children (and some remaining classmates) identified the 'collaborative reading'[26] grouping, peripheral children who identified the same collection of cards explained they were grouped together for other reasons, including 'because they are the eyes pile' (Pierre Haine, HP2). Similarly, when central children were categorising cards as being all 'about maths and numbers'[27] (Cerys Hill, HP6), other peripheral children grouped the same cards together because 'they're all looking at stuff' (Palmer Nisbett, NH2) or because 'they're all using their hands' (Paige Naylor, NH6). These peripheral pupils are simply struggling to identify abstract academic concepts within the images, regardless of whether they are inside or outside school activities. Although exploration of children's justifications of their groupings has revealed differences between central and peripheral children's recognition of academic concepts, it is necessary to investigate whether, statistically, central children are more skilled at identifying abstract concepts than their peripheral peers. The next section, therefore, explores the percentage of children in each group who identified (i) abstract concepts, (ii) used surface features when grouping cards together and (iii) used other justifications (such as providing a narrative to attempt to link different cards together to form a group).

8.4.11 Investigating differences in central and peripheral children's recognition of abstract academic concepts

The results for Year 6 central and peripheral children are presented in Table 8.33 while the percentage of Year 2 central and peripheral children identifying abstract concepts is outlined in Table 8.34. To better illustrate differences in children's identification of abstract, surface and other (narrative) explanations, these percentages have been presented as line graphs in Figures 8.49-8.52.

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[26] Collaborative reading category comprised images of children reading together or an adult reading to a group of children sat on the carpet.

[27] The numbers category comprised images of a child playing with toy blocks with numbers written on each block and of a boy sat at the computer calculating sums on the screen.

Table 8.33: Identification of abstract vs. surface features for central and peripheral Year 6 pupils as percentages

	Central		*Peripheral*	
	S1 (101)	**S2 (99)**	**S1 (111)**	**S2 (104)**
Abstract	39	38	32	29
Surface	61	61	68	70
Other	0	1	0	1
Total	100	100	100	100

Table 8.34: Identification of abstract vs. surface features for central and peripheral Year 2 pupils as percentages

	Central		*Peripheral*	
	S1 (94)	**S2 (93)**	**S1 (108)**	**S2 (105)**
Abstract	26	28	21	21
Surface	74	71	77	77
Other	0	1	2	1
Total	100	100	100	100

Fig 8.49: Year 6 pupil differences sort 1
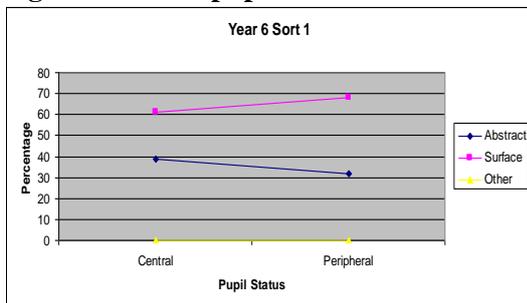
Fig 8.50: Year 6 pupil differences sort 2
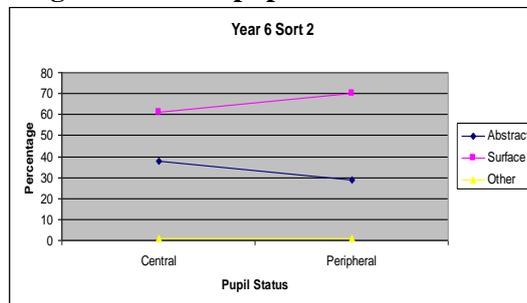
Fig 8.51: Year 2 pupil differences sort 1
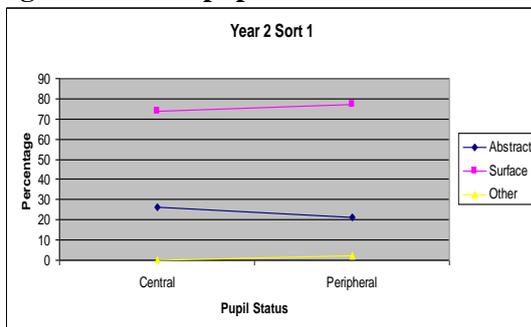
Fig 8.52: Year 2 pupil differences sort 2
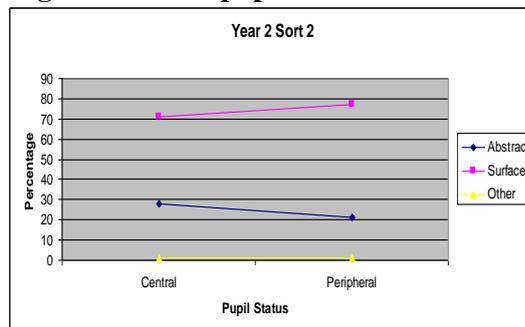
Central pupils in Year 6 identified more abstract groupings (*M*=39) overall than peripheral Y6 children (*M*=31). Similar patterns were found in Year 2 with central children (*M*=27)

recognising more abstract academic concepts than peripheral children (*M*=21). It is evident that children in Year 6 are more likely to recognise abstract concepts than younger Y2 children. However, what is interesting is the high number of surface features being identified by all children in both Key Stages (61% and 69% for the central and peripheral Y6 children respectively and in Year 2, 73% of central and 77% of peripheral peers use surface features to group cards together. When reflecting back on the adult-labelled 'out-of-school literacy' and 'out-of-school maths' categories, children are simply not identifying these classifications and despite grouping these cards together, are using surface features to connect the images to form a category.

8.4.12   Statistical analysis of central and peripheral group differences

A one-way between groups multivariate analysis of variance was conducted to investigate differences between central and peripheral pupils' identification of abstract academic codes. Two dependent variables were used: Sort 1 abstract categories and Sort 2 abstract categories. The independent variable was pupil status (central/peripheral). No statistically significant difference was found for the combined sorts [$F(1, 64)$= .71, *p*=.50; Wilkes Lambda=.98; partial eta squared =.02]. Neither sort reached statistical significance when analysed separately. Inspection of the mean scores revealed that central pupils identified fractionally more abstract academic categories (*M*=1.97, *SD*=1.03) than peripheral pupils (*M*=1.81, *SD*=1.23) in sort 1 and sort 2 (*M*=1.97, *SD*=.97) for central pupils and peripheral pupils (*M*=1.63, *SD*=1.48).

8.4.13   Summary of central and peripheral group differences

In sum, investigation of the mean number of sorts identified by central and peripheral children failed to identify significant differences between these groups. When examining the mean number of groupings identified by each group, peripheral children in Y6 identified more groupings (*M*=9) than central children (*M*=5) but this difference was not identified in Year 2. It could be argued that these findings, in conjunction with earlier findings presented in this thesis, suggest that the defining features of peripheral children consolidate as children continue through the academy. Peripheral children are not noticeably different from their central peers in KS1 but by the time they reach the end of KS2, wider differences do emerge. Analysis of the justifications provided by children when explaining their groupings revealed

that central children were more likely than peripheral children to identify academic concepts. Although central pupils outperformed their peripheral classmates in terms of recognising abstract concepts over surface features, the difference was not statistically significant. Both central and peripheral children were approximately twice as likely to draw on surface features, than identify abstract concepts; this was found across both year groups. It, therefore, appears that children in Coalshire in all classes and across both key stages do not easily identify abstract and decontextualised concepts when presented with images of English and mathematics activities in school and outside school applied contexts. According to Wells (1994), the extent to which individuals develop systems of concepts that are highly abstract and decontextualised depends upon the diversity and complexity of the activities in which its members engage. Thus, it is possible that some of the socio-cultural features of life as a Coalshire learner may account for some of the difficulties that pupils experience in recognising academic concepts outside of the immediate learning environment. To investigate this further, the analytic lens will shift to children's responses to the specially devised 'children's social and cultural experiences' scale.

8.5 Children's social and cultural experiences

Having already established that (i) children's learning is embedded in social events and occurs as individuals interact with others, tools and events within their immediate environment (Vygotsky, 1986), and (ii) that children's cognitive development is preceded by engagement with these social and cultural tools (Seeger et al., 1998; Rogoff, 1995), attention *has* to be paid to the social and cultural contexts specific to pupils situated within this particular locale (refer to Chapter 4, Section A for a detailed presentation of the unique features of Coalshire). By attending to the greater socio-cultural context in which learners are embedded, everyday contexts of intellectual activity can be better understood. Furthermore, exploration of the sociocultural history that provides children in this unique locale with the tools for cognitive activity (in relation to reaching solutions to testing/SATs responses) may possibly throw light on the differential achievement observed among groups of pupils. The instrument employed to access children's social and cultural experiences was the CSCE (children's social and cultural experiences scale).

8.5.1 Children's social and cultural experiences scale

In order ascertain the breadth and depth of children's everyday socio-cultural experiences, a list of 85 items (activities and places) were drawn up (as identified in the pilot study – refer to section 3.7) and included in the children's social and cultural experiences (CSCE) scale (found in Appendix A). This scale was considered to be reliable (Cronbach's alpha =.89 overall and α=.78 when categories were theoretically reclassified – refer to Chapter 3, section 3.6.1.3 for details). A table was compiled, with the activities listed on the left hand side of the page and five columns indicating timing of when these activities were last done, or when certain places were last visited, in Likert format. The first column was 'yesterday or sooner', the second was labelled 'last week or sooner' (i.e. any time within the last 7 days- excluding yesterday or today). The middle column was labelled last month or sooner', then 'last year or sooner' and finally 'ever' (i.e. have participated in a certain activity longer ago than a year). The items ranged from frequency of visits to parks, beaches, zoos, museums etc; going places alone; visiting doctors/dentists/opticians etc. to stating when the last time a child enjoyed English/ mathematics/ science/ school/ learning and home (refer to Appendix A). This exploratory measure was considered appropriate for use with primary school children across both Key Stages and every effort was made to ensure that children were able to differentiate between the specified categories, with a comprehensive practice run and small-group discussion on how to complete the activity. However, analysis of the responses provided by children in Year 2 revealed that children did not always complete the scale accurately.[28] Critics, including neo-Piagetians, may argue that some of these 6-7 year olds may not have developed the necessary competencies or be able to reliably recall memories to complete such an adult-formulated activity (e.g. Schneider, 2002). For this reason, the data for Year 2 children was removed and focus, henceforth, will remain on the Year 6 pupils (*N*=107) only.

The wide-ranging items covered in this scale sought to identify the characteristics of children's experiences, to possibly see whether the bridging of school and home worlds is enhanced in any way by incidents of socially structured learning situations outside of the school environment, or whether occurrences of formal and informal instruction provided by others (adults and peers outside immediate classroom culture) may play a role in enabling

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[28] Attempts to verify responses, including during later interviews with children confirmed that some Year 2 children had not completed the scale accurately.

children to develop higher level abstract thinking demanded of them in decontextualised academic testing situations (Vygotsky, 1994; Verenne & McDermott, 1998).

The 85 items were grouped and analysed as follows: (i) *place of interest* (including: park; beach; zoo; museum; fun-fair; mountain; town; cinema; theatre; ice skating; bowling; restaurant; pub) ; (ii) *transport* (including experiences of having been on an aeroplane, boat; train; bus; car; van; taxi); (iii) *family* (inquiring when children last saw grandparents; visited Auntie; saw Mam; saw Dad); (iv) *sedentary activity* (including TV; Sky; watched videos; watched DVD; played the Playstation; used a computer for games; used the internet; played on a gameboy, did drawing; colouring; played cards; construction; Lego; dolls; played with dinosaurs; played with toy sharks; played with other toys); (v) *physical activity* (including use of a scooter; bike; go-kart; quad bike; motorbike; football; netball; kickboxing; tennis; rugby; hockey; swimming; (vi) *other activity* (asking children when they last played on the streets; played with a parent; played with a friend; helped Mam; helped Dad; went somewhere alone; went somewhere with a friend); (vii) *school related learning* (enquiring when children last visited the library; read a book; read a magazine; read with somebody; did homework; played a word game; played a number game; did writing for fun; used a computer for work; brought work into school; (viii) *school enjoyment* (asking when children last enjoyed English; enjoyed Maths; enjoyed Science; enjoyed school; enjoyed learning; enjoyed home); and (ix) *wider experiences* (including when children last went on holiday; went on a picnic; outing; went to England; went abroad; went to the doctors; visited the dentist; visited the opticians; went to the hairdressers).

8.5.2 School differences in children's social and cultural experiences

The mean scores identified within each of the nine categories were calculated to identify whether differences emerged in children's social and cultural experiences at each of the four schools. The mean scores are presented in Table 8.35. It is worth noting that each category contains a different number of variables so the maximum score has been identified for each category. For example, the 'places of interest' category contains 13 variables so the maximum score would be 65 (i.e. 13x5 if children reported having been to each place 'yesterday or sooner' by marking 5 on the Likert scale). The family category comprises four variables so the maximum score would be 20 etc. The maximum score for each category is noted in parenthesis.

Table 8.35: Summary of school differences in children's social and cultural experiences

Activity (Max. score)	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Interest (65)	**34.07**	7.78	**35.81**	7.33	**33.80**	5.33	**33.36**	3.51
Transport (35)	**17.57**	4.13	**19.38**	4.03	**17.48**	3.96	**18.86**	4.39
Family (20)	**16.36**	3.13	**17.88**	1.75	**17.29**	2.18	**17.11**	2.18
Sedentary Activity (85)	**33.00**	3.72	**33.69**	5.08	**32.66**	4.46	**33.18**	4.94
Physical Activity (60)	**30.14**	7.63	**30.65**	11.20	**31.00**	8.20	**29.36**	10.60
Other Activity (35)	**28.29**	6.74	**27.65**	6.34	**28.71**	3.55	**28.75**	3.88
Outside Sch. Learning (50)	**29.14**	8.33	**34.15**	6.75	**33.26**	7.38	**32.89**	6.06
School Enjoyment(30)	**21.93**	6.83	**21.31**	6.27	**21.20**	6.29	**19.32**	5.40
Wider Experiences(45)	**19.57**	3.90	**22.65**	4.76	**20.40**	4.68	**22.14**	3.83

It is evident that few school differences emerge in children's overall experiences for each category. Multivariate analysis confirmed that no significant school differences were found. This would suggest that children living in this locale share similar social and cultural experiences.

Although few school differences have been found when looking at the mean scores for each category, it is possible that more nuanced differences are being disguised by this form of summative analysis; there may be important differences in the specific experiences of children within certain classrooms that are not yet evident. To ensure these differences are not being overlooked, histograms presenting the mode[29] scores for each group of activities are briefly provided to illustrate children's experiences for each school. The mode scores (out of 5) are presented for each item beneath each activity for each category. Some categories with a large number of variables (e.g. the first 'places of interest' category) have been split into two histograms to aid visual presentation. Due to the volume of data presented here, histograms of the nine categories will first be presented (Figures 8.53-8.65) and then a summary of findings will be provided.

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[29] The analytical decision to present mode scores was based on the need to ensure that typical (i.e. most frequent) responses of children in each class was presented here. Mean and median scores were also analysed and any discrepancies noted.

Figure 8.53: Places of Interest – Part 1

Place of interst

Place of Interest	Park	Beach	Zoo	Museum	Fun Fair	Mountain	Town
North Higherbank	4	2	2	2	2	3	5
Highbury Park	5	1	1	2	3	3	5
Lowerbridge	4	2	2	3	4	2	5
Fallowfield	4	1	1	2	2	3	4

Figure 8.54: Places of Interest – Part 2

Place of interest cont.

	Cinema	Theatre	Ice Skating	Bowling	Restaurant	Pub
North Higherbank	3	2	2	2	4	4
Highbury Park	3	2	2	2	3	3
Lowerbridge	3	2	1	3	3	4
Fallowfield	3	2	1	2	2	3

Figure 8.55: Transport

Transport

Transport	Aeroplane	Boat	Train	Car	Bus	Van	Taxi
North Higherbank	2	2	2	5	3	2	3
Highbury Park	2	2	2	5	4	3	5
Lowerbridge	1	1	2	5	4	1	4
Fallowfield	2	1	2	5	3	2	2

Figure 8.56: Family

Family

	Grandparents	Aunty	Mam	Dad
North Higherbank	5	4	5	5
Highbury Park	5	4	5	5
Lowerbridge	5	4	5	5
Fallowfield	5	3	5	5

Figure 8.57: Sedentary Activity – Part 1

Sedentary Activity - Technology

Sedentary activity	TV	Sky	Video	DVD	Playstation	PC Games	Internet	Game boy
North Higherbank	5	5	5	5	5	5	5	3
Highbury Park	5	5	5	5	5	5	5	4
Lowerbridge	5	5	5	5	5	5	5	4
Fallowfield	5	5	5	4	5	5	4	3
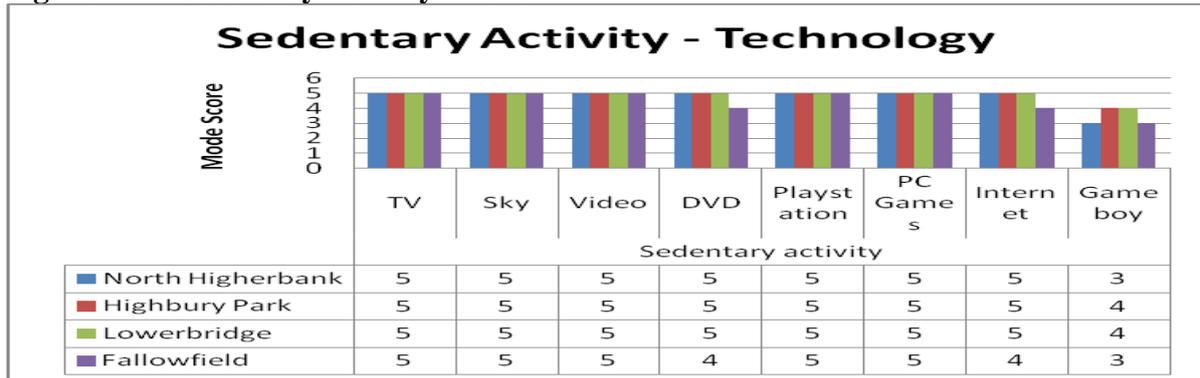
Figure 8.58: Sedentary Activity – Part 2

Sedentary Activity - Creative

	Drawing	Colouring	Cards	Construction	Lego	Dolls	Dinosaurs	Sharks	Other Toys
North Higherbank	5	5	2	2	2	1	1	1	3
Highbury Park	5	5	1	1	1	1	1	1	3
Lowerbridge	5	5	2	1	1	1	1	1	1
Fallowfield	5	4	1	2	2	1	1	1	4
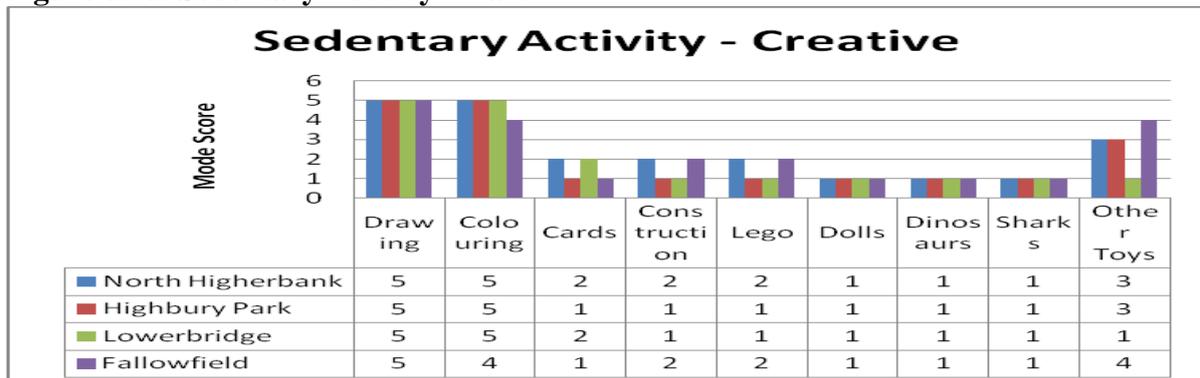
Figure 8.59: Physical Activity – Part 1

Physical Activity

Physical Activity	Scooter	Bike	Go-Kart	Quad Bike	Motorbike
North Higherbank Mode	3	5	2	2	4
Highbury Park Mode	5	5	3	1	1
Lowerbridge Mode	4	5	1	1	1
Fallowfield Mode	5	5	2	2	1
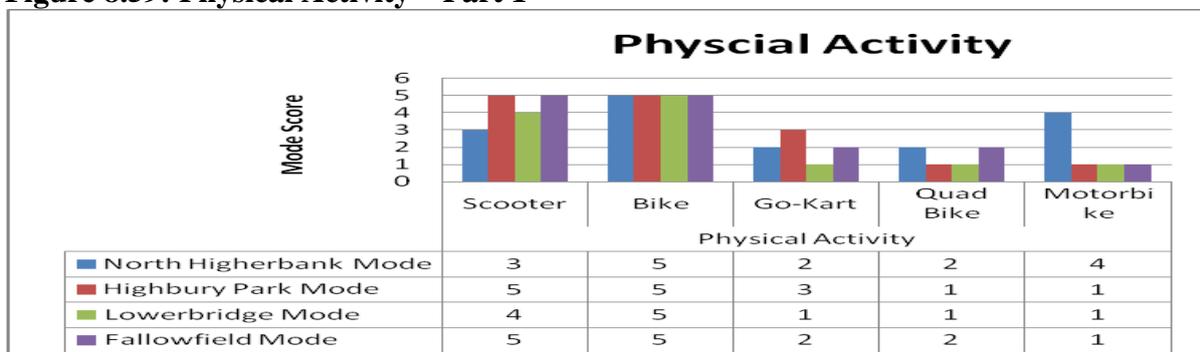
Figure 8.60: Physical Activity – Part 2

Physical Activity - Team Sports

	Football	Netball	Kick Boxing	Tennis	Rugby	Hockey	Swimming
North Higherbank	5	1	1	2	3	1	4
Highbury Park	5	4	2	2	3	2	5
Lowerbridge	5	3	1	2	5	1	3
Fallowfield	5	1	1	3	2	2	3
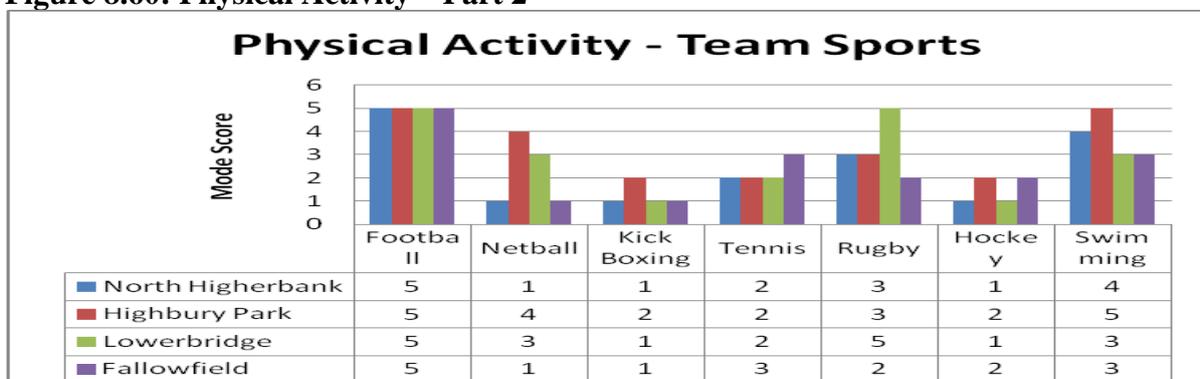
Figure 8.61: Other Activity

Other Activity	Played on the streets	Played with parent	Played with friend	Helped Mam with job	Helped Dad with job	Went s'where alone	Went with friend
North Higherbank	5	4	5	5	5	5	5
Highbury Park	5	5	5	5	5	4	5
Lowerbridge	5	4	5	5	5	5	5
Fallowfield	5	4	5	5	4	4	5
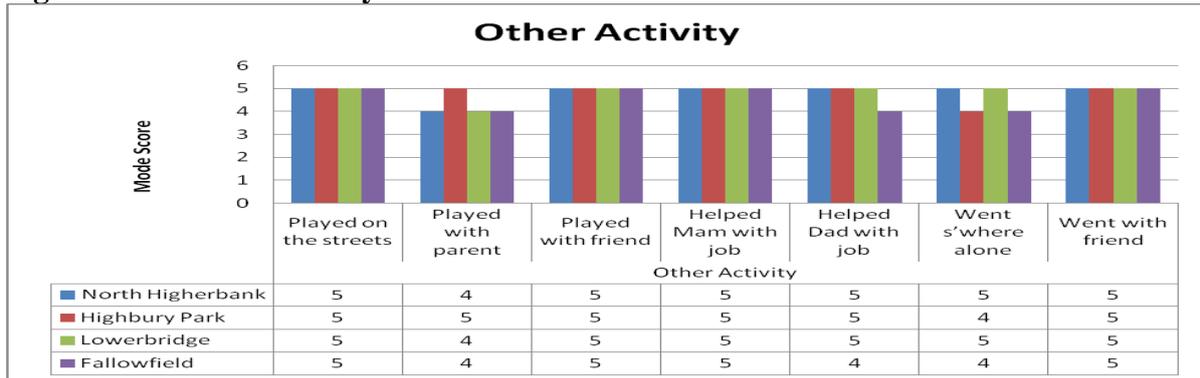
Figure 8.62: Outside School Learning – Part 1

School-related learning	Visited library	Read books	Read a magazine	Read with someone	Did some homework
North Higherbank	3	5	4	4	3
Highbury Park	3	5	4	5	3
Lowerbridge	4	4	5	4	3
Fallowfield	3	4	5	4	3
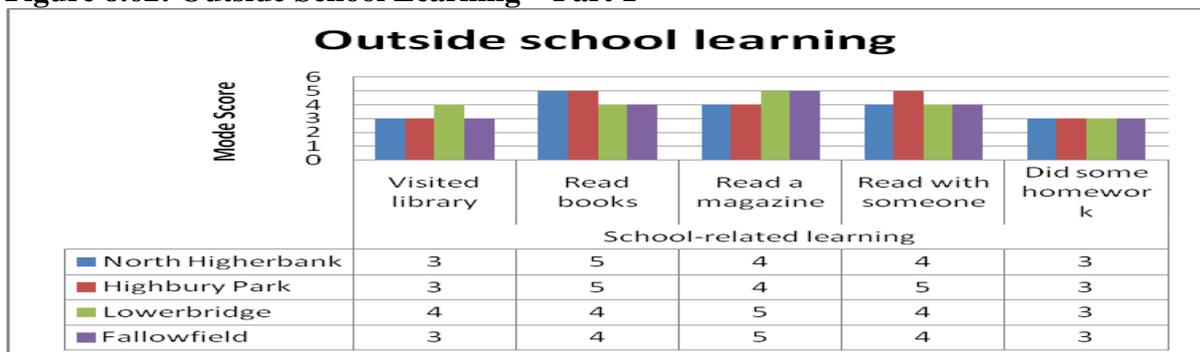
Figure 8.63: Outside School Learning – Part 2

	Played a word game	Played a number Game	Did writing for fun	Computer for work	Brought work to school
North Higherbank	3	1	5	3	3
Highbury Park	4	4	5	5	2
Lowerbridge	3	3	5	5	3
Fallowfield	3	3	4	3	3
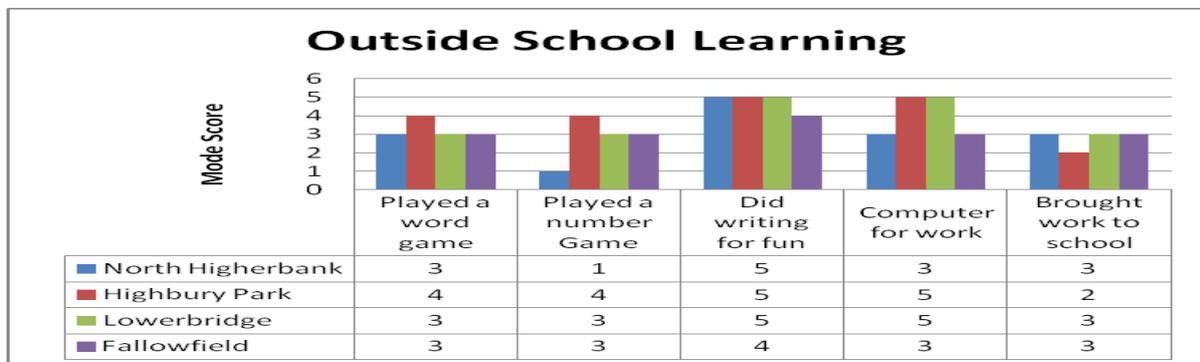
Figure 8.64: School Enjoyment

School enjoyment	English	Maths	Science	School	Learning	Home
North Higherbank	4	4	4	5	5	5
Highbury Park	5	5	3	5	5	5
Lowerbridge	5	5	4	5	5	5
Fallowfield	2	4	3	4	4	5

Figure 8.65: Children's wider experiences

Wider Expereinces

	Holiday	Picnic	Outing	England	Went abroad Activity	Doctors	Dentist	Optician s	Hairdre sser
North Higherbank	2	2	4	2	2	3	3	2	3
Highbury Park	2	2	3	2	2	3	3	2	3
Lowerbridge	2	3	4	1	1	3	3	2	3
Fallowfield	2	3	3	2	2	3	3	2	3

8.5.3 Summary of school differences in children's social and cultural experiences

Having already established that there are few overall school differences in the mean CSCE scores, it is perhaps beneficial to firstly summarise what the common (i) daily, (ii) weekly, (iii) monthly, (iv) yearly, and (v) rarely or never experienced activities are for children in these four schools. Notable school differences will be reported. This will create a picture of what life is like for 10-11 year olds living in this underachieving locale.

According to pupils' self-reports, daily life includes the following activities: going to town, using a car as the main source of transport (including taxis), seeing both parents and grandparents on a daily basis (suggesting that families maintain a Coalshire sense of community by residing near to relatives), spending leisure time watching TV, Sky, DVDs and playing computer games, going out on a bike, playing with friends on the street, playing football and helping parents with jobs. Only children in the HA schools reportedly read on a daily basis, children in the LA schools reported reading weekly.

Weekly activities include going to the park, going swimming (HA schools only, children in the LA schools report swimming on a monthly basis), reading books (LA schools only, HA children reportedly read on a daily basis), reading with someone (except children at Highbury Park who read more frequently, on a daily basis). Pupils at HP were the only children to report playing word games and number games on a weekly basis. Children in the HA schools and at Lowerbridge see an Auntie on a weekly basis (it is less frequent for pupils at Fallowfield), which further supports Coalshire MP John Wright's assertion that this locale has a close knit community (refer to Chapter 4, section 4.7).

Monthly activities for children across the four classrooms include going to the mountain, seeing a film at the cinema, having a meal in a pub or restaurant, using public transport such as busses or taxis, going swimming (LA schools as children in HA schools go swimming more frequently), playing rugby, visiting the library (although children at LB report doing so on a weekly basis[30]), doing homework, bringing work to school (although HP 'crew' children reportedly bring work to school less frequently; this is possibly another way in which Mr Humour is protecting children from the stress and pressure of academic work). Other monthly activities include going on outings[31], and visiting professionals such as doctors and dentists.

More infrequent (yearly) activities include going to the theatre, going bowling, going somewhere on the train, going on an aeroplane (except children at Lowerbridge who reportedly rarely or never go abroad), go on holiday, go on a boat (HA schools only), go ice skating (HA schools only) and go to the opticians.

In the rarely or never category, children at LA schools reportedly do not travel anywhere by boat. Pupils at Lowerbridge appear to go abroad or travel to England less frequently (rarely or never) than children at the other schools (who go yearly). LA pupils rarely or never go ice-skating (while HA children do). Children across all schools rarely or never play with toys such as Lego or dolls; some children considered themselves to be too mature for such activities. Individual school differences of note include children at Fallowfield who consistently report lower levels of school enjoyment than children at the other schools. Whereas pupils at NH, HP and LB enjoy school and enjoy learning on a daily basis, children at FF do not. Children in Mrs L'Enthuse's LB6 class and Mr Humour's HP6 class enjoy learning English on a daily basis while FF6 pupils said they last enjoyed English sometime within the last year and not the last month.

Despite not having identified major classroom differences in Year 6 children's social and cultural experiences, attention will now shift to central and peripheral children's experiences to determine whether children's differential experiences relate in any way to their learning status (as identified by class teachers in Chapter 7).

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[30] Visiting the local library is a school strategy implemented by staff at Lowerbridge to promote literacy and to encourage children to read more.

[31] Regrettably, children were not asked to specify where the outings were when completing the CSCE scale.

8.5.4   Exploring differences in central and peripheral pupils' CSCE scores

The mean CSCE scores of central and peripheral pupils are provided in Table 8.36.

Table 8.36: Summary of differences in central and peripheral children's social and cultural experiences

Activity (Max. Score)	Central		Peripheral	
	M	*SD*	*M*	*SD*
Interest (65)	**31.93**	6.81	**34.43**	6.65
Transport (35)	**17.56**	3.44	**18.36**	5.37
Family (20)	**17.38**	1.78	**16.79**	2.42
Sedentary Activity (85)	**31.75**	5.22	**32.50**	4.18
Physical Activity (60)	**24.63**	10.31	**31.29**	11.11
Other Activity (35)	**27.56**	5.51	**32.50**	7.15
Outside School Learning (50)	**32.25**	5.52	**32.50**	7.15
School Enjoyment (30)	**19.13**	7.05	**23.79**	5.75
Wider Experiences (45)	**20.13**	3.72	**21.00**	6.31

The mean scores presented in Table 8.36 are higher for peripheral children than central children for all activities except family. Rather than assume that peripheral children engage in a range of activities more frequently than central children, attention must be paid to the individual social and cultural activities (*N*=85) to ascertain whether the everyday experiences of central and peripheral pupils differ in any way. The following figures (Figs. 8.66-8.79) document central and peripheral children's mode scores for each of the 85 items; where necessary, larger categories are presented across multiple histograms.

Figure 8.66: Places of Interest – Part 1
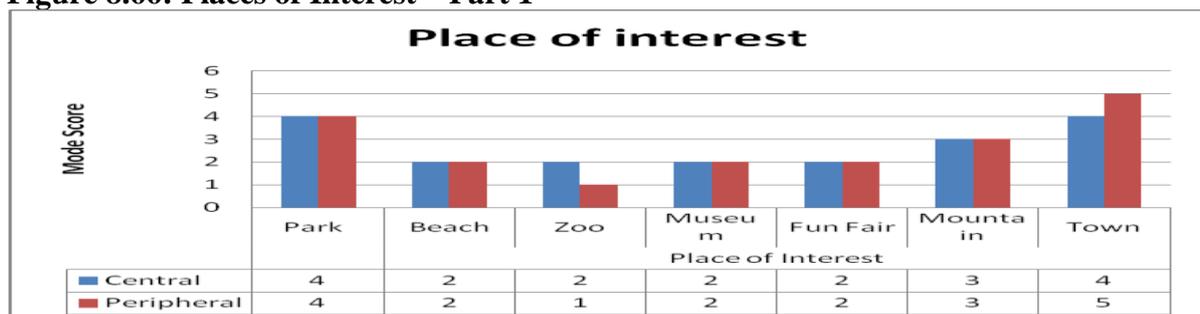
Figure 8.67: Places of Interest – Part 2

Places of interest cont.

Place of Interest	Cinema	Theatre	Ice Skating	Bowling	Restaurant	Pub
Central	3	1	1	3	2	3
Peripheral	2	1	1	3	4	3

Figure 8.68: Transport

Transport

Transport	Aeroplane	Boat	Train	Car	Bus	Van	Taxi
Central	2	1	2	5	2	1	3
Peripheral	2	1	2	5	3	3	5

Figure 8.69: Family

Family

Family	Grandparents	Aunty	Mam	Dad
Central	4	4	5	5
Peripheral	5	5	5	5
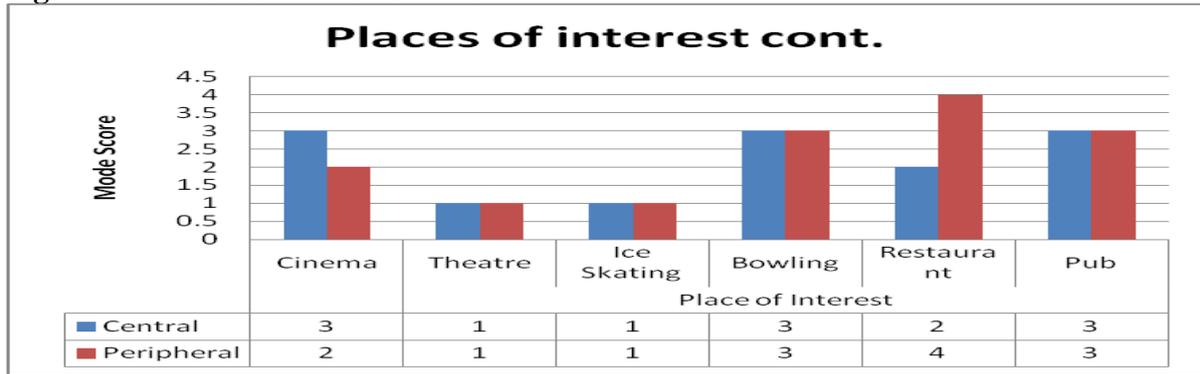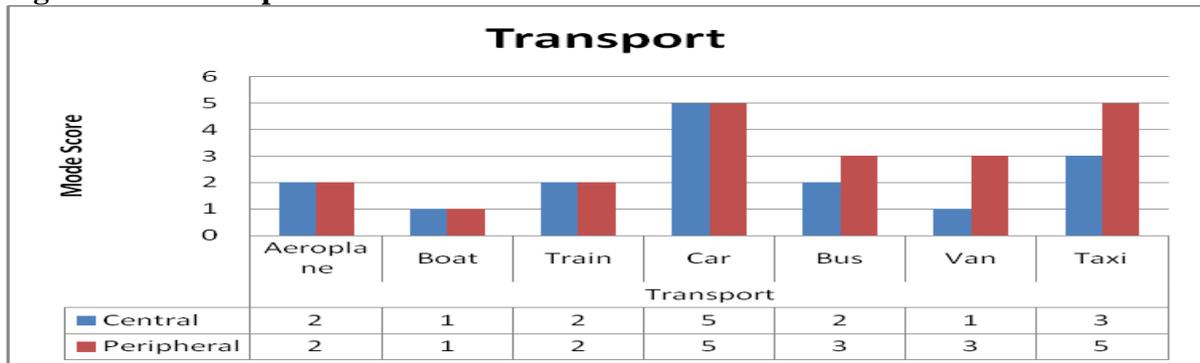
Figure 8.70: Sedentary Activity – Part 1

Sedentary Activity - Technology

Sedentary Activity	TV	Sky	Video	DVD	Playstation	PC games	Internet	Gameboy
Central	5	5	5	5	5	5	5	4
Peripheral	5	5	5	5	5	5	4	5
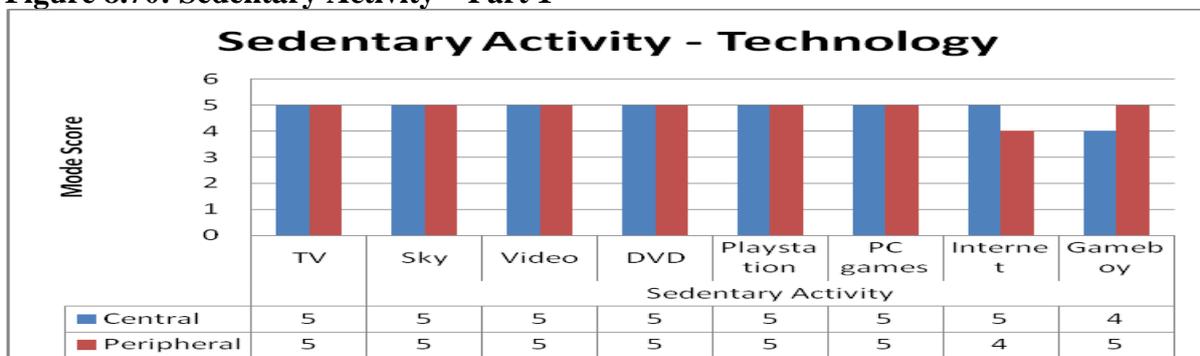
Figure 8.71: Sedentary Activity – Part 2

Sedentary Activity – Creative

Sedentary Activity	Drawing	Colouring	Cards	Construction	Lego	Dolls	Dinosaurs	Sharks	Other toys
Central	5	5	1	2	2	1	1	1	3
Peripheral	5	4	1	2	2	1	1	1	3
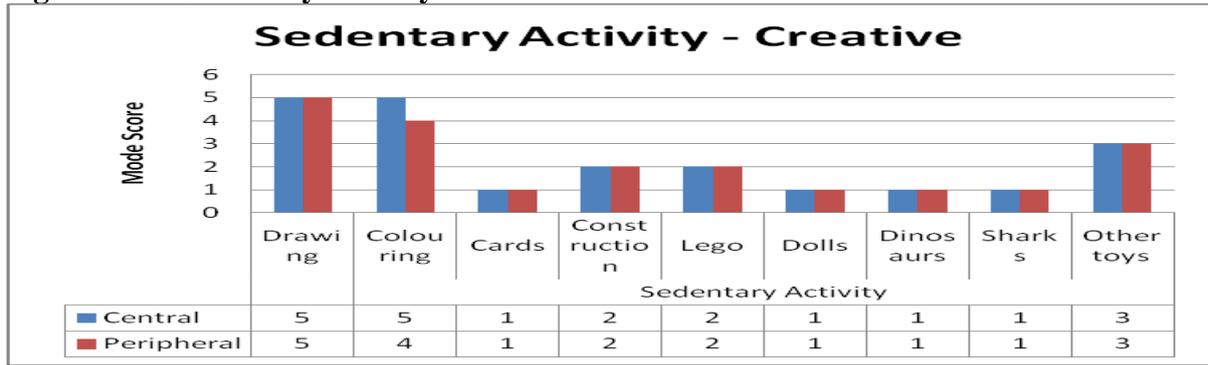
Figure 8.72: Physical Activity – Part 1

Physical Activity

Physical activity	Scooter	Bike	Go-Kart	Quad Bike	Motorbike
Central	4	5	1	1	1
Peripheral	5	5	1	1	2
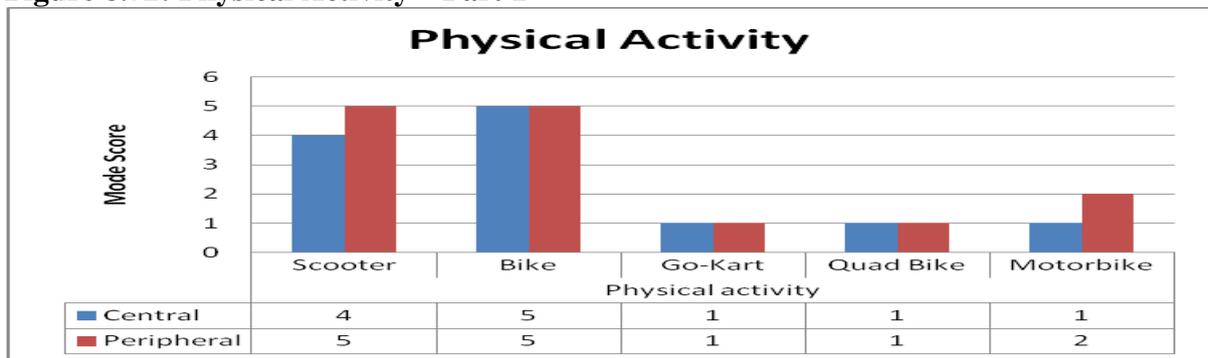
Figure 8.73: Physical Activity – Part 2

Physical Activity – Team Sports

	Football	Netball	Kickboxing	Tennis	Rugby	Hockey	Swimming
Central	5	1	1	1	4	1	3
Peripheral	5	1	1	1	4	1	3
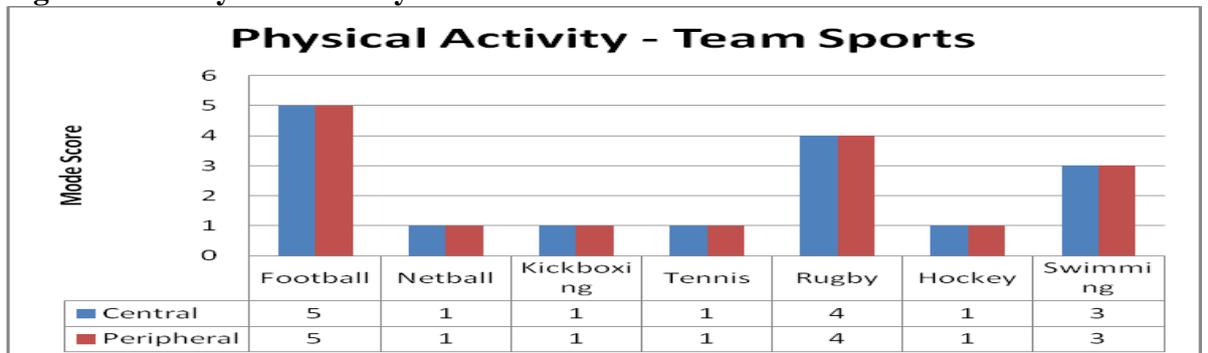
Figure 8.74: Other Activity

Other activity

Other activity	Play in the street	Play with parent	Play with friend	Help Mam	Help Dad	Went s'where alone	Went with friend
Central	5	4	5	5	4	5	4
Peripheral	5	4	5	5	5	5	5
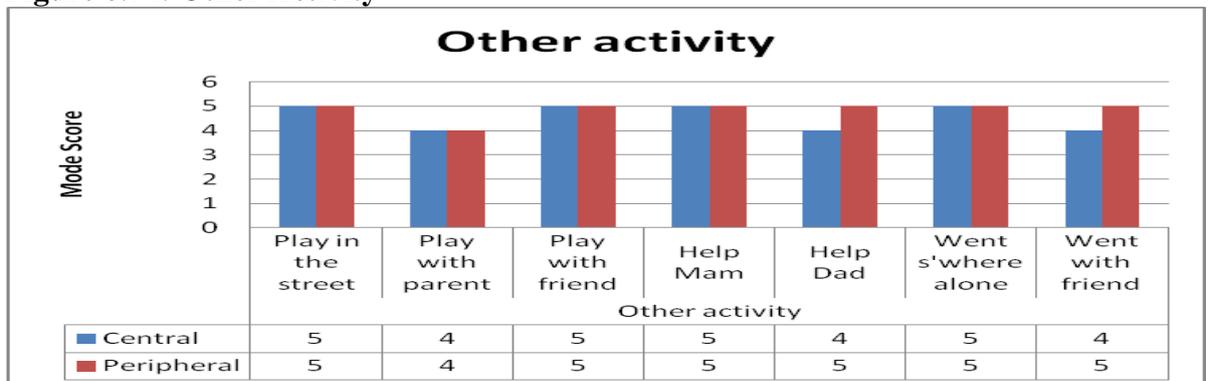
Figure 8.75: Outside School Learning – Part 1

Outside School Learning

	Visited library	Read books	Read a magazine	Read with someone	Did some homework
Central	3	4	4	4	3
Peripheral	3	4	4	3	3

Outside school learning
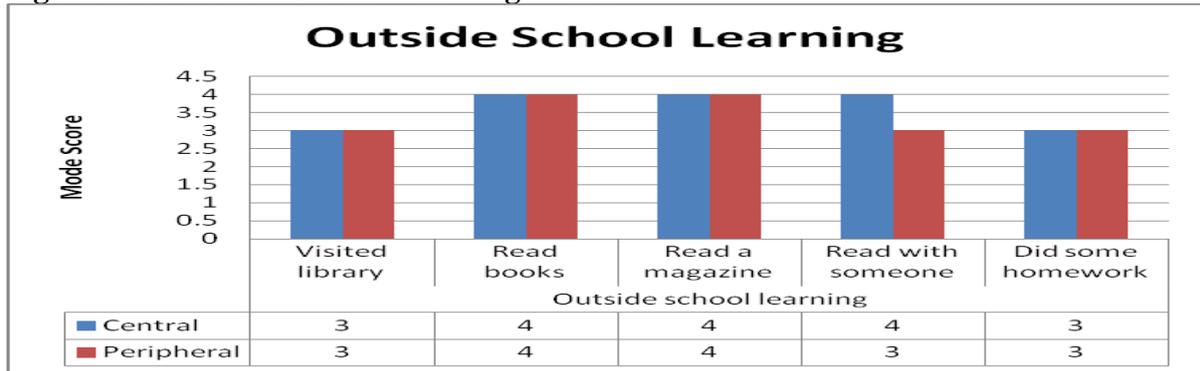
Figure 8.76: Outside School Learning – Part 2

Outside School Learning cont.

	Played a word game	Played a number game	Did writing for fun	Computer for work	Brought work to school
Central	4	4	5	4	3
Peripheral	3	3	5	3	4
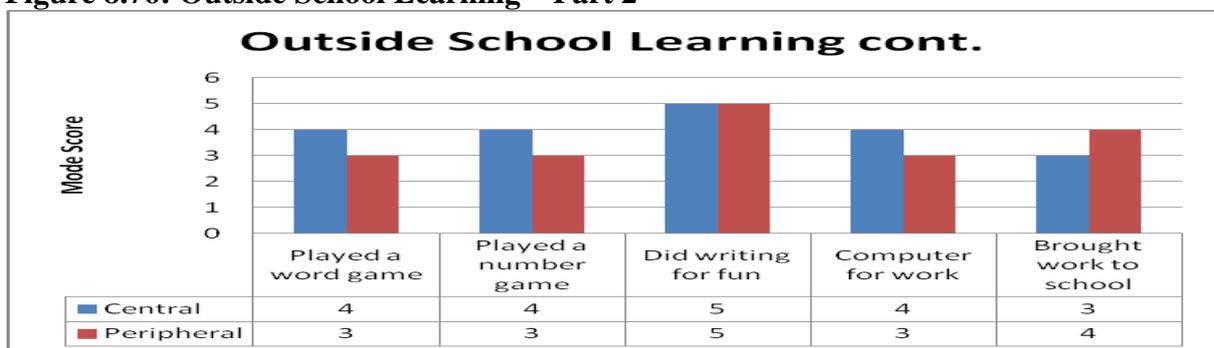
Figure 8.77: School Enjoyment

School Enjoyment

	English	Maths	Science	School	Learning	Home
Central	4	4	4	5	4	5
Peripheral	5	5	5	5	5	5

School enjoyment
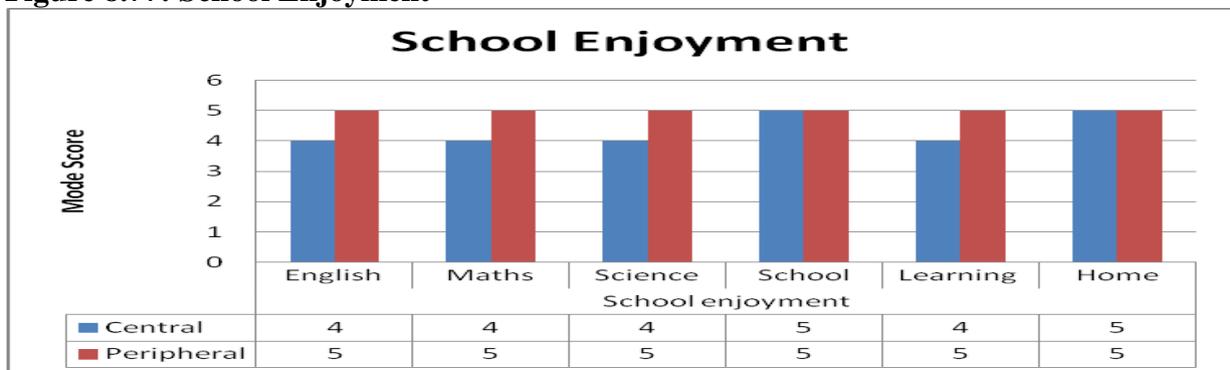
Figure 8.78: Children's wider experiences – Part 1

Wider experiences

	Holiday	Picnic	Outing	England	Abroad
Central	2	3	3	2	2
Peripheral	2	2	5	2	2
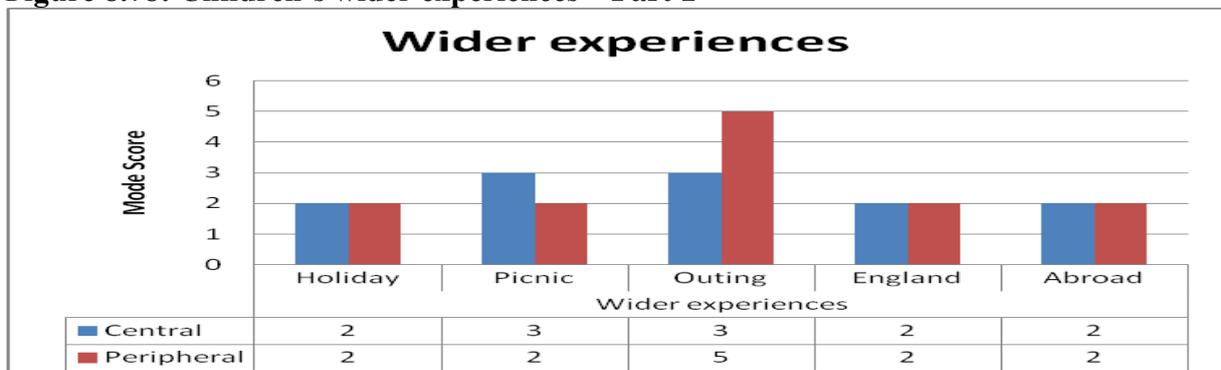
Wider experiences

Figure 8.79: Children's wider experiences – Part 2

Wider experiences cont.

	Doctors	Dentist	Optician	Hairdresser
Central	3	3	2	3
Peripheral	3	4	3	3
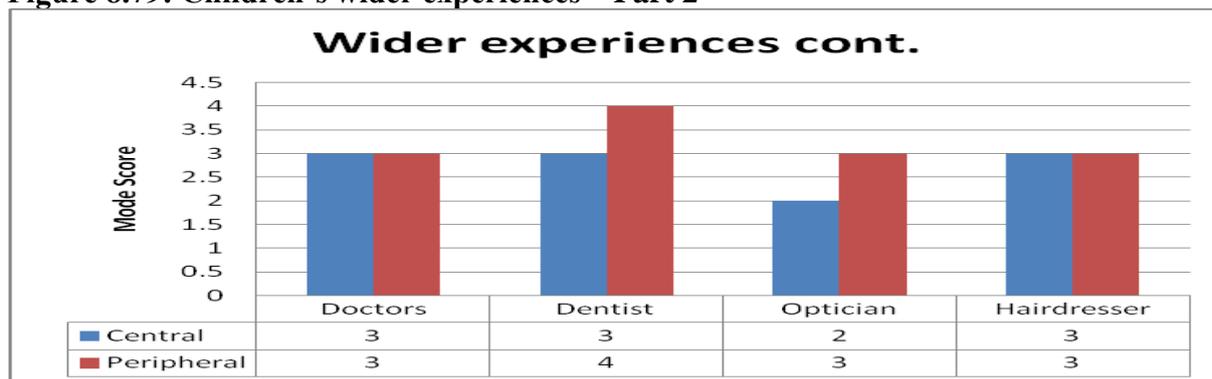
8.5.5 Summary of central and peripheral children's experiences

It is not necessary to present central and peripheral pupils' experiences in daily, weekly, monthly etc. format (as school differences were presented in section 8.5.3) because it has already been established that children living in Coalshire share similar social and cultural experiences; the histograms presented in this section further support this. However, there are some differences in the self-reported experiences of central and peripheral children, which are presented below. As teachers appear to have very clear representations of central learners (as documented in Chapter 7, section 7.3) but less clear representations of peripheral learners, the next section will maintain focus on the peripheral pupils to explore how, if at all, their social and cultural experiences differ from those of the clearly defined central children.

Peripheral pupils reportedly visit town more frequently (daily rather than central children's weekly visits); more regularly visit places with friends (daily rather than weekly); use taxis more frequently (daily rather than the monthly use reported by central children - possibly as a result of Local Authority supported transport to school); access scooters and motorbikes more than central children (although this isn't common for all pupils); reportedly eat food outside the home (including fast-food restaurants or pubs) on a weekly basis rather than yearly visits to restaurants for central pupils; and peripheral pupils reportedly see extended family daily compared with central children who see grandparents and aunties on a weekly basis. Although central and peripheral pupils report the same enjoyment of school (*Mode*=5, suggesting most children enjoy school on a daily basis), peripheral learners reported greater school enjoyment for English, maths and science as separate subjects; enjoying these subjects on a daily basis compared with central children enjoying these subjects each week. There are various explanations for these findings, which will be discussed further in section 8.7.

Peripheral children are, however, less likely to use the internet or use a computer for work (weekly use rather than daily use of central learners); read with someone else and play word and number games less frequently (monthly) than central learners who engage in these activities on a weekly basis. Peripheral children spend less time doing creative colouring activities than central children and have fewer opportunities to go to the cinema (yearly rather than monthly), go on picnics or go to the zoo (rarely or never) compared with yearly experiences of central learners.

Although there appear to be a number of differences in the social and cultural experiences of central and peripheral children; issues of reliability using this self-report measure cannot be ignored and neither can the use of mode rather than mean scores[32]. For this reason, additional statistical analyses were undertaken using the mean (rather than mode) scores to determine whether central and peripheral learners have significantly different social and cultural experiences to one another. Independent t-tests were, therefore, computed on the 85 individual items. However, significant differences were found for only 3 items:

(i) children's experiences of playing cards [$t(32)=-2.23, p=.03$] with central children reportedly playing with cards ($M=1.13, SD=.62$) less frequently than peripheral children ($M=2.14, SD=1.70$);

(ii) children's self-reported enjoyment of English [$t(32)=-2.35, p=.03$] where, again, means were higher for peripheral children ($M=4.36, SD=.93$) than central children ($M=3.19, SD=1.64$);

(iii) children's enjoyment of science [$t(32)=-2.99, p=.01$] with peripheral children once more rating their enjoyment of science ($M=4.14, SD=.86$) as greater than that of central pupils ($M=2.88, SD=1.36$).

It can, therefore, be concluded that broadly speaking, the social and cultural experiences of central and peripheral children do not vary significantly when analysed at this level. Children living in this unique locale ostensibly share similar experiences. So, if examination of the everyday experiences of central and peripheral learners cannot explain why some children succeed in school while others do not, the analytic lens must be adjusted further to try and understand why some children are seemingly more resilient to educational underachievement than others. Adopting a more qualitative focus, attention now turns to illustrative case studies

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[32] NB: mean scores were, however, used in the summary Tables 8.35 and 8.36.

of two peripheral children: Paddy Hunter (HP6) and Phoenix Lowe (LB6), both of whom are included in the earlier pupil profiles in section 8.1. These children have been selected to exemplify how educational resilience can be strengthened in certain circumstances.

8.6   Profiles of two peripheral children from one HA and one LA school

Data from a variety of sources including: interviews with children, post-SATs questionnaires, school reports and fieldnotes have been drawn on to capture and illustrate the learning experiences, attitudes and future expectations of two children, both identified as peripheral learners; one from a high achieving school, Paddy Hunter (HP6), the other from a lower achieving school, Phoenix Lowe (LB6). Paddy's profile will be presented first.

8.6.6.1   Peripheral Profile 1: Paddy Hunter (Highbury Park, Year 6)

His class teacher, Mr Humour, identified 10 year old Paddy Hunter as a peripheral learner when this study commenced. Paddy does not require any additional literacy support and his teacher did not identify any areas of concern requiring improvement. Paddy is described as being a 'true character' by both Mr Humour and Mrs Humble, head teacher at Highbury Park and lived up to this throughout the period of data collection. Paddy's end-of-year report stated that he 'has participated fully in the life of the school' and his final departure from Highbury Park will be 'a sad loss for us'. His school report further articulates that the 'excellent progress' Paddy has made whilst being one of Mr Humour's Crew members has 'astounded teachers'. Mrs Humble explained, "Paddy has matured into a reliable, sensible, hardworking young man who has indeed been a superb pupil and will be greatly missed at Highbury Park" (Mrs Humble, Head Teacher, Highbury Park Primary School). Paddy's attendance throughout Year 6 was 86%, which Mr Humour considered to be satisfactory.

Paddy lives at home with his employed Mother, following the premature death of his Father. Paddy's Mother works two jobs; one job in a factory (from 7.15am-4.15pm) and also in a local restaurant. Paddy is dropped off at his Bampa's (grandfather's) house before school and says he always has breakfast as "Mam says it's the most important meal of the day". Paddy goes to his Nan's house after school until his Mam finishes work. When asked about his favourite things, Paddy explained he loves playing football with his friends, reading aloud "because I like annoying everyone", spending time with boys "because they are good to hang

out with", going to the park "because I like bothering with friends" and playing sports like football, basketball, rugby, baseball and cricket. His other favourite things include watching TV "because my favourite program on there is The Simpsons" and "my favourite teacher, Mr Humour, because he's not grumpy and he buys us pastries, cakes and melons". Paddy's dislikes include "tests that are boring or too hard, assembly because it takes too long, shopping because I don't like walking around the shops and Welsh because I don't understand the words". Paddy also divulged "I don't like reading at home because it's boring, just reading", he said "I'd rather go out with my friends than help at home". Paddy has a PlayStation and a PC, which he uses for games and work (including "the SATs CDs that Sir gave us").

A typical day for Paddy involves being picked up from school by his Nan and going back to her house for an hour. He usually goes out to play football with friends who live nearby before having tea. Paddy says most days he will play fighting/thriller or sci-fi games on his Playstation all evening as "it's the best thing going" but might watch Coronation Street or Eastenders as his Mam likes it. Paddy has to go to bed at 9pm on a weekday but can go to bed anytime on weekends and holidays. Paddy laughed as he explained that his Mother grounds him if he doesn't go to bed on a school night and he proudly stated "I've not been grounded yet this year!"

Paddy has been on a train (and underground train), an aeroplane when he went on holiday to Ibiza, Tenerife, Lanzarote and Benidorm with his Nan and Grampa (but not Mam), a boat on holiday and on long bus trips for various outings with his Mam. Paddy's mother has taken him to two different zoos, a museum and a science museum. She doesn't drive but his Grandparents do. Paddy regularly goes to town and spends time at his Nan's in the holidays when Mam is working.

When interviewed about testing situations, Paddy explained "I don't mind doing tests because they are challenging. Yes, I get nervous which affects me because I don't think hard as much when I'm nervous. Some children love tests because they are brainier than others". Referring specifically to the English research SATS, Paddy said:

> "I don't enjoy English because it is rubbish. I didn't like any parts of the test because it was absolutely hard... I disliked everything because it's solid; I found it very

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difficult because I don't know much about whales. It was a very challenging test because it was very, very hard. Everything in the book was the most challenging bit and I give up because I couldn't do them".

Paddy confirmed he had to rush the English test to finish in time and suggested that "this test would be more interesting if it was easier... I think I have done rubbish". Paddy confirmed that "No, I'm not interested in whales and sea creatures, I would prefer them to be about football and girls" or if they had to be about wildlife, "I would rather read about sharks and swordfishes". Paddy scored 15/50 in the English research SATs test.

Paddy does not have any favourite types of books. He reads at home once a week and estimates that he owns "about twenty books". He reads alone but asks his mother if he needs help with any unfamiliar words. Paddy said his Mam sometimes reads with him. Paddy's Mam loves "reading Danielle Steele novels" but doesn't read any newspapers or magazines. When asked if Paddy believes he might need to use English in the future, he replied: "No I don't think I will use English when I finish my education. I hope I never have to use English outside of the classroom". In terms of future career aspirations, Paddy said "I most want to be a copper police man 'cause you can try and catch people and put 'em in jail if they're naughty". Paddy believes he will have to work hard in school to achieve this goal but when asked what qualifications he thinks he'll need to become a policeman, Paddy replied: "be strong to hold people back, be fast to catch 'em and be a good driver". Paddy's late father worked for many years as a Policeman and Paddy explained that he, too, wants "a good job when I'm older".

When asked about learning mathematics, Paddy confirmed he enjoys maths "because it's education and fun" and "I'm good at maths when I put my mind to it". Referring specifically to the maths research SATs test, Paddy said he "liked the money part best because it was adding up and you had to see what you had left" but disliked the multiplication questions "because I'm rubbish at times-ing". Overall, Paddy "found the questions difficult" and concluded that "I'm not very good at maths as all of it was challenging". He believed he had "done rubbish 'cause I give up because it's hard". He did say that the questions with pictures were helpful as they helped him work out the answers. Paddy scored 12/40 in the mathematics research SATs test.

Paddy feels supported by Mr Humour, whom he describes as "a good teacher" who always "says excellent when I bring him my work, remember my football kit and when I finish my work". Paddy says "when Sir gives me a serious look it makes me work harder". Paddy receives support from his Mam who also "makes me work hard in school.... My Mother and teachers encourage me to do well in school", she always says "I hope you do well in school". She "encourages me to read... and helps me with homework". Paddy says he also receives encouragement from his Nan who "buys me books 'cause she likes me reading" and his Bampa who "asks about school work and checks I do good work in school. He *always* asks; it gets on my nerves!" Paddy believes he will need to "use maths when I finish my education for college at art college" and that "I use maths after school because my mother teaches me after school".

Paddy Hunter's Mother is very supportive of school events and has accompanied Paddy on various trips which have been extended to family members. She communicates well with school staff. Paddy says she attends everything she can if she's not working and when his school report is good, "Mam do buy me something". Paddy divulged that his Mother makes him work for pocket money and chores include hoovering (50p per room or £2 for the whole house) and making breakfast in bed for Mam on the weekend ("25p just for making toast" or "if I make her a cup of tea it goes up to one pound!").

Paddy thrived as a Crew member and clearly valued his membership. He attended all extra-curricular events organised by Mr Humour, including 'breakie in Tescos, Gambo racing, visits to Premier League football matches etc. (as detailed in Chapter 4). Head Teacher, Mrs Humble, commented during *ad hoc* discourse that Paddy looks up to Mr Humour, who appears to be a positive role model for him. Whilst always maintaining his cheeky character, Paddy demonstrably respected Mr Humour; he regularly engaged in teacher-pupil banter and was often the first in line to help Mr Humour when needed. As outlined in Chapter 4 (section 4.28), Paddy was the first to speak up and explain to his confused classmates why one child (Nigel) had to relinquish his Crew member status when being moved to a different class as a result of Nigel's unacceptable anti-social behaviour. Paddy was quick to observe that Nigel "broke his promise when he put his hand on his heart as a new Crew member and swore with the rest of the class 'I will not let the Crew down ever' but he did". Maintaining allegiance to the Crew was important to Paddy and the other Crew members. Paddy confirmed he is not

looking forward to leaving the Crew "because I don't know no one up the comp and I'm sad to leave Sir and all my friends here".

8.6.6.2 Peripheral Profile 2: Phoenix Lowe (Lowerbridge Year 6)

Phoenix Lowe's teacher, Mrs L'Enthuse, nominated him as a peripheral learner and describes this 10-year-old boy as 'a popular pupil'. Phoenix receives support within a small group to improve his literacy skills and while he has made some progress, his teacher says "he must apply these skills to all his literacy activities and all across the curriculum". Mrs L'Enthuse further remarks that Phoenix "does need to concentrate more fully, he can be easily distracted, and with a little more effort he could complete all of his work". Areas identified by Phoenix's teacher as needing more work and effort include: general progress, behaviour in class, behaviour at break-times, effort in class, ability to work with others, ability to work independently and relationships with other children. Despite this, his Head Teacher is "pleased to see the progress made in the past year" (Mrs Leader, Head Teacher, Lowerbridge Primary School). His attendance throughout Year 6 was also 86%, which staff at Lowerbridge deem to be satisfactory.

Phoenix's parents have separated; he used to live with his Mother but "she didn't never encourage me to do nothing" so he now lives with his Dad and Step-Mum, neither of whom work, his younger brother (aged 4 years) and his older sister (aged 14 years) who is dating someone much older. Phoenix says he always eats breakfast before school. Phoenix is passionate about football: "it is my favourite activity and it makes me happy. Phoenix spends his free time playing football, watching TV and "fighting films", playing computer games and very occasionally going fishing. Phoenix's favourite things include his dog, his Nan, his friends and videos, which he says "make me happy". Phoenix also enjoys playing on his Playstation. His dislikes include "maths (which) makes school boring". Phoenix openly declares "I hate maths 'cause it's hard" and "reading aloud 'cause I might get stuck on words and it's bad because children would make fun". Phoenix has two mobile phones, an X-Box, all versions of PlayStations and "tons of games", a laptop that his father acquired for him and a PC. Despite being unemployed, Phoenix's Father is able to provide goods of choice when requested. Phoenix said his Father uses the PC most, to play games and copy CDs.

A typical day for Phoenix involves getting home from school and going straight onto the PlayStation to play football games. After tea, Phoenix plays more computer games or watches TV, including Eastenders and all the soaps that his Step-Mum wants to watch. Bed time is around 8pm and Phoenix is expected to turn his own TV off at 9pm. However, on weekends, he can play on his PS2 "until eleven in the night!" Phoenix admits to fighting with his siblings and says he sometimes helps around the house for extra pocket money.

Phoenix has never been on a train or aeroplane, has never visited a zoo, museum or theatre but has been in a boat twice to go fishing. Phoenix often goes to town. In the school holidays, Phoenix mostly hangs out in the park and plays football with friends. Phoenix says his Step-Mum and dad "don't go nowhere" in the summer holidays. He has been taken to football matches in Liverpool and London by his sister's older boyfriend and has been to a beach twice with his dad but not his Mother as he "never did much living with my Mam".

When asked about his thoughts on testing situations, Phoenix said "I hate SATs work because I just don't like it; the SATs was hard 'cause some of the questions I didn't understand. English was best 'cause you had to read the story and answer the questions which was easy". Phoenix felt he has enough practice in class for tests and expressed how glad he is when the tests are over. Despite not liking tests, Phoenix believes "SATs is very important 'cause you learn for the comp" but believes "I don't think I'll pass my exams". Phoenix apparently enjoys English "because it is a very nice object" (subject) but when referring to the English SATs test; he said "I hated all of it because it was too hard. I disliked all of it because it was horrible" and "it was difficult because I don't like it". Phoenix said he didn't rush to finish the test and explained that he didn't know if it was challenging "because I did not understand it" and had to give up. When interviewed, Phoenix said he leaves out the difficult test questions that need long answers. He believes the English test would be more interesting if it was easier and declared "I do not like whales and sea creatures, I prefer football and tigers or crocodiles and sharks". Phoenix thinks all tests need more pictures, like in comic books, which he enjoys. He believed he scored 23 in the English research SATs test but actually scored 9/50 on this test.

Phoenix openly shares that "I never read but I have about 20 books... I like picture books best...my Step-Mam do read with me". Phoenix says his Step-Mam doesn't read books

herself but she does read the TV magazine "all about the soaps" and his "Dad do read the Sun newspaper". Phoenix believes he will need English after his education for football but says "I never use English outside the classroom". Phoenix believes he is "not a good reader or a speller but (is) good at writing". In future, Phoenix aspires to be a footballer. His Father has not found secure employment during Phoenix's lifetime and neither have his Grandparents.

When asked about mathematics, Phoenix declared "I don't enjoy maths because I don't know my tables. Despite this, Phoenix said he liked "doing the working outs" on the maths research SATs test "because I just like them". He said "the test was easy because I knew what to do" but had to rush to finish this test. Phoenix believed he performed well on this test and said he tried hard to get a high score. Phoenix scored 4/40 in the mathematics research SATs test.

Phoenix says his Dad and family encourage him but Mrs L'Enthuse's nagging is what really makes him work hard in school. He admits he is "a bit scared of being told off by Mrs L'Enthuse". Phoenix believes children do need to use maths outside the classroom, primarily for homework. He thinks some children might need to use maths after they finish their education, but only if they want to be a teacher. Phoenix does not believe maths is necessary for his chosen career as a professional footballer. Phoenix was not at all keen about the prospect of leaving Lowerbridge and going to the comp.

Phoenix says his Step-Mam and Dad ask him about school but don't help with his homework. Phoenix shared he receives no support from his Mother who "never ever came to parents evening". When asked if his Dad attends parents evening and school events, he said "he never got a letter (about it)". Phoenix says he receives big rewards from his father every week for being good in school, including: "I had a new football last week, before I got football boots, goal posts, Liverpool kit, shin pads, PlayStation games, Sony CD player, and Eminem and Pink CDs". When asked how his father knows he has been good in school, Phoenix replied "because I tell him". Phoenix's father does not have regular communication with Mrs L'Enthuse. Mrs L'Enthuse confirmed that it was difficult to establish open communication with Phoenix's parents and problems arose during Year 6 regarding his behaviour management (as outlined more generally in Chapter 4, section 4.22). Mrs L'Enthuse explained that the lack of open dialogue between parents and school staff often resulted in children being given conflicting messages: while Lowerbridge staff adhere to a zero tolerance

policy on violence, children like Phoenix are told by parents that hitting other children is the only way to solve disputes. Mrs L'Enthuse explained that Phoenix often found himself in situations that cause conflict to other children, both inside and outside the classroom, but by the end of Year 6, Phoenix was beginning to make progress in managing such situations. His end-of-year report confirmed that 'the change in his behaviour is to be commended'. Phoenix played football matches with classmates at every opportunity. He did not have membership to any other extra-curricular clubs or organisations.

These case studies serve to illustrate the reality of life in Coalshire from the perspective of two peripheral learners. While both Paddy and Phoenix share common interests in playing football, watching TV and playing computer games (like many of the children interviewed in this study), their experiences differ in a number of ways; particularly in terms of role models, both parental and academic. Following the death of his late father, Paddy has one parent with a very strong work ethic. By maintaining two jobs, Paddy's mother is conveying to him the importance of working hard, being independent and not relying on the state to support the family. This message is not being transmitted to Phoenix who only knows multi-generational unemployment: neither his Mother/Step-Mother nor father work and this pattern is witnessed among his grandparents too. Phoenix readily explained that he has more computers, consoles, games and other technology than his other classmates and seemingly wants for nothing as his father can acquire whatever he desires, despite being unemployed.

These two boys also experience differences in terms of academic role models. Paddy is not only taught by Mr Humour who is a life-long Coalshire insider (as demonstrated in Chapter 4, section 4.26) who is familiar with the unique social and cultural features of the locale, but his teacher is also an esteemed Crew leader, a group in which he belongs and is valued. Paddy respects his group leader and enjoys appropriate banter with Mr Humour. Being a member of the Crew is important to Paddy and given the absence of a Father, his Crew leader serves as a positive male role model to him. Phoenix, meanwhile, is taught by an experienced and capable teacher who chooses not to reside in Coalshire and as an outsider is not *au fait* with some of the unique qualities of this locale (as documented in Chapter 4). Mrs L'Enthuse openly admits in Chapter 4 that the customs and behaviours she has learnt about since commencing teaching in this locale are starkly different to children's experiences in her own

locale. Phoenix confesses to sometimes being fearful of his teacher and suggests that Mrs L'Enthuse's nagging is what drives him to work when he does. Phoenix's teacher may serve as a positive female role model (which may be important given his experience of not being adequately cared for by his own mother), but he does not have the same type of relationship with Mrs L'Enthuse as created by Mr Humour's Crew room.

The parental support experienced by these two boys vastly differs too. Although both Paddy and Phoenix feel they can turn to Mothers/Step-Mothers for help with reading difficult words, support in terms of attending school events is very different. Paddy's Mother has regular contact with staff at Highbury Park School, while Phoenix's parents are characteristic of those described in Chapter 4 as being difficult to entice over Lowerbridge's school threshold. As outlined previously, Highbury Park is strongly anchored within the local community and teachers have successfully developed and maintained strong relationships and open communication with parents through social activities, family school trips and other school events (NB: the other HA school, North Higherbank, experiences similar success). It has already been established that Lowerbridge (and Fallowfield) have found it very difficult to establish strong parental links and it is evident in Phoenix's profile that his parents, for whatever reason, do not seek regular contact with the school staff. The lack of school-home communication has proven to be difficult for Phoenix who has received conflicting messages in terms of managing peer conflict and with his own behaviour management. As Mrs L'Enthuse articulated in Chapter 4, some children (including Phoenix) struggle to negotiate the mixed home-school messages, which impacts on their learning experiences.

8.7   Summary

Having previously attended to classroom cultures, testing contexts and teachers' perceptions of learners in the preceding chapters, this chapter set out to focus on the individual pupils participating in this study. In accordance with the United Nations Convention on the Rights of the Child (UNCRC) Article 12 (Kallio, 2012), this thesis acknowledges that children are active members of their school and classroom communities and therefore have a right for their voice to be heard. It was also important for this socio-cultural study to frame pupils' understanding of learning activities within a number of planes of analysis (Rogoff, 1995), including the individual plane, to fully explore the differential achievement of learners within this underachieving locale; this is important as no task undertaken can be disembedded from

broader contexts such as classroom, school as institution, experiences within families, and living within particular locale (Haggis, 2004; Lave & Wenger, 1991). Although individual summaries of the findings from the respective instruments used in this chapter have already been provided, a summary of the overall findings for English and mathematics as distinct subjects has not yet been offered. The following sections will, therefore, briefly highlight the key findings from across the research SATs tests, pupil profiles, the picture task, the sorting activity and the children's social and cultural experiences scale for English (section 8.7.1) and mathematics (section 8.7.2). The final part of this chapter includes a broader discussion highlighting key features of central and peripheral learners in relation to literature (section 8.7.3).

8.7.1 Summary of findings related to English

This study has found that all children fared better in the English research SATs than the mathematics test, with no notable differences in the performance of children at the higher and lower achieving schools. In the English test, questions were framed and embedded within a strong narrative about whales for children in KS2 and focusing on dogs for children in KS1. It appears that the contextualised nature of these assessments helps children identify and draw on the necessary features of the test when answering the questions. All central children in Year 6 reached the nationally recognised benchmark (gaining a Level 4 or above) in the English research SATs test, despite completing this test mid-year, several months before the actual SATs assessments are completed. In contrast, three quarters of peripheral children in Year 6 *failed* to reach this benchmark. Stark differences were found in Year 2 as well; 75% of central children reached the expected Level 2 while only 26% of peripheral children reached this benchmark. It is possible that teachers are using academic ability as a marker of children's learner status (i.e. central or peripheral) or it could be that children identified as central learners are using socio-cognitive resources that peripheral children are not, which influences the way in which they engage with the test material.

When seeking to investigate whether children can recognise academic concepts related to literacy, it appears that English concepts are consistently more identifiable to pupils than academic concepts related to numeracy. These results were found across both the picture task and the sorting task. It is feasible that children are using specific markers such as books and words to identify the activity as English. Children who performed better on the English

research SATs test also achieved higher scores on the English concept picture recognition test. Children at North Higherbank and Lowerbridge demonstrated the best performance of all schools on both assessments, suggesting that children who are able to correctly identify pairings of English activities with the academic concept perform better on national standardised assessments such as SATs tests.

It is interesting that despite there being no clear higher and lower achieving school divide on the research SATs tests, HA and LA school differences began to emerge in the sorting task. Children at the higher achieving schools demonstrated greater recognition of abstract academic concepts than children at the lower achieving schools. In complete contrast to the research SATs results, children at Highbury Park identified the most abstract groupings while children at Lowerbridge identified the fewest. Incidentally, children at HP engage in word games, reading and reading with others more frequently (daily) than children at LB (weekly). The classroom differences that were found across both year groups would lend support to the view that socio-cultural influences within the classroom culture could account for differences in children's ability to demonstrate abstract thinking (Vygotsky, 1994).

8.7.2 *Summary of findings related to Mathematics*

Performance in the mathematics test was weaker across all schools. The decontextualised nature of these assessments proved challenging for the vast majority of pupils in both Year 6 and Year 2. The findings from the picture task and the sorting activity support this. Central children were twice as likely to recognise mathematics concepts as peripheral children and markedly outperformed them on the maths research SATs test. For example, half of the Year 6 central pupils met the required benchmark Level 4 when tested early, yet only 6% of peripheral children achieved this level. Notable differences were also found in Year 2 with 88% of central children achieving benchmark Level 2 and only 44% of peripheral children reaching this target.

Statistically significant classroom differences were found in children's ability to recognise mathematics concepts, further supporting the view that classroom context may play a significant role in equipping children with socio-cognitive resources to be used in testing situations. No relationship was found between children's maths research SATs scores and their scores on the mathematics recognition (picture) test. As previously established in

Chapter 5, children across all schools performed poorly on the maths research SATs test, predominantly because only part of the maths curriculum had been covered at the mid-year point of testing.

Analysis of children's post-SATs questionnaires (documented in Chapter 6 and illustrated in the pupil profiles in section 8.1) confirmed that central children are better able to identify the usefulness of English and mathematics both outside the school context and in the future than peripheral pupils. Central children are also more able to identify abstract academic concepts on the sorting activity than peripheral children although the difference was not statistically significant, perhaps because all groups commonly recognised surface features over and above abstract academic features. It appears that differences between central and peripheral pupils are more noticeable in Year 6 than Year 2, thus suggesting that pupil status strengthens as children progress through the academy; centrally involved learners may move closer to the core while peripheral learners may be pushed further towards the periphery.

The range of specifically devised research instruments employed in this chapter appear to lend support to class teachers' views, as outlined in Chapter 7, that central and peripheral children differ in the their learning experiences. It has already been established in the previous chapter that teachers hold clear representations of central children; teachers across schools consider these children not to be problematic, they have no identifiable deficits, teachers believe central pupils work hard and motivate themselves to remain engaged in learning activities and, finally, they are expected to do well as they progress through the academy and in future. As teachers appear not to worry about these children, attention must now focus on the peripheral children to see how they engaged with the materials used in this study. The following summary of key characteristics of peripheral children may help teachers better understand those children who are positioned on the periphery of classroom learning.

8.7.3 Identifying key features of central and peripheral learners

This chapter has established that peripheral children differ from central children in the following ways:

(i) Peripheral children perform less well on academic assessments than their central peers (as outlined in section 8.2). This chapter has confirmed that academically, peripheral children

perform significantly poorer than central children in both English and mathematics standardised assessments completed as part of the 'mock' (research) SATs. These findings transcend Key Stages. It is, however, still not clear to what extent teachers draw on pupils' academic competence (as measured in scholastic tests) when classifying groups of learners in their class (Archer, 2008) or broader characteristics and pedagogic factors which precede underachievement in academic assessments. To fully understand this, the role of classroom culture, broader socio-cultural influences and teacher-pupil interactions and relationships within the classroom context must be considered; these will be addressed in Chapter 10.

(ii) The reported test enjoyment levels of peripheral children were significantly lower than that of central children (as confirmed in the analysis of 'achievers' (i.e. central children) and 'underachievers' (including peripheral children) presented in Chapter 6, section 6.10. According to Ryan et al. (1990), interest and enjoyment are critical to pupil motivation. Peripheral children were also considerably less interested in the test material subjects than central children. Although this chapter has presented a limited selection of pupil profiles, analysis of all pupils' responses confirmed that central children typically enjoyed the English comprehension topics of whales (Year 6) and dogs (Year 2), while peripheral children were less enthused about these topics and suggested football, girls, sharks, crocodiles, tigers etc. as preferred topics. It is worth highlighting the differential gender ratio of central children (comprising 66% girls) compared with peripheral pupils (63% boys), as presented in Chapter 7, section 7.2. Although it is not within the scope of this thesis to focus on the differential achievement of boys and girls, it is widely accepted that boys' interests differ substantially from girls (e.g. Younger, Warrington, Gray, Rudduck, McLellan, Bearne, Kershner & Bricheno, 2005; Cherney & London, 2006) and it is possible that the content of the English research SATs tests was gender biased. Peripheral boys' reduced interest in the English comprehension topic could also be explained by broader perceptions of English as a feminine subject compared with the masculine image of science (Meece, Glienke & Burg, 2006).

(iii) Peripheral children reportedly found the research SATs tests more challenging than central children. Perceived task difficulty has long been considered a key mediator of achievement motivation (Weiner, 1974). It is possible that peripheral children have reduced expectancy of success (Chaplain, 2000) compared with their central peers. The general consensus from the individual interviews with the 64 children participating in this study was

that central pupils held realistic yet favourable perceptions of their own academic ability, most likely resulting from frequent positive affirmations from class teachers (as witnessed throughout the period of data collection), while peripheral children generally lacked confidence in their own ability, as evident in statements such as 'I think I have done rubbish' (Paddy Hunter, HP6) or 'I'm not good at maths' (Palmer Foster, FF2). Although peripheral children consistently displayed low confidence in their own academic performance, they frequently overestimated their anticipated performance on the research SATs test. For example, Phoenix Lowe anticipated he correctly answered almost half of the English research SATs questions (23/50) but actually only scored 9/50.

(iv) Unlike central children, peripheral pupils openly reported that they didn't try especially hard on the research SATs tests. The qualitative data presented in the eight pupil profiles in section 8.1 supports previous Chi-square analysis for significant differences in children's self-reported effort ($p<.01$, as presented in Chapter 6, section 6.10). The effort needed to persevere in challenging tasks like the research SATs tests is considered by motivation theorists to be a causal attribute of achievement motivation (Weiner, 1974; Dornyei, 2000). Cavaco et al. (2003) would characterise this peripheral group of learners as falling into their 'work avoidance' category as effort is required to become either task or ego oriented (as outlined in Chapter 2, section 2.6); both latter groups are required for academic success. Peripheral children articulated a preference for group work (where other children can help provide the answers) and easy work compared with central pupils who seemingly prefer to be challenged with individual tasks. The central children in this study appear to actively enjoy and seek challenges and find reward in the achievement of accomplishing their goal. Traditional motivation theorists such as Dweck (1989), Deci (1975) and Galloway et al. (1996) would argue that these attributes are required for adaptive motivational styles. Wenger (1998), meanwhile, offers a better framework to assess motivation as embedded within the social context. As Vygotsky (1981) denotes, interaction within the social plane precedes development within the psychological plane and learning is internalised through joint social interaction with class teachers. This will be discussed further in Chapter 10.

(v) Peripheral children do not appear to be drawing on the same socio-cognitive resources as central learners; peripheral pupils were somewhat less successful in recognising abstract academic concepts, which Vygotsky (1978) identified as higher mental functioning required

for scientific conceptual thinking. These children commonly identified surface rather than abstract features, suggesting that some peripheral learners are not recognising abstract academic concepts as readily as their central counterparts. This study, therefore, supports the work of Newman et al. (1989) who found differences in high and low-achieving pupils' interpretations of tasks. Newman et al. found that high-achieving children made categorical-taxonomic interpretations characteristic of school curriculum discourse and technology found in Western Societies while low achieving pupils made functional-relational-thematic interpretations characteristic of non-Western society (Seeger, Voigt & Waschescio, 1998). According to Newman et al. (1989), topics in education are more suited to the taxonomic representation discourse structure favoured by higher achieving (i.e. central) learners. The formal decontextualised thinking required for tasks (including the research SATs, especially the mathematics assessment, the picture task and the sorting activity) is acquired through systematic instruction in educational settings (Vygotsky, 1994). Assessments like these place cognitive demands on pupils to relate content to other concepts in systems which evolve from abstract to particular groundings (Douek, 2006). This formal academic thinking, which Vygotsky (1987) termed as 'scientific concepts' (referred to throughout this thesis as 'academic concepts') differs from the everyday spontaneous concepts appropriated through joint interaction in children's immediate communities (Wells, 1994). It is possible that some children are learning academic concepts at school, away from the context in which they are used, resulting in children having difficulties in thinking within an abstracted context. This study acknowledges that these everyday concepts create the potential for children to develop academic concepts in formal learning environments, while scientific concepts prepare the necessary formations to underpin everyday concepts (Fleer & Ridgeway, 2007). As Daniels (2012) denotes, the combination of embedded everyday and scientific knowledge will, Vygotsky (1987) argued, lead toward disembedded academic thought and new ideas.

(vii) According to both child interviews and analysis of children's post-research SATs questionnaires (presented in the pupil profiles in section 8.1 and in Chapter 6), peripheral children reportedly engage in less reading at home than central children. Lin (2005) and Sainsbury & Clarkson (2008) highlight the potential consequences of children not being supported in outside school learning. Peripheral learners also seem less assured of the need for English and maths in the future; given that the perceived usefulness and importance of tasks influences children's learning preferences (Graham & Taylor, 2002), this could

potentially undermine teachers' attempts to engage peripheral learners in English and mathematics tasks in future. This may explain the lower career aspirations and less certainty in wanting employment found among peripheral children but not witnessed among central learners.

(vii) Finally, it is important to note that the narrow central-peripheral divide in Year 2 appears to widen as children progress through primary school, thus suggesting that learner status becomes more ingrained as children progress through the academy. This may have serious implications for peripheral learners as young as 7 years old (Year 2), who fail to meet teachers' ideal pupil status (Laws & Davies, 2000; Monk, 2000). The learning trajectories of these pupils may be influenced by the way teachers view these children and, in turn, how these children see themselves as learners (Hempel-Jorgensen, 2009; Stevens et al., 2008).

The main issues highlighted in this summary will be drawn together in the final discussion in Chapter 10. First, however, the analytic lens needs to be readjusted as longitudinal data is briefly presented in the next chapter to complete the account of differential academic achievement of central and peripheral learners in an underachieving locale.

CHAPTER 9   LONGITUDINAL SATS DATA

9.0   Introduction

This thesis has already established that the national Standard Attainment Tests (SATs), which seek to measure pupils' attainment in the core subjects of English, mathematics and science, have been the focus of much controversial discourse in recent years. Despite the fierce criticism surrounding these snapshot assessments, standardised end-of-Key Stage assessments are, nonetheless, used to identify schools and Local Authorities (LAs) that are under-performing when compared with national attainment figures. SATs performance data may also be useful in identifying the relative performance of individual pupils as they progress throughout the academy. As discussed in Chapter 1 (section 1.2), underachieving schools and underachieving pupils continue to be a national concern (Palardy, 2008; Andrews, 2011, WAG, 2008). This final empirical chapter seeks to understand the differential performance of the schools and children featured in this investigation. This will be achieved by analysing children's actual SATs results[33] at each of the four institutions, which will not only reveal how these schools performed in relation to one another, but how they compare to Coalshire and all-Wales attainment figures. These findings will clarify each school's position in terms of where they fit within this underachieving locale. It will also determine whether the North Higherbank and Highbury Park schools have maintained their higher achieving (HA) status and whether Lowerbridge and Fallowfield have kept their lower achieving (LA) status during the period of data collection, as ascribed at the start of the study (outlined in Chapter 3). Analysis of academic attainment in English and mathematics as separate subjects may also throw light on whether Coalshire Authority need to address subject related issues or whether underachievement transcends school subjects across the locale.

The actual SATs results will be presented for Year 6 children at each of the four participating schools. This chapter maintains its focus on children in KS2 only; the end of year assessments for Year 2 children unfortunately had to be excluded due to the abolition of end-of-Key Stage 1 SATs tests which prevented comparative analysis being undertaken. Rather than merely offering a quantitative analysis of the relative performance of each school,

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[33] Actual SATs results refer to the national assessments undertaken at the end of each Key Stage, as opposed to the research SATs tests, which were used as an intervention within this study.

observable discrepancies will be discussed within the unique social and cultural parameters of each individual school (as outlined in Chapters 4-6). First, the percentage of pupils achieving the nationally prescribed benchmark of Level 4 or above in English, mathematics and science will be presented (section 9.1) to determine how each of the four schools performed in the assessments that supposedly matter. Next, analysis of the differential performance of pupils' research English and maths SATs test compared with pupils' performance in their actual English and maths SATs is provided to demarcate any school differences (section 9.2). Longitudinal SATs performance data is then presented (section 9.3) to provide a longer-term view of school performance within this underachieving locale, to establish whether the higher achieving (HA) and lower achieving (LA) schools maintain their status in the long-term. Attention then turns to the central and peripheral pupils (section 9.4) and comparative analysis of their research versus actual SATs performance is provided (section 9.5). This will identify whether central and peripheral children fulfil their teachers' expectations (as outlined in Chapter 7). This chapter concludes with a final discussion on children's end of Key Stage 2 performance (section 9.6).

9.1   Actual SATs results

School performance, as reported in educational league tables, is measured according to how many pupils achieve the prescribed benchmark levels, as set out by the government. For children in Year 6, the expected benchmark is Level 4 or above in each of the core subjects: English, maths and science. Government league tables report these data for subjects separately but also include an overall core subject indicator (CSI) measure which identifies pupils whom achieve Level 4 or above in *all* three subjects. The Welsh Assembly Government would like all children to leave primary education with a CSI Level 4 or higher. However, the number of pupils reaching this benchmark varies from locale to locale. As outlined in Chapters 1 and 4, a strong body of empirical data supports the assertion that Coalshire is an underachieving locale (Rees et al., 1997, 2000; Estyn, 2003; NAfW, 2002; SfW, 2011). As this study has sought to explore pupil motivation and academic performance within such an underachieving locale, it is important to establish whether school performance data (as measured by end-of-Key Stage SATs tests) supports the findings presented in this thesis. These data attained from Head Teachers at the end of the period of data collection are presented in Table 9.1, below. The proportion of children achieving Level 4 or above is

presented for each school and the figures highlighted in red denote the difference in scores between schools' actual SATs results compared with the all-Wales attainment figures provided by the Welsh Assembly Government. Negative scores are identified and show where schools fall short of Welsh average SATs results. For reference, across Wales for the year of data collection, 78% of pupils achieved the Level 4+ benchmark in English, 74% achieved the expected level in science and 82% gained a Level 4 or above in science. The mean percentage of Welsh pupils achieving a Level 4+ was 78%. It is worth noting that the Welsh average figures were selected in favour of attainment results for Coalshire specifically as it provides a more useful benchmark to identify higher and lower performing schools.

Table 9.1: Percentage of pupils achieving benchmark Level 4 or above in actual SATs

Subject Level 4+	North Higherbank		Highbury Park		Lowerbridge		Fallowfield	
	%	Wales +/-	%	Wales +/-	%	Wales +/-	%	Wales +/-
English	89	11	63	-15	81	3	74	-4
Maths	79	5	56	-18	81	7	69	-5
Science	100	18	80	-2	88	6	83	1
Mean Total	**84**	**6**	**66**	**-12**	**83**	**5**	**75**	**-3**

Table 9.1 demonstrates that the North Higherbank and Lowerbridge are the only schools to surpass average English, Maths and Science results across the country, respectively gaining 6% and 5% higher than average results. Fallowfield underperformed when compared with the all-Wales figures but exceeded the average attainment within Coalshire (illustrated in Figure 9.1). Pupils at Highbury Park underperformed across the board; on average, 12% fewer children achieved Level 4 in the English, maths and science subjects when compared with the Welsh average. Figure 9.1 illustrates overall core subject performance of pupils at each of the four schools, in relation to the Coalshire average and the all-Wales average.

Fig. 9.1: Comparative School-Locale-National Total Core SATs Results
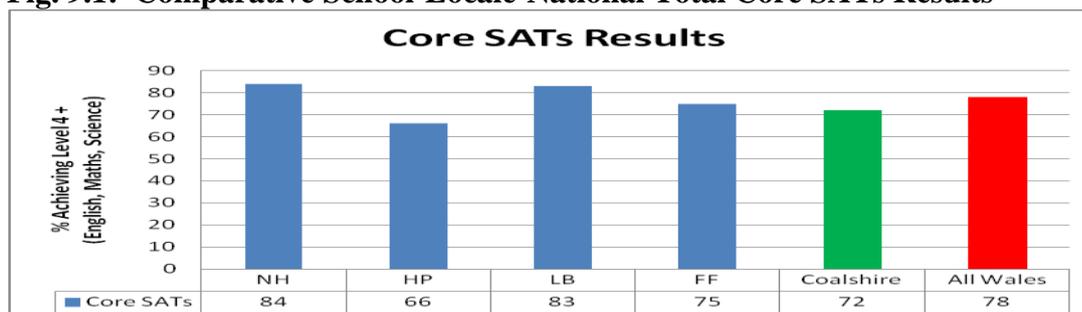
As expected, pupils at North Higherbank and Lowerbridge exceeded average locale and national attainment figures. These schools performed best on the research SATs tests (presented in Chapter 6) and continued to outperform children at HP and FF. Based on these results, Lowerbridge appears to have shed its lower achieving status. At Highbury Park, pupils fell below both the average Coalshire (-6%) and all-Wales results (-12%). Despite having previously been identified as a higher achieving school (refer to Chapter 3, section 3.5), Highbury Park does not appear to be maintaining its HA status. As previously noted in Chapter 4, these results were attributed by the Head Teacher and Mr Humour to be caused by the significant proportion of Year 6 pupils with statemented Special Educational Needs (38%). Overall, pupils at Fallowfield exceeded the average locale results but fell 3% below the all-Wales results. Science was the only subject where the proportion of pupils achieving a Level 4 surpassed the national average, by 1%.

Having broadly outlined the proportion of Year 6 pupils who achieved the benchmark Level 4 in their actual end-of-year SATs tests at each of the four schools, the next section will focus on children's differential performance between the mid-year research SATS undertaken by children as part of this investigation and their end-of-Key Stage actual SATs results. This comparative analysis is necessary to identify whether HA and LA schools maintain their prescribed status (which was not evident when analysing the research SATs data).

9.2   Comparison of research and actual SATs results for each school

Although this study follows a socio-cultural approach, which includes detailed ethnographic data and qualitative interview data, some of the instruments employed in this investigation have generated numerical data and therefore require additional quantitative analysis. As noted in Chapter 3, these paradigms are not necessarily mutually exclusive (Morse, 1997). Although the primary purpose of the research SATs tests was for the test to serve as an intervention, in order to probe pupils' and teachers' understandings of testing situations, engagement with testing material and children's recognition of abstract concepts, they nonetheless generated numerical data worthy of exploration. The next section presents both descriptive and inferential statistics to present the mean scores achieved by Year 6 pupils in the actual end-of-Year 6 English reading test and maths 'test A' only. These were the specific elements of testing selected as part of the mock research SATs intervention and have

been included here to offer a direct comparison[34]. The following Tables (9.2 - 9.5) document the mean scores in each of the SATs assessment and difference in assessment. This is displayed separately for each subject.

9.2.1 English SATs

Children's scores on the research and actual English SATs reading (comprehension) test are presented in Table 9.2 and differences in the scores are presented for each school.

Table 9.2: Mean English research and actual SATs scores for each school

School	English Research SATs	English Actual SATs	Mean Difference
NH	27.5	27.8	.03
HP	23.2	30.1	6.9
LB	29.2	30.3	1.1
FF	24.9	24.9	0

Although pupils at Highbury Park consistently underperformed in the English research SATs (as discussed in Chapter 6) compared with children at the remaining schools, when the important actual SATs tests were undertaken, these children dramatically improved in terms of their performance. These results, which are among the best of the four schools, would indicate that HP is closer to maintaining its higher achieving school status. There is minimal variation in the scores of children at NH, LB and FF. Children in these schools do not appear to have made any gains in performance despite the additional months of formal academic instruction between the two testing periods. Although HP witnessed improvements in English scores, statistical analysis was undertaken to identify whether this school, specifically, saw significant gains by the end of the year; this is presented in Table 9.3.

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[34] NB: In addition to the reading test results presented in this section, the actual end-of-year English SATs test also included a written test, handwriting test and a spelling test.
The maths test used in this study is only one element of the actual maths SATs test. There is an additional test which is not included here.

Table 9.3: Statistical differences between research and actual KS2 SATs in English

Subject	Region	Range of Scores	Mean	Std.	t	df.	Sig.
NH	Research	7-46	27.5	9.53	-3.22	27	.750
	Actual	10-43	27.8	8.75			
HP	Research	11-39	23.2	10.38	-2.80	9	.021
	Actual	25-37	30.1	3.93			
LB	Research	8-42	29.2	8.77	-1.00	18	.332
	Actual	16-43	30.3	7.46			
FF	Research	4-39	24.9	7.06	.000	32	1.000
	Actual	9-41	24.09	7.09			

*p<.05

T-test analysis revealed no statistically significant differences between pupils' academic attainment on research SATs and actual SATs for North Higherbank, Lowerbridge and Fallowfield. However, pupils at Highbury Park performed significantly better in the actual end-of-year SATs tests ($t(9)$=-2.80, p=.02). The socio-cultural context of the testing situation (as described in Chapter 5, sections 5.2-5.4) is, perhaps, the best justification for HP pupils' poor performance on the initial research SATs. Analysis of Mr Humour's mediation of the testing situation revealed that children in Mr Humour's Crew were not imbued with a sense of the research SATs being important. As previously noted, these children were sent to the IT room to complete their SATs test, essentially as a favour to 'help Nic with her college work' (Mr Humour, HP6). The unique 'whole child' view held by Mr Humour served to protect his Crew members from unnecessary worry and pressure of mock SATs testing. Until this point, it was not clear whether Mr Humour's *laissez-faire* approach would help or hinder his pupils' academic progression but these findings indicate that when it matters, children at Highbury Park perform well. In fact, the English reading comprehension SATs results indicate that children in HP6 performed equally well when compared with the results of children in LB6 who endured months of preparatory cramming and ongoing mock SATs tests.

9.2.2   Mathematics SATs

Analysis of the mean scores for the mathematics research and actual SATs tests at each school revealed that all schools witnessed improvements in performance, as demonstrated in Table 9.4.

Table 9.4: Mean maths research and actual SATs scores for each school

School	Maths Research SATs	Maths Actual SATs	Mean Difference
NH	16.6	24.6	8
HP	10.6	27.6	17
LB	16.9	29.4	12.5
FF	12.5	24.2	11.7

Table 9.4 illustrates that children at Highbury Park demonstrated the greatest gains; they have effectively closed the gap and, again, resumed their HA status. Lowerbridge secured the highest overall results for this maths test. Despite already achieving the best results on the research SATs test, these children improved, on average, by 13%. It would, therefore, appear that Mrs L'Enthuse's cramming approach has been successful for mathematics.

Paired-samples t-tests conducted for each school confirmed that statistically significant differences between the mathematics research SATs and actual SATs were found at every school ($p=.000$), regardless of their HA/LA achievement status (refer to Table 9.5). These findings support previous postulations that children under-performed on the mathematics research SATs test, in contrast to the English research SATs test, because they had not completed the full mathematics curriculum at the mid-year point of testing. This appeared to matter less for English, because children were better able to access the testing material within the embedded narrative of the comprehension test. Children seemingly struggled to access the decontextualised mathematics questions.

Table 9.5 Statistical Exploration of Research and Actual Maths SATs for Each School

Subject	Region	Range of Scores	Mean	Std.	t	df.	Sig.
NH	Research	9-33	16.6	5.51	-9.27	27	.000
	Actual	15-35	24.6	5.46			
HP	Research	2-22	10.6	6.28	-9.96	9	.000
	Actual	10-39	27.6	3.13			
LB	Research	4-25	16.9	5.25	-11.47	18	.000
	Actual	22-34	29.4	3.25			
FF	Research	3-28	12.5	5.87	-11.59	32	.000
	Actual	8-37	24.2	5.86			

Having established that Highbury Park appears to be the most unique school in terms of fluctuating results between the two testing periods, it is worth analysing more longitudinal data to establish whether the gains made by children during this year of data collection (2003) are unusual or whether Mr Humour's distinctive pedagogic practices are effective in terms of recapturing Highbury Park's position as a higher achieving school. The following section will, therefore, compare the SATs results achieved by the Crew in 2003 with the SATs results achieved by each of the four schools in the following year, 2004.

9.3   Comparison of 2003 and 2004 SATs data

The percentage of pupils achieving the expected benchmark (Level 4+) in English, mathematics and science in each of the four schools in 2003 and 2004 are presented in Table 9.6. Although analytic decision making undertaken at the design stage of this study resulted in the exclusion of science research SATs tests (as explained in Chapter 3, section 3.4), science data are included here to support the subject specific nature of academic achievement. English and mathematics are explored separately in sections 9.3.1 and 9.3.2 respectively.

Table 9.6: Percentage of pupils achieving Level 4 or above in English, maths and science in 2003 and 2004

School	English		Mathematics		Science	
	2003	2004	2003	2004	2003	2004
North Higherbank	89	71	79	71	100	82
Highbury Park	63	86	56	96	86	97
Lowerbridge	81	70	81	74	88	93
Fallowfield	74	53	69	69	83	81

These school performance data have been ranked in order for English, mathematics and science for 2003, the year of data collection (see Table 9.7) and 2004 (refer to Table 9.8).

Table 9.7: Rank Order of School Performance Results 2003

2003	English	Maths	Science
1	North Higherbank	Lowerbridge	North Higherbank
2	Lowerbridge	North Higherbank	Lowerbridge
3	Fallowfield	Fallowfield	Highbury Park
4	Highbury Park	Highbury Park	Fallowfield

Table 9.8: Rank Order of School Performance Results 2004

2004	English	Maths	Science
1	Highbury Park	Highbury Park	Highbury Park
2	North Higherbank	Lowerbridge	Lowerbridge
3	Lowerbridge	North Higherbank	North Higherbank
4	Fallowfield	Fallowfield	Fallowfield

At the outset of this study, it was anticipated that North Higherbank and Highbury Park would secure the top positions of the four schools; this is not the case. In 2003, it is evident that North Higherbank shares the top positions with Lowerbridge, which was previously identified as a LA school. These results support earlier suggestions that the intensive teaching strategies and frequent practice tests initiated by Mrs L'Enthuse appear to have been successful. Meanwhile, Highbury Park gained the worst results in English and maths, which countered previous expectations. However, the following year's cohort has ensured that Highbury Park is firmly secured the top spot (see Table 9.8). Fallowfield is positioned third in 2003 for English and maths but maintains its LA status over the long-term as it sits at the bottom of the 2003 table for science and all subjects in the 2004 rank order.

The next section takes a closer look at longitudinal data for English and mathematics separately.

9.3.1 English

The end-of-year English SATs test results for 2003 and 2004 are represented in Figure 9.2.

Figure 9.2: Comparative School Performance for English SATs: 2003-2004
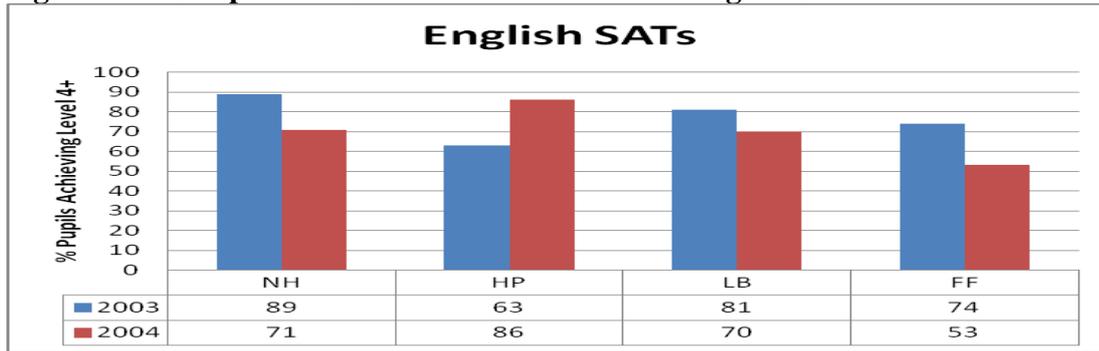
With 86% of pupils at Highbury Park gaining a Level 4 or above in English in 2004 (an increase of 23%), this school has certainly regained its position at the top end of Coalshire's league tables. Highbury Park was initially considered to be among the lowest achieving school at the start of this study when the research SATs tests were undertaken but has moved back to its original higher achieving status in the following year. The three remaining schools dipped in terms of performance in the year following data collection. Highbury Park was the only school to improve upon the previous year's English results. This finding is perhaps to be expected given the uncharacteristically high proportion of children with SEN in the 2003 cohort.

In 2004, almost one fifth fewer pupils achieved a Level 4 or above in the English SATs at North Higherbank (18%) and Fallowfield (21%) compared with the previous year. Performance at Lowerbridge also fell in the 2004 English assessments although the difference (11%) was not as marked. As highlighted earlier in this thesis, the patterns of achievement previously anticipated for each school, i.e. North Higherbank and Highbury Park were expected to outperform Lowerbridge and Fallowfield, were not found for 2003; the year of data collection. Whilst these patterns appear to revert back for 2004, the difference in the English SATs performance between North Higherbank and Lowerbridge is nominal. The gap, however, between Highbury Park and Fallowfield is markedly wider (33%). The following section will explore longitudinal data for the mathematics SATS tests to ascertain whether similar patterns were found for this subject.

9.3.2 Mathematics

The 2003 and 2004 end-of-Key Stage 2 SATs data for the mathematics tests is presented in Figure 9.3.

Figure 9.3: Comparative School Performance for Maths SATs: 2003-2004

Mathematics SATs

	NH	HP	LB	FF
2003	79	56	81	69
2004	71	96	74	69
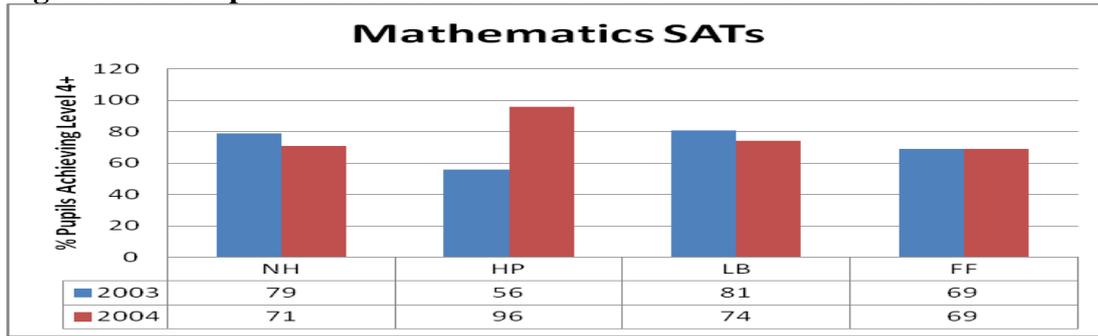
Fig 9.3 reveals similar patterns for maths as English. In total, 96% of pupils at Highbury Park achieved the necessary Level 4 or above in the 2004 maths SATs test; a 40% increase on the previous year's results. These results might be expected given the aforementioned SEN ratio in the previous year's cohort. Nonetheless, it is quite remarkable that the 2004 HP6 cohort secured mathematics results that were 22-27% higher than the results in the other schools. 8% fewer pupils at North Higherbank and 5% fewer pupils at Lowerbridge gained a Level 4 or above in the 2004 SATs compared with the previous year's cohort (dipping from 79-71% and 81-74% respectively). There was no change at Fallowfield; 69% of pupils were awarded a Level 4+ in maths. Having explored changes in school performance over a two-year period, the next section shifts the focus back to the central and peripheral children.

9.4 Actual SATs result for central and peripheral children

The SATs performance of central pupils, peripheral children and the remaining class is documented in Figure 9.4. For the year of data collection, the all-Wales average achievement of the benchmark Level 4+ for the core subjects is as follows: English (78%), mathematics (74%), science (82%), mean total (78%).

Figure 9.4: Comparative Core SATs Results for central, peripheral and remaining class

Core SATs Results

	English	Maths	Science	CSI
Central	100	100	100	100
Peripheral	56.3	43.8	83.3	37.5
Remaining Class	79	74.7	88.7	82
All Wales	78	74	82	78
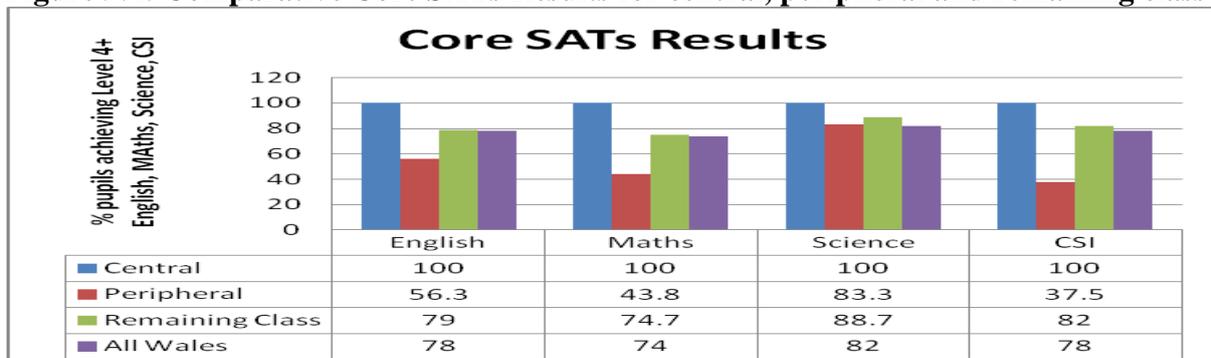
Central pupils consistently achieve the highest results; 100% (*N*=16) of the central children in Year 6 reached the expected benchmark Level 4. In fact, approximately 70% of central children secured the highest level (Level 5) across the English, maths and science SATs results. Peripheral children, meanwhile, consistently fall short of all-Wales averages across the core subjects. Table 9.9 presents the mean differences between the percentage of central, peripheral and remaining pupils achieving the expected benchmark and the all-Wales results for English, mathematics and science in 2003 (highlighted in red).

Table 9.9: Percentage of pupils achieving benchmark Level 4 or above in actual SATs

Subject Level 4+	*Central*		*Peripheral*		*Remaining Class*	
	%	Wales +/-	%	Wales +/-	%	Wales +/-
English	100	22	56.3	-21.7	79.0	1
Maths	100	26	43.8	-30.2	74.7	0.7
Science	100	18	83.3	1.3	88.7	6.7
Mean Total	100	22	61.1	-16.9	80.8	2.8
CSI	100	22	37.5	-40.5	68.6	-9.4

It is clear that central children are able to access the testing material used in SATs assessments and respond in the way expected of them. It is equally clear that peripheral pupils are not. In maths, for example, 30% fewer peripheral children reach the expected benchmark than the all-Wales average. Peripheral pupils' results for CSI (core subject indicator), which identifies the number of children gaining a Level 4+ across English, mathematics *and* science, are even more disappointing; with a discrepancy of 40% between peripheral children's results and all-Wales results. The remaining classmates across the four schools appear to have gained English, maths and science SATs levels roughly in line with the Welsh average, however, fall approximately 10% short when focusing on CSI figures.

9.5   Comparison of research and actual SATs results for central and peripheral pupils

The research SATs results and actual SATs results have been compared for the English reading comprehension assessment (section 9.5.1) and the mathematics assessment (section 9.5.2). This comparison is needed to identify whether the achievement gap for central and peripheral children in the research SATs is maintained throughout the school year or whether

peripheral pupils are able to improve in terms of academic performance in tests that really matter.

9.5.1 English research versus actual SATs

Children's scores from the English reading test used in the research SATs intervention have been compared with the scores they achieved on the actual SATs reading test and the mean difference is presented in Table 9.10.

Table 9.10: Mean English research and actual SATs scores for central, peripheral and remaining class

School	English Research SATs	English Actual SATs	Mean Difference
Central (*N=16*)	32.00	33.25	1.25
Peripheral (*N=16*)	14.31	21.25	6.94
Remaining Class (*N=81*)	26.54	23.00	-3.54

Central pupils performed marginally better in the actual SATs reading test but the nominal mean difference between the two tests indicates that central children had already reached the required level when tested at the mid-year point. The additional few months of schooling did not benefit these children in terms of advancing their reading comprehension skills. Peripheral children achieved, on average, 7 points more by the time they took the actual English reading test. The remaining classmates performed slightly worse on the actual SATs reading test but it is not known why this might be.

Table 9.11: Statistical differences between English research/actual KS2 SATs

Subject	Region	Range of Scores	Mean	Std.	t	df.	Sig.
Central	Research	21-42	32.75	6.72	-.47	15	.65
	Actual	20-43	33.25	6.63			
Peripheral	Research	4-27	14.31	6.12	-2.50	15	.04*
	Actual	10-31	21.25	7.96			
Remaining Class	Research	7-46	26.74	7.98	-.48	74	.64
	Actual	0-40	23.00	13.50			

*p<.05

Statistical analysis was undertaken to determine whether the differential performance of central and peripheral pupils was significantly different (refer to Table 9.11). Paired-samples t-tests revealed that peripheral children were the only group to significantly improve their performance between the research SATs and the actual SATs ($t(15)=-2.50$, $p=.04$). This group of pupils clearly needed the extra time to improve their English comprehension skills.

9.5.2 Mathematics research versus actual SATs

Analysis of children's scores on the research and actual mathematics SATs (Test A) revealed that all groups (central, peripheral and remaining classmates) improved, on average by 10% (as illustrated in Table 9.12).

Table 9.12: Mean maths research and actual SATs scores for central, peripheral and remaining class

School	Maths Research SATs	Maths Actual SATs	Mean Difference
Central (*N=16*)	18.25	29.63	11.38
Peripheral (*N=16*)	9.94	20.75	10.81
Remaining Class (*N=81*)	14.75	25.46	10.71

Statistical analysis confirmed that all groups significantly improved their performance in the actual mathematics SATs test: *central children* ($t(15)=-5.09$, $p<.01$), *peripheral pupils* ($t(15)=-2.59$, $p<.05$), and *remaining class* ($t(15)=-11.85$, $p<.01$), as demonstrated in Table 9.13.

Table 9.13: Statistical differences between research and actual KS2 SATs in maths

Subject	Region	Range of Scores	Mean	Std.	t	df.	Sig.
Central	Research	7-33	18.06	7.47	-5.09	15	.001**
	Actual	21-36	29.63	6.37			
Peripheral	Research	3-22	10.56	5.39	-2.59	15	.036*
	Actual	9-30	20.75	7.29			
Remaining Class	Research	2-31	15.57	6.19	-11.85	74	.000**
	Actual	9-38	25.46	6.68			

***p<.05, **p<.01**

Tables 9.12 and 9.13 confirm that all children needed the additional time between the research and actual SATs to consolidate their understanding of mathematical concepts.

9.6 Summary

Although the use of formal standardised assessments such as SATs test can be criticised for issues related to reliability and construct validity (Paton, 2009; Allemano, 2013), for being too narrow (Thompson & Slattery, 2008) and for causing undue stress to teachers and pupils (Curtis, 2007), this form of assessment has been useful in this study in exploring how teachers mediate testing situations, how children respond to testing material and how children perform when expected to independently solve problems in challenging test conditions. Although SATs tests have been employed in this study, this thesis acknowledges that these static measures will only ever reveal part of a child's academic ability (Yildrim, 2008) and ignore children's proximal development (Vygotsky, 1956) and broader social and cultural issues which impact on academic performance (Yildrim, 2008). Nonetheless, analysis of Year 6 children's performance in the actual end-of-year SATs tests has been necessary to complete the socio-cultural account of pupil motivation within this underachieving locale.

At first glance, the actual SATs results for the year of data collection appear to indicate that the protective 'whole-child' approach of Mr Humour has not been successful; his hands-off mediation of the research SATS in Chapter 5 conveyed to his Crew the message that SATs were not important. Children at Highbury Park appear to have underperformed in 2003 and subsequently lost their previously ascribed higher achieving (HA) school status. However, analysis of longitudinal data has been especially useful in confirming that the school performance during the year of data collection was not representative of the broader picture. Highbury Park, specifically, appears to have had a 'blip' year, accounted for by the unusually high proportion of pupils with recognised special educational needs. In the following year, Highbury Park showed marked improvements in each of the core subjects, securing the highest results of all of the four schools in 2004. In maths in particular, the proportion of children reaching the required benchmark rose from 56% to 96% in just one year. Both North Higherbank and Highbury Park achieved the highest results in English in 2004, thus maintaining their higher achieving status. It would appear that results at Lowerbridge and Fallowfield dipped the year after data collection, which could either reflect the different capability of a different cohort or changes in school policy. Lowerbridge amended their

setting policy for English and mathematics in 2004 while Fallowfield did not. The pedagogic approaches employed at Fallowfield appear to be the least effective of the four schools as Fallowfield firmly retains its lower achieving status from 2002-2004.

In relation to central and peripheral learners, the achievement gap initially identified between these groups in the research SATs, has remained throughout Year 6, with 100% of central children reaching benchmark levels in English, mathematics and science but only approximately half of peripheral children reaching the same standard in English and maths. This latter group fell considerably short of the Welsh average in all subjects. For peripheral children, understanding and meeting the demands of formal testing remains a challenge (McDermott, 1987); these are the pupils in all schools who struggle to achieve academically. In English, central pupils performed equally well in the mid-year research SATs intervention stage and the actual English SATs tests, which may suggest that they are equipped to manage the cognitive demands placed on them in testing situations ahead of time. One might question the degree to which these children benefit from participating in the English curriculum in the latter half of the year as they appear to plateau in terms of performance. However, it is possible that during this time period, central children are honing their English comprehension skills to achieve the highest possible level; Level 5 (which 70% successfully achieved across the core subjects in the actual SATs tests). In mathematics, all children (central, peripheral and remaining classmates) made significant gains between the research and actual SATs tests. As noted in Chapter 5, the teachers in this study believe that children's performance in mathematics (and science) subjects can be enhanced by teaching content-specific knowledge; this approach appears to have worked. The aforementioned pedagogic approaches appear to be effective, as all children appear to be better equipped to deal with the decontextualised nature of the mathematics test by the end of the academic year than when tested mid-year.

Exploration of school performance, as examined by traditional SATs assessment measures, has been valuable in understanding the impact of Year 6 teachers' different pedagogic approaches, as described in Chapter 5. It has already been established that each of the class teachers are attempting to counter patterns of intergenerational underachievement in Coalshire (as empirically documented in Chapter 4) in their own unique ways. Despite a strong body of literature questioning the efficacy of cramming approaches in education (e.g. Van Note, 2009; Good, Aronson & Inzlicht, 2003), the coaching approach used in North

Higherbank and the drilling techniques employed at Lowerbridge appear to have paid off in the end-of-KS2 English, mathematics and science SATs assessments; children at these schools secured the most favourable outcomes in 2003. On paper, these schools are thriving; despite being situated within an underachieving locale, they are achieving results higher than the Welsh average. However, teachers at these schools acknowledged earlier in this thesis that SATs tests dominate the curriculum and impact negatively on their teaching; this is, unfortunately, experienced nationwide (Webb & Vulliamy, 2006) and will continue to be an issue as long as governments place such heavy emphasis on academic league tables. It seems the high stakes nature of academic testing in the UK, and the consequential labelling of children and schools will undoubtedly encourage teachers to continue adopting cramming strategies (Mortimore, 2008). It is worth noting that children at Fallowfield, a school which did not adopt cramming approaches, did not perform as well as pupils at North Higherbank and Highbury Park. Although teaching to the test appears to be effective in securing favourable academic outcomes, it is not clear from analysing test results in isolation whether these children have actually understood the abstract concepts being assessed or whether they have simply been taught how to superficially pass the test. When working within a socio-cultural framework, instruction and assessment should be inseparable from one another and it could be argued that children's academic ability, achievement and underachievement, can only be fully understood when viewed as a dynamic process (Lantolt & Thorne, 2006). The findings from this chapter will, therefore, be discussed further in Chapter 10 in light of the wider findings from this study.

CHAPTER 10   DISCUSSION AND CONCLUSION

10.0   Introduction

This study set out to investigate differential academic achievement and pupil motivation from a socio-cultural perspective at the institution, classroom and individual plane of analysis within a recognised underachieving locale in Wales. More specifically, this study was concerned with identifying: (i) why some children succeed academically in school and some do not in an underachieving locale; (ii) characteristics of any of the contexts in which children are embedded that provide resilience to educational underachievement; and (iii) what socio-cultural approaches bring to our understanding of pupils' motivation to learn in school. This chapter will briefly summarise the key findings identified within each plane of analysis before discussing the findings in relation to the study's research objectives. The importance of this investigation will then be outlined before identifying the limitations of the study and future directions for research in this field. Final conclusions complete this chapter.

10.1   Summary of key findings

This study has found that children's motivation to learn and subsequent academic achievement cannot be fully explained without attending to the wider social and cultural milieu in which children are embedded. The key findings within the locale, institutional, classroom and individual planes of analysis are presented next.

Locale plane of analysis: This study has identified Coalshire as an incontestably unique underachieving locale with learners in this locale experiencing specific social, cultural, historical, geographical and economic constraints not commonly found in other UK regions. Within the locale plane of analysis, pupils' social and cultural experiences were remarkably similar regardless of differences in individual learner status, classroom culture, institutional context or home life.

Institutional plane of analysis: Although children in this underachieving locale share similar social and cultural experiences, this study has identified that institutional practices do indeed impact on the academic attainment of pupils in Key Stage 1 and 2. This study has found that outcome-orientated pedagogic strategies such as cramming can temporarily move a previously identified low achieving (LA) school further up the academic league tables in

order to seemingly demonstrate that children are successful (when measuring success in terms of reaching benchmarks on test scores). However, these children cannot readily recognise academic concepts required of higher mental functioning. Meanwhile, children within higher achieving (HA) schools are not only more adept at recognising abstract concepts, but these institutions maintain their HA status when longitudinal analysis of school performance is undertaken (thus indicating that cohort effects may account for the blip in performance during the year of study). This investigation has, therefore, established that institutional practices can mediate academic success within locales which experience high levels of social and economic deprivation. Using a socio-cultural theoretical framework, it has been possible to identify features of successful schools, including how much of the 'outside' children are expected to leave at the school gates. Within this plane of analysis, the main characteristics of the successful HA schools not found at LA schools include: (i) staff instantiating a greater permeability of boundaries between children's inside and outside school worlds; (ii) effective home-school partnerships and greater parental involvement in school activities; (iii) a sense of the school firmly belonging at the heart of the local community; (iv) maintenance and utilisation of strong community links to encourage children to experience wider social, cultural and political practices both inside and outside the locale; (v) an established collective (Christian) school ethos; and (vi) recognition of pupils' indigenous socio-cultural culture.

Classroom plane of analysis: One of the key findings from this investigation is that the greatest resilience to educational underachievement can be found within the classroom plane of analysis, indicating that even within the constraints of delivering a narrow and prescriptive National Curriculum, class teachers can and do indeed make a difference, as evident in pupils in the HA classes demonstrating greater recognition of abstract academic concepts than children in classrooms at the LA schools. This suggests that classrooms equip pupils with socio-cognitive resources to use in testing situations. Within this plane, successful learners benefitted from teachers whom: (i) fostered a collective classroom culture and sense of belonging; (ii) valued members of the learning community; (iii) valued and utilised native social and cultural tools to mediate learning activities; (iv) promoted autonomy of movement, independence and responsibility within the classroom; (v) offered an adapted and culturally meaningful curriculum; (vi) brokered and bridged between children's home and school worlds; (vii) promoted greater outside school learning.

Individual plane of analysis: Important findings were identified within the individual plane in relation to both teachers and children. The teachers in this study drew on individual construct, pedagogic and social markers to create very firm positive representations of central learners but less clear representations of peripheral learners, for whom a deficit model was applied. In relation to pupils, this study firstly identified that pupils perform significantly better in tests that are framed and embedded in a strong narrative (thus allowing individuals to draw on the necessary features of the test to answer the questions) rather than decontextualised abstract problems traditionally found in mathematics tests. Secondly, pupils are more readily able to recognise academic concepts related to English rather than mathematics concepts. Thirdly, pupils most able to recognise academic concepts generally perform better on academic tests [this was found in all schools except the Crew at HP, where the class teacher's priority to focus on the whole child and protect children from tests, coupled with a cohort effect resulting from an uncharacteristically high proportion of pupils with SEN, resulted in a temporary dip in test performance]. This finding is important in itself as despite being seen as less successful (when measuring success in terms of test scores), the children in this class were able to demonstrate superior higher mental thinking in drawing on socio-cognitive resources to recognise the most abstract groupings in the sorting activity. This finding has potential implications for future assessment discourse in relation to the validity of existing scholastic tests.

This study has also found that in the individual plane of analysis, children identified as central learners draw on socio-cognitive resources that help them engage better with testing material than peripheral learners, who do not draw on the same socio-cognitive resources. Peripheral learners also experience difficulties in thinking within an abstracted context required of formal academic learning despite teachers' attempts to prepare them for tests. In addition, the differential performance of central and peripheral learners was found to increase the further children progress through the academy; central children hone further towards the core while peripheral children may be pushed further towards the periphery. Finally, this study has identified that a concerning number of pupils do not value education; by the time children reach KS2, almost half do not believe they will need to use English and mathematics in future and struggle to identify with the purpose of learning. Many children do not see learning as 'cool' and a significant minority do not believe they will gain successful employment upon completion of formal schooling. The social, cultural and economic

experiences of learners within this underachieving locale must, therefore, be considered when seeking to understand motivation and academic achievement. Having outlined the key findings, the next section responds to the research questions.

10.2   Research questions

The following sections draw the aforementioned findings from each plane of analysis together in response to the three research objectives set at the outset of this study. The first seeks to identify features of academic success.

10.2.1   Why do some children succeed in school and others do not in an underachieving locale?

In order to adequately answer this question it is first necessary to determine what is meant by success. The traditional model of success relies on the use of tests. Tests are afforded great importance in educational contexts and for many children, academic testing impacts on their future trajectory throughout the academy and beyond. These tests, written by 'experts' removed from the classroom context, are used to measure academic achievement and according to this model, any use of drilling techniques and teaching to the test will produce results. This approach works for children identified by their teachers as central learners who will meet artificially set benchmarks and will most likely continue in education. Peripheral learners, meanwhile, will not succeed in school if success continues to be measured in this way. For these children, the picture is more complicated and diverse. Within Coalshire, there is strong support to suggest that peripheral children will not succeed through the academy to higher education. While central children are relatively stable and appear to work through tests and perform at expected levels, peripheral children do not. These children appear to share characteristics of children in McDermott's (1999) study, who manage to 'get by' in everyday activities but not in testing situations. However, if any of these children have challenging experiences (including bereavement, bullying, third generation unemployment, as documented in the pupil profiles in Chapter 8, or even if the economic base is low), then schools have to be exceptional (refer to section 10.2.2) to counter these issues. As long as traditional models of success are used, groups of learners will continue to fail in school. If schools continue to follow this method of narrowly measuring quality in these statistical terms, other possibilities of quality and potential are ignored. This model supports Bowles & Gintis' (1976) Marxist perspective that schools serve to prepare pupils for working life over

and above adult life in general and tests in their current form legitimate knowledge reproduction (Eggleston, 1990) and act as a form of social control. This thesis advocates McDermott's (1987) contention that success is more than success in tests and proposes that an alternative model could look beyond success as measured by cognitive tests and instead focus on the whole child.

If the emphasis was shifted to measure success from a socio-cultural perspective, in helping children feel as though they have a stake in the world, it would help pupils accomplish academic tasks. A child's socio-cultural context undoubtedly influences differential responses to tests (Cooper & Dunn, 2000). Although schools have to work hard for it, schools can make a difference but not necessarily in the way politicians think, i.e. drawing out more Level 4s in KS2 and Level 2s in KS1 assessments (WAG, 2005, 2008, 2010). From a political perspective, Coalshire is stigmatised as underachieving based on exam results and this pattern is set to continue unless all teachers adopt cramming and drilling approaches to clamber their way further up artificial educational league tables. Learning, however, first needs to be understood (Murphy, 1999); including the criteria used, the meaning conveyed and what is actually meant by success. The specific example of one peripheral learner, Paddy Hunter (HP6, outlined in section 8.6), exemplifies that some children initially identified as not expected to succeed based on former academic performance can succeed if different parameters of success are used. The whole-child approach adopted by his teacher, Mr Humour, conveyed the message that Paddy mattered and, like all other Crew members, was a core member of the team. Paddy's final primary school report acknowledged that he had fully participated in the life of the school and had become a reliable and sensible pupil whilst being a member of the Crew community. Highbury Park would consider this a success story regardless of Paddy's end of Key Stage results which, incidentally, were excellent as he successfully met benchmark standards despite originally being identified as a peripheral learner. Children like Paddy who were ultimately most adept at demonstrating more abstract thinking (or higher mental functions) (Vygotsky, 1978) were given strong messages that they mattered and had an important stake in the world; this was particularly evident at Highbury Park. In this study, the children who were least able to recognise abstract concepts were situated in schools like Lowerbridge where teachers were bussed in and had not experienced life in the locale. A revised socio-cultural model of success identifies these children as least successful while the traditional model identifies them as most successful (as they secured the

highest SATs results purely in response to teachers' continued drilling approaches). The question remains whether or not those in education can wean themselves off the political economy of very limited measurements to explore alternative ways of measuring success that truly accounts for successful learning. However, political willingness is needed for this to be achievable.

A rejection of the first model of success (i.e. measured by standardised tests) which dominates twenty first century education in the West was called for by teachers in this study and in the literature (e.g. Webb & Vuillany, 2006). There is concern that current measures of success negatively impact on pupils' educational experiences and result in increased institutional results but not improved understanding for the child. There was a consensus among all teachers in this study that the National Curriculum fails pupils as it is too broad, prescriptive, compartmentalised, fragmented, dissociated, unbalanced and overloaded and the assessments designed to test children's knowledge of the national curriculum content does not reflect pupils' true understanding or ability (Hood et al., 1980); particularly when teachers faced with societal and institutional pressures are left with little option other than teaching to the test. This account of teachers' experiences strongly disputes government claims that every child should benefit from a well-designed, rich and broad curriculum (DfES, 2004). Fractures in the transition from policy and practice are evident in this instance. According to the class teachers' perspective, children do not succeed *because* of the national curriculum and national testing; teachers infer they achieve despite this rigid curriculum. This perspective would suggest that the issue is more widespread than 'some' children not achieving and should ignite future pedagogical debates.

The aim of the research SATs intervention was to simulate the end-of-Key Stage testing situation, i.e. the primary context afforded great importance in educational settings. This intervention was designed not only to identify why some children succeed and others do not, but to provide a basis for probing pupils' understanding and experience of the testing situation, identifying what they bring to the test setting in a way their socio-cultural context supports. This study found wide variation in success across schools (measured by SATs results). For the year of data collection, the schools which adopted cramming techniques (i.e. Lowerbridge and North Higherbank) were most successful in both the research SATs and actual SATs tests, which supports mid-twentieth century research evidence (e.g. Yates &

Pidgeon, 1957 cited in Wyse & Torrence, 2009). However, longitudinal analysis revealed a much more complex pattern. While league tables have allowed for schools to be classified as higher and lower achieving, this in itself has not been sufficient to understand academic success because, as this study has shown, there is considerable variation between classes and year groups. For example, some children (namely those who were later identified as central pupils) achieve across all classrooms regardless of the ascribed school status (HA or LA), thus suggesting the school effect may not always account for such variation. Curriculum subject effects were initially found in the research SATs intervention; children performed best when testing material was strongly framed and embedded in a meaningful narrative (e.g. the English reading comprehension test), as advocated by socio-culturalists (including Lave, 1988, Lave & Wenger, 1991 and Rogoff, 1995) and performed less well when abstract decontextualised cognitive demands were placed on them (e.g. in the mathematics test) (Newman et al., 1989). Notwithstanding, some groups of pupils (central children) outperformed peripheral groups of learners in both subjects.

By shifting the analytical focus from schools to central and peripheral classifications of pupils, it has been possible to explore the specific features of a testing situation in an attempt to better understand differential academic success. This study has shown that some pupils, namely those identified as central pupils, were able to read and interpret features of the test while others were not. Although central and peripheral learners were identified through teachers' subjective classifications (informed by previous assessment results), this group of pupils appeared to be able to recognise the requirements of academic tasks. The instruments devised to identify whether children could recognise academic concepts revealed that in some schools, namely the HA schools, more children recognised abstract concepts than other children at the LA schools. Those who can recognise academic concepts are demonstrating formal decontextualised thinking acquired through academic instruction (Vygotsky, 1987; Douek, 2006). The learning contexts in which children are embedded equip pupils with school codes that helps them succeed in testing situations. Central pupils were better able to draw on socio-cognitive resources to recognise abstract over surface features (Fleer & Ridgeway, 2007), particularly for mathematics, and the approach taken to the test differed between these groups. According to Vygotsky (1994), children who continue to rely on everyday concepts (i.e. peripheral children) will struggle to gain access to academic (scientific) concepts and will subsequently find it difficult to identify the rules of the

discipline, which require abstract, decontextualised concepts (Lave, 1988). Because some learners do not recognise academic concepts, they need greater regularity to work out what these concepts (school codes) are (Newman et al., 1989); if they do not get this, they fail.

So, it appears that children who succeed are either those identified as central learners or this may be extended to peripheral learners situated in classroom contexts which provide a sense of belonging and convey to children that they matter (discussed further in section 10.2.2). To summarise, central pupils in this study experienced some stability in managing the classroom context; teachers identified desirable innate qualities in these learners, such as being passive, good, involved, hard-working and complaint with instruction, rules and requirements. According to teachers, this group of learners experienced greater success because they were more supported and engaged in school related activities outside of home and children's self-reports confirmed that central children read more widely and experience greater parental involvement. Far greater complexity was witnessed for peripheral learners who struggle to succeed when success is measured via tests. No pattern or consensus was found for this group of pupils; any one of a number of issues in their lives (be it emotionally or physically absent parents, limited parental support, low expectations, socio-economic consequences of parents' long-term unemployment, or even an absence of bedtime routine and breakfast before school etc.), placed them in a position that made it difficult for them to function in school in a way demanded of them. Many of these children could not recognise academic concepts and did not know what the conventions were, for a variety of reasons. For some children, it is within the economic plane of analysis (not fully explored in this thesis), that children identify reasons for not bothering in school. For example, Phoenix Lowe (see section 8.6) whose family experienced multi-generational unemployment could not establish the link between investing effort and working hard in school when he read off the near experiences of relatives that jobs in Coalshire simply aren't available. No one recognises that children like Phoenix have a stake in the world and no amount of cramming will help. Class teachers who attempt to overcome pupil disengagement will help pupils like Phoenix achieve results in the short term but, if anything, actually convey the message that all that matters is grades, thus further alienating children and failing to teach them about life (Varenne & McDermott, 1998). Schools, therefore, have to work doubly hard to counter low motivation, which arises as a result of children's wider socio-cultural experiences. The next section explores contexts that promote educational resilience.

10.2.2 Are there any characteristics of any of the contexts in which children are embedded that provide resilience to educational underachievement?

Although each of the four institutions and eight classroom contexts explored in this study offer children opportunities to succeed in school, it is the Year 6 Crew room at Highbury Park that garnered the most interest and outshone the other learning environments on a variety of levels. Firstly, this school was identified as consistently being a higher achieving school within this underachieving locale from the start of the study. Although the aforementioned uncharacteristically high proportion of children with SEN affected the results of this study, the longitudinal data confirmed this was a 'blip' year and subsequent results have repositioned this school back at the top of the locale league tables. Moreover, in spite of the disappointing results for Highbury Park during the year of data collection, children at this school still outperformed all other classes in the most cognitively demanding of tasks; the sorting activity. Children at HP recognised academic concepts more readily than children at any other school, thus something is taking place within this institution that appears to promote resilience to educational underachievement. Maintaining planes of analysis from the individual to the locale, the following sections will identify characteristics of the HP context that appear to be helping children succeed academically.

Characteristics within the *individual plane of analysis,* including how the test was interpreted as an educational resource promoted resilience for some individuals. When testing is embedded within classrooms, school, home and the locale, children who bring socio-cognitive resources from wider contexts to the testing situation (Wertsch, 1991) are able to engage better with testing material (Chaikklin & Lave, 1996). The more stripped out and decontextualised the test, the harder it gets for learners (Murphy, 1999; McDermott, 1999). Contexts, including individual relationships with school staff, help children (particularly peripheral learners), develop enough belief that they have a stake in the world in order to follow a promising trajectory to future employment. Children in the Crew were provided opportunities to develop relationships with support staff, caretakers, lunch-time supervisors etc. during lesson time as Mr Humour recognises their respective skills can be utilised to further children's learning (refer to Chapter 4).

The Crew offers the best example of educational resilience promoted at the individual level.

In the crew:

- Children are recognised as partners in the learning process rather than targets of instruction.

- Pupils are recognised as active co-constructors of knowledge.

- Children learn as apprentices (dark room, school newspaper etc.) (Rogoff, 1990).

- A sense of belonging and stake in the world is central.

- There is equality among crew members.

- The classroom setting allows pupils a strong sense of personal agency.

- Context is conducive to meaningful interaction (Lerman, 2000).

- Ritualised vs. principled knowledge takes place (Edwards & Mercer, 1987).

- Subjects (such as mathematics or English) emerge for pupils as part of classroom activities (rather than being encountered as static or decontextualised categories)

- Children's home lives are acknowledged and there is increasing space for Crew pupils' contributions from their own knowledge (akin to the method used by Mr Knowledge in North Higherbank suggests horizontal discourse, Bernstein, 2000).

- A sense of loyalty to the Crew is promoted, resulting in a sense of solidarity (e.g. a child's name sticker was ripped from chair following said child's contravention of Crew rules, refer to Chapter 4, part C).

- Affective and emotional (not cognitive) elements are present in this classroom context− Mr Humour engages in banter with the class and encourages children to playfully respond. Mr Humour offers children a sense of justice, and for some, including Paddy Hunter, acts as an academic father figure who understands what life in Coalshire is like.

A variety of characteristics within the *classroom plane of analysis,* also appear to provide children with greater resilience to educational underachievement. Through *positive interactions* with Mr Humour (i.e. a more experienced native member of society), Crew members receive information about the tools and practices that facilitate problem solving in classroom activities (McDermott, 1987). Mr Humour has created a *unique context* where structuration in the classroom affords clues that increase children's accessibility to content

(Rogoff, 1995). His *mediation* of the research SATs intervention was unlike any other response; by maintaining focus on the whole child, Mr Humour allowed the tests to take place but went to great lengths to downplay and protect children from unnecessary stress. This approach to keep the long-term view in mind (i.e. not worrying about children's mid-year test performance) seemingly works for Mr Humour's Crew who are not only *protected* from unnecessary practice papers but appear year-on-year to perform well by not adopting training approaches. Ultimately, children in this school experience more enjoyable and positive experiences by being protected from unnecessarily stressful testing situations.

The socio-cultural resources that children bring to the testing situation were determined by the structure and culture of the classroom. The *material culture*, including the artefacts, tools and resources around the classroom to autonomously be utilised by the children to engage in learning were unique in the Crew room (refer to Chapter 4, section C). The cultural heritage of a classroom is carried in the artefacts available for pupils to use (Lave & Wenger, 1991). The resources and artefacts in this classroom went way beyond the immediate classroom context and reached the indigenous understanding, local and *cultural knowledge* that pupils have in their communities (Dornyei & Csizer, 2002). As a native to Coalshire, Mr Humour was able to recognise the importance of *bridging* between children's home and school worlds. Children at Highbury Park (and at North Higherbank) were encouraged to personalise their learning environment, while children at Fallowfield were banned from bringing personal artefacts to school for fear of damage to personal property.

In terms of pedagogic practice, Mr Humour understands that children need some *agency* and *access*. The learners in the Crew room therefore have a strong sense of personal agency. His approach to the *curriculum* was to shift towards ways pupils might be able to make sense of the curriculum; instead of demanding children undertake a series of arduous tests, Mr Humour created individual, fun, bite-sized interactive SATs DVDs for children to enjoy at their leisure. As a result, subjects emerge for pupils as part of classroom activities rather than being encountered as static or decontextualised categories. The *atmosphere* in this learning environment was supportive, the teacher's *interactional style* was positive and the prestigious Crew membership (that children wait for years to receive in Year 6) afforded children a place to be recognised and validated. A sense of *equality* was also most evident in this class; Mr Humour was the only teacher to find it difficult to differentiate between central and

peripheral pupils. Finally, classroom *collectivity* may be an important characteristic of educational resilience at Highbury Park; Mr Humour was against an individualistic perspective and instead promoted a collective classroom culture, advocating peer group work wherever possible (Tudge, 1992). Shared values established through peer-to-peer interaction were drawn upon to push peers forward. This allowed Crew pupils to take possessions of activities, resulting in long-term benefits (unlike the shorter-term focus evident at Lowerbridge).

A community of practice was evident at Highbury Park, but not at the other schools. At HP, children were recognised as important and valued *members of the community*. Mr Humour has worked hard to create the only community of practice, whereby learners have a shared repertoire of artefacts (Wenger, 1998) which carry accumulated knowledge of the community (Lave & Wenger, 1991). Through guided participation in the interpersonal plane (Rogoff, 199), crew members belong to a community where each member is valued, even those with legitimate peripheral participation. Teachers' fundamental representations of learners focus on community membership and the explicit and tacit messages conveyed to these children is that community membership and collegial learning is the only way for children to get on through the academy.

Protective characteristics within the *institutional plane of analysis,* relate to outsider *community members* crossing into school, including local actors, sports player, scientists etc. The *cultural bridging* (Rogoff, 1995) offered to children at Highbury Park exceeded opportunities provided to children in the other schools. As previously established, Mr Humour lives in the locale and knows how to relate to children and how to effectively broker between learner's everyday and school experiences (Rogoff et al., 1984). This is in sharp contrast to some teachers at the LA schools who placed responsibilities for discrepancies between home and school life (Edwards and Warin, 1999) away from themselves. The *school ethos* and *sense of community* also appears to promote a sense of cohesion and belonging. Highbury Park has a culture of *parents crossing the boundary* in and out of school, which as WAG (2003) identified, places this school at the heart of the family and wider community. Teachers have to believe that pupils are worth investing in. Mr Humour not only believes that children are worth investing in but he works hard to organise and self-finance extra-curricular activities to enhance children's learning experiences. In doing so, he subsidises children's

learning opportunities through his own emotional and material generosity and local knowledge. This results in his Crew feeling an incredible *sense of belonging*. Attempts to create a sense of belonging in the LA schools (Lowerbridge and Fallowfield), which bus in teachers from outside the locale are futile as teachers need to be home-grown in the community if the community is genuinely going to survive. The sense of community in these schools has, essentially, failed to survive as new school buildings have been built to accommodate amalgamations as a result of school closures.

Finally, within the *locale plane of analysis,* the *strong anchoring* of the school at the heart of the community appears to offer some resilience in terms of Highbury Park (and North Higherbank) being able to draw on established school networks, connections and *community links* to knowledgeable Coalshire insiders and appropriate role models who can and do regularly engage with and inspire learners at these schools.

In sum, the six main issues identified in this study that appear to contribute to educational resilience for some children include:

(i) *Availability and accessibility of tools, artefacts and cultural resources* within the classroom. In the LA classrooms, children remain dissociated from the context; the bare walls of the classroom prevented children from freely using tools to support their learning.

(ii) *Encouragement from the teacher to use the tools and artefacts.* Children in the HA schools benefitted from teachers encouraging them to develop a sense of autonomy by accessing resources in classrooms to aide learning, compared with teachers in both LA schools who prioritised policing of behaviour and permitted limited independent access to resources; children in these learning contexts were required to ask before getting up and had restricted movement around the classroom. For these teachers, out of seat behaviour was synonymous with pupils being off-task.

(iii) *Sense of belonging.* The Crew room in particular effectively established collective identity. Similar attempts were witnessed in Mr Nowledge's (NH6) classroom. These teachers adopted a whole child perspective and recognised that a sense of belonging is

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a pre-requisite for academic success – a stark comparison to the individualistic approach of LA schools which prioritised pushing to raise standards.

(iv) *Bridging.* Children benefitted from being in schools where teachers acted as a broker to bridge between pupils' inside and outside school worlds. This study has identified that teachers need to be in and live within the local culture, know the locale and have access to shared resources. Pupils can't be expected to follow and relate to the way of life of a teacher who lives in an inner-city, miles away. The teachers who commuted in because "we wouldn't want to live here" cannot know and understand the culture and norms of life in Coalshire and therefore cannot value children's indigenous culture. Even if teachers live outside of the locale, Mr Nowledge (NH6) has shown that attempts to spend time getting to know features of the locale to try and broker children's inside and outside school experiences can go some way in helping children.

(v) *Role of the teacher,* including the approaches taken in, for example, re-writing the curriculum to meet the needs of the pupils. At both HA schools, Mr Nowledge and Mr Humour actively made the National Curriculum framework accessible to pupils in their classes by utilising Coalshire-relevant examples to explain subject content. The *availability of the teacher* was also identified as a factor in promoting resilience. Teachers at the HA schools were more accessible to parents than, for example, at Fallowfield where high security fencing and unmanned intercom systems prevented parents from stepping over the school threshold to speak to staff.

(vi) *Role of the school.* The HA schools which were firmly anchored at the heart of the community, which were made accessible to parents who were actively involved in inside and outside school activities served to offer resilience to children. These institutions encompassed the whole family rather than focusing on the individual child in isolation, thus promoting a greater and wider sense of community.

In light of this, the identifiable features of a successful school are: widely available resources; understanding that children need some agency and access to resources; effective fostering of a collective culture which promotes a sense of belonging; even if teachers are unable to

bridge, they can adapt the curriculum to help children make better sense of it; ingrained in the locale (i.e. shared identity, understand the culture and act as a role model from within; and reach out to families via shared activities in a school situated at the heart of the community. This study has revealed how features of a child's life offer resilience to manage whatever life throws at them. Some children are inducted into a collective culture where they have agency, access to socio-cultural tools and to each other as learners (not as expert learners but as novices). In classrooms where there is a shared set of values (as evident at Highbury Park), motivation can be increased as pupils really want to belong; it makes them feel competent and successful learning is fun which is important. Community has been recreated within the group. It is in the collective classroom cultures that children are better equipped to solve problems (as evident in the sorting task activity in Chapter 8, section 8.4), i.e. children were encouraged to autonomously make connections between outside school activities and inside school learning (also evident at North Higherbank), as opposed to the individualistic drilling and cramming techniques adopted in other institutions. In some cases, teachers' socio-political beliefs prevented children from engaging in such materials.

The schools which promoted collectivity, autonomy and agency were both higher achieving schools. When tested for recognition of abstract concepts, learners at these schools outperformed pupils at the lower achieving schools, who experience individualistic cultures. In contrast, other children are inducted into individualistic cultures where institutions are fixated with securing high grades in tests, as evident at Lowerbridge Primary where Mrs L'Enthuse was headhunted to drive up performance. Based on children's academic performance on standardised national tests, this approach *appears* to be effective. However, benefits of the teaching to the test approach were short-lived; pupils later confirmed that they crammed for the test but just weeks after the test they reported having forgotten concepts and facts that they revised beforehand. This questions the usefulness of this form of standardised testing, which for some children is nothing more than a memory test. The strict policing by the class teacher and the perennial practice SATs test ensured that children at Lowerbridge (a previously identified lower achieving school) reached expected benchmark standards; however, by teaching to the test, individuals remain disassociated and are not supported in developing abstract thinking (Newman et al., 1989). Children in this classroom context may achieve the highest performance in scholastic tests but fare poorly when testing for children's recognition of abstract concepts (as identified in section 8.4.7). In this particular school, the

class teacher was not able to speak as an insider and admittedly did not always understand Coalshire life so could not value the children's indigenous culture. Other classroom contexts offered nothing for pupils to identify or get involved with (namely Fallowfield), which incidentally performed poorest when long-term school performance was documented.

Having identified the characteristics of the Crew classroom culture that appear to provide children with greater resilience to educational underachievement than at other schools, it leads to the question that if all peripheral pupils from the other schools were taught in Mr Humour's Crew room, would that have influenced their achievement? This study can conclude that yes, peripheral learners from other schools would have benefitted from a Crew culture because peripheral and central Crew members performed equally well on the tests. Mr Humour was the only teacher to question the notion of differentiating between those involved and not involved in learning from the outset and, when pushed, identified four children but reiterated that all Crew members are involved learners. This suggests that teachers can motivate *all* children to succeed by adopting Mr Humour's pedagogic model.

In sum, every Crew member is told they matter and CAN succeed; routines and expectations are consistent so pupils can develop academic concepts (i.e. school codes); pupils initiate activities and are afforded increased autonomy; the teacher in the crew room provides regularity and a strong recognition of rules so children can develop academic concepts; children develop a social identity; and collectivity produces cohesiveness of the Crew. It is, however, possible for teachers to create a collective culture all about the exam but not collectivity. Teachers can have high expectations regarding children's test performance as a classroom culture but without collectivity (i.e. the collaborative element that allows pupils to take possession of activities), children will not develop shared values. It is when these shared values result in peer to peer interaction that peers are pushed forward. In light of these findings, the next section reiterates the need to use socio-cultural theory when investigating pupil motivation.

10.2.3 What do socio-cultural approaches bring to our understanding of pupils' motivation to learn in school?

This study has identified that future motivation research would benefit from looking to socio-cultural theoretical approaches for a variety of reasons. Although existing psychological

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theories and sociological explanations of learning have individual merits in advancing our understanding of the way children think and learn, exploration of these theories (as outlined in Chapter 2) has revealed significant shortcomings in their explanations of pupils' motivation to learn. For example, early behavioural reinforcement models have traditionally been given credence and have even been adopted in mainstream schooling (Ames & Archer, 1987), but unlike socio-cultural approaches, they completely ignore issues of meaning (Wenger, 1998). Thus, pupils' motivation to learn cannot be fully understood from this perspective alone. Shortcomings have also been identified in humanistic accounts of motivation, which assert that individuals are motivated to self-actualise and reach their full potential (Maslow, 1970; Crain, 2005), but humanistic psychology cannot adequately account for unmotivated individuals who do not seek fulfilment and realisation of their full potential. Neither can it account for individuals who are motivated by needs of belonging and respect, which socio-cultural approaches can explain in abundance. By fully attending to the motivating role of belonging within a community of learners, this thesis has revealed that socio-cultural theory can indeed account for children's motivation to learn in school, as evident in the Crew Room at Highbury Park. In this study, pupils identified as peripheral learners were able to become more engaged, more motivated to learn and make the transition from peripheral to central learners when teachers created and facilitated a strong learning community in which learners felt a sense of belonging. Furthermore, in contrast to humanistic explanations of motivation (which are widely critiqued for being subjective, naively optimistic and not lending itself well to empirical scrutiny), socio-cultural theory continues to withstand empirical investigation and should be considered as a credible theoretical approach in future motivation research.

Although it is clear that socio-cultural approaches are more plausible than behavioural and humanistic explanations of motivation, the main competing psychological approach is found in the field of cognitive psychology, which has dominated the field of motivation research in recent decades. Despite its growing popularity, this approach has, however, failed in its attempt to fully explain pupils' motivation to learn in school as it has largely ignored the social and cultural influences on children's learning and academic achievement, as found within this underachieving locale. As outlined in Chapter 2, cognitive approaches give primacy to choice behaviour (Dornyei, 2000) and assume that cognitions are casual determinants of behaviour, i.e. learners choose to engage in behaviours they believe will lead

to a desired end goal. Although the basic linear models of cognition (e.g. Deci, 1974) have evolved with latter models attending to the individual's sense of agency and attitudes to learning (in the form of beliefs, goals and responses to tasks) (Jacobs & Newstead, 2000), this approach has failed to fully account for variation in learners' motivation to engage in learning. For example, according to McClelland's (1985) Achievement Goal Theory, all classrooms will have some learners who display adaptive motivational styles and some learners with maladaptive styles of motivation (Heyman & Dweck, 1992). One might, therefore, be surprised to find some classrooms and institutions with predominantly maladaptive learners who do not appear to have the intrinsic self-determination to achieve and, subsequently, consistently underachieve in scholastic assessments. Cognitive psychologists might attempt to account for this in terms of the variance and efficacy of teachers' employment of extrinsic support and structures (Deci, 1985) when, as this study has shown, learner engagement is influenced by the historical, economic, geographical, community, institutional and classroom contexts in which learners are situated. Unlike socio-cultural approaches, existing cognitive models of motivation cannot fully explain why particular locales, often those assigned a low socio-economic status, remain at the bottom of educational league tables year after year. By failing to acknowledge the social and cultural influences on pupils' engagement in learning, cognitive models will never be able to fully account for academic underachievement in particular locales.

It is clear that behavioural, humanistic and cognitive theories of motivation have failed to address how individuals are culturally, historically and institutionally situated, which needs to be done before any aspect of mental functioning can be understood (Dewey, 1956). Although some attempts have been made to at least consider the role of social relationships (e.g. Maehr & Midgely, 1991), these individualistic theories have failed to develop a strong understanding of how individuals manage and negotiate social identities in school settings (Lave & Wenger, 1991) and can be further critiqued for representing the individual as divorced from the social, which Lloyd & Duveen (1992) believe is theoretically inadequate. While this study has identified theories of motivation and learning that do address elements of the social (e.g. Social Learning Theory, as outlined in Section 2.4), these theories have also been developed in a socio-cultural vacuum (van Etten, 2004). Sociological theories, meanwhile, have much to offer in understanding learning in classroom contexts; both in terms of the conceptualisation of knowledge as defined by society (Bowles & Gintis, 1976;

Bourdieu, 1997) and the classification and framing and social construction of educational knowledge (Bernstein, 1975). Sociological work on class is also useful when seeking to understand children's experiences of the world in relation to the experiences of others. Although some attempts have been made to demonstrate how social structuration relates to individual motivation within the field of sociology (e.g. Bourdieu, 1986; Bernstein, 1971 – as outlined in Section 2.5), sociological theories do, however, fall short in offering a full and complete analysis at the individual level and cannot adequately explain the notion of the individual as being both shaped by and as shaping the environment. While sociological perspectives try to hold together the role of society in children's learning, socio-cultural frameworks offer a much-needed rapprochement between psychology and society.

This thesis argues that socio-cultural approaches can effectively bridge between psychological and social processes and, therefore, has much to offer when seeking to understand pupils' motivation to learn in school. Socio-cultural theory affords attention to be paid to the individual's embedded socio-cultural history and the everyday practices of their outside world; it further explains how these practices channel cognitive development (Rogoff, 1995) in ways that other psychological theories cannot. Unlike competing theories of motivation, socio-cultural theory permits researchers to explore motivation on a variety of levels or, more specifically, planes of analysis. This approach permits the effective use of both positivistic and interpretivistic methods of inquiry. In this study, planes of analysis were utilised to explore pupils' engagement in learning within the individual, classroom, institution and locale planes. By considering these four planes in which cognitive activity is embedded, it has been possible to attend to meanings that emerge in the interplay between individual learners acting in social classroom contexts whilst always considering the child in context; this would not be possible with alternative psychological theoretical frameworks.

As previously discussed, the traditional psychological approach to motivation assumes a cognitive approach based on the mind as a computer model capable of achieving desired goals (refer to Theoretical Chapter 2 for details). However, as shown in thus study, in order to be able to detect what motivates children, attention *has* to be paid to the local classroom culture as it connects to children's lives outside school. Socio-cultural frameworks permit movement away from restrictive and naive assumptions that motivation occurs in isolation from the social milieu to acknowledge that every child is part of a community (Dornyei &

Csizer, 2002). This study has found that within the individual plane, academic tasks cannot be disembedded from broader contexts (as advocated by Haggis, 2004 and Lave & Wenger, 1991) and children are most likely to experience success when their everyday understanding is appropriated (Leont'ev, 1981) to bridge into academic tasks in school. Given that the classroom context is not a separate entity to the outside world, it should be recognised when investigating cognitive development sequences within the classroom setting. Pupils' responses to the tests and tasks undertaken in this study demonstrate that children cannot develop abstract academic concepts in isolation from the classroom context and the wider social and cultural context in which they belong, thus supporting the work of Vygotsky (1994). Using a socio-cultural approach to investigate the classroom plane of analysis permits understanding of how teachers can effectively promote resilience to educational underachievement by creating academic communities that motivate children to learn. The best example is found in the Crew room, where the classroom belonged to the pupils and not just to the class teacher (as outlined in Section 10.2.2). Here, Crew members knew they could take initiatives, move at will, be creative and enjoy their learning experiences. In this classroom, Mr Humour was able to relinquish control and allow pupils the time and space to make meaningful connections between what they already knew and what disciplinary knowledge is required for success in tests. However, to take this approach requires trust and courage from the class teacher. When high stakes testing is at the centre of a teacher's attention, it is particularly difficult to afford children trust and allow them to experiment, take risks and get things wrong. Thus, it is clear that teachers' pedagogic approaches are informed by wider social and cultural constraints. Contrary to traditional psychological models of motivation, a theoretical approach using planes of analysis can account for the wider influences of institutional practices and broader economic and political contexts.

Having established that cognition and motivation need to be recognised as situated practices that cannot be separated from social contexts (as argued by Rogoff, 2003), attention must also be paid to the way teachers are positioned within political and policy contexts. Socio-cultural planes of analysis permit such investigation in ways that competing theoretical approaches cannot. As found in this study, the policy context can make it very difficult for teachers to trust children. For example, when teachers feel they are being judged they will often resort to techniques that seem to be legitimated by policy makers and yet which often do not accord with their own deep knowledge of how children learn. This can be seen in the way teachers

can easily diagnose what is wrong with educational policy approaches and yet few can enact this knowing in their own classrooms. Mr Humour, was, therefore, an exceptional person in eschewing popularist pedagogic approaches to stay true to his beliefs that focus should remain on the whole child and not focus entirely on test scores. This study has also found that teachers' representations of learners are influenced by the wider political context. For example, most teachers in the study drew on overly simple representations of children as bright or not clever and blamed parents for children's failure to function well in schools; this deflects blame away from teachers. Unfortunately, this is what happens when teachers and other professionals are under pressure and are themselves being overly controlled by policies and are dictated to from on high. A sociocultural approach allows us to understand teachers' classroom practices as nested within locale, institutional and political contexts and each of these planes need to be investigated in order to understand what is happening in schools and why some children are, ultimately, more resilient to educational underachievement. It is therefore evident that the political context is a ghostly presence in teacher's classroom practices. A sociocultural approach allows us to take account of the way all planes of analysis from individual to locale are at play in classroom activities and effect influences below the radar of teachers and children's conscious awareness.

Socio-cultural theory is the only theory to consider the mutual embeddedness of pupils' engagement in learning and their social world (Rogoff, 1995) and offers a more complex understanding of the importance of context and classroom context in particular. Existing theories of motivation would not have identified the critical role of the classroom (as embedded within the institution and wider community), which was identified in this study as the most influential plane of analysis. As Rogoff and Lave (1999) argue, cognitive development is greatly influenced by the role of the social orchestration of thinking through the cultural institution. Thus, a socio-cultural approach permits understanding of the wider social and cultural experiences that children bring to the classroom context (de Abreu, 1995). As found in this study, recognition of children's biographies and an understanding that learning is embedded within a wider context permits motivation to be fully understood (McInerney & van Etten, 2004).

It is clear from this study that socio-cultural approaches to learning can help practitioners understand the way that pupil motivation is guided by both social interaction with the class teacher and interaction with the intellectual tools of the culture. Approaching motivation in this way enables researchers to account for the mediation appropriated by material and semiotic tools (language, activity structures, signs and symbol systems) existing within the classroom contexts (Lave & Wenger, 1991). This theoretical framework is unique in its ability to account for the way in which formal and informal interactions within the classroom, institution and locale are central to the process of development. Furthermore, socio-cultural theory can also account for the material culture and discourse within school institutions that convey messages to children that they matter. Individualistic accounts of motivation which focus on internal cognitive mechanisms fail to do so. In this study, the teachers who identified and drew on children's wider experiences appeared to be the most successful. In order to fully understand cognitive development, including motivation, the everyday contexts where children are provided guidance in engaging with and solving novel problems need to be understood. In witnessing the differential instruction provided by teachers in this study, it is clear that some children are better equipped to solve novel problems than others, i.e. those children who are encouraged to autonomously make connections between outside school activities and inside school learning.

Ultimately, socio-cultural theory permits greater understanding of the role of social orchestration of thinking through cultural institutions (Rogoff & Lave, 1999) in a way that cannot be achieved with alternative approaches. It would not have been possible to identify the features of successful schools that defy the locale's underachieving status in relation to motivation and achievement without using socio-cultural planes of analysis. Traditional approaches which favour cognitive assessments and self-report measures of motivation would have identified Highbury Park's Crew room as ineffectual and detrimental to pupils' learning as this cohort didn't perform particularly well on the research SATs tests. Meanwhile, the socio-cultural framework employed in this study could effectively account for the uncharacteristic results for the year of data collection. For example, this framework permitted the researcher to explore beyond pencil and paper methods of assessment to identify that the Crew philosophy and pedagogy is motivating pupils not only to achieve but is also equipping them with socio-cognitive resources to recognise academic concepts in novel tasks. This theoretical approach has also permitted insight into teachers' representations of central

learners in the context of the material culture, classroom atmosphere and interactional styles, which may not have been made accessible through other theoretical approaches. It can therefore be concluded that socio-cultural theory offers a more complete picture of motivation (Haggis, 2004) and has much to offer in helping us understand the complex reality of pupils' motivation to learn in school.

10.3   Importance of the study

Primarily, the uniqueness of this study qualifies its importance as no other study researching low achievement in an underachieving locale has been undertaken on this scale. This study is, therefore, the first of its kind to explore pupil motivation and underachievement from a socio-cultural perspective whilst maintaining planes of analysis. Through the use of different levels of embedded analysis, this study has investigated the complex interaction of social and cultural dimensions within a locale that influences educational attainment. It has contributed a greater understanding of the differential motivation of social groups in the same locale, thus moving the field of research forward from sociological explanations of underachievement or previously dominant individual cognitive models of motivation. In doing so, it has radically shifted understanding of motivation by taking account of the planes of analysis which always considers the child within context. Exploring motivation and underachievement from a socio-cultural perspective integrates the best of psychological and sociological approaches to provide insight into individuals' embedded experiences of classrooms life. This contributes to an area of educational research that has largely been neglected by researchers.

This study is especially pertinent at a time when policy makers are stressing the need for educators to 'just motivate pupils', which infers that a switch in the child's brain simply needs to be turned on. However, as this study has shown, it is not that simple. Motivation cannot be fully understood as an internal cognitive model and, as argued throughout this thesis, is better understood within a socio-cultural framework. This study has also extended Rogoff's (1999) analytical planes of analysis, to consider the broader economy, socio-political factors and geographical constraints whilst also accounting for specific institutional and classroom cultures within which the child's learning is situated.

The research instruments developed and used in this study have revealed what does not show up in tests. The specifically designed research tools have effectively explored children's

ability to recognise academic concepts; required in higher level abstract thinking but not effectively recognised in national standardised tests. This important finding could potentially lend support to critics of the government's current over-reliance on scholastic testing. By replicating formal testing situations, it has been possible to determine how pupils interpret educational resources, i.e. the socio-cognitive resources that pupils bring to testing situations. This study, therefore, stresses the importance of how testing situations are embedded in home, classroom, institution, locale and wider geographical contexts. Finally, the findings of this study have potentially important implications for both policy and practice, with implications for pedagogic reform (as outlined in section 10.5). These research findings will be disseminated within the fields of psychology and education through journal articles.

10.4   Limitations

The main limitation of this study relates to its research design. This study had hoped to specifically focus on schools with parallel classes in each year group to gain a better understanding of different classroom cultures within the same institution at each key stage. This was not possible as the perennial high levels of outward migration experienced in Coalshire have resulted in decreasing school and class sizes. Although attempts were made to overcome this issue by doubling the original sample of two schools to four, this has subsequently resulted in a more complex study which leads to the second limitation; the scope of this study was, without doubt, overly ambitious. In order to adequately research each of the four planes of analysis (locale, institution, classroom and individual), extended periods of data collection were required and an overwhelming volume of data was collected, analysed and written up. The lengthy ethnographic chapters would have been significantly reduced and more easily digestible had the original research design of two schools been feasible to pursue. However, extending the study to four institutions has ultimately increased the value of the findings. Another limitation concerned not being able to use all of the data collected for children in Key Stage 1. Although the 95 Year 2 children completed the CSCE scale, their responses were not reliable enough to incorporate so data from 108 Year 6 children had to be relied upon to depict the social and cultural experiences of children in this locale. Designing the study to assess the experiences of children in KS2 and KS3 (rather than KS1) would have overcome this issue; however, on reflection, the transient nature of learning in secondary school (whereby pupils move to different classrooms for different subjects) would have made

it more difficult to ethnographically depict the classroom culture. The final limitation concerns the timing of the research SATs intervention, particularly the mathematics test. Different teachers had covered different elements of the curriculum at the time of testing, which resulted in methodological flaws in trying to compare test results within the classroom and individual planes of analysis. While this study has declared from the outset that the purpose of the research SATs tests were not used to measure performance but, instead, identify teachers' mediation of the testing situation and pupils' responses to academic assessments, it was nonetheless necessary at times to document the differential performance of groups of learners. Readers need to be aware that these comparisons are affected by this limitation.

10.5   Future directions

Policy: There is a notable absence within current policy and practice of the recognition of belonging, cohesion and community; i.e. the foundations of success at the higher achieving school; Highbury Park. The outcomes of this study garner support for calls to policy makers to design learning cultures that motivate rather than demotivated pupils. Policy makers need to make education meaningful to children and something in which they want to invest. The antithesis of this is encouraging schools (even if tacitly through the publication of educational league tables) to teach to the test. As shown in this study, this approach produces artificial results which do not help children develop deeper understanding of academic concepts. Moreover, it diminishes pupils' learning experiences as teachers are forced to narrow the curriculum to focus on English, mathematics and science subject knowledge demanded of children in SATs assessments. Future policy should, therefore, rethink the current testing situation and address the critical socio-cultural cultures that influence pupil motivation. Moreover, future policy makers ought to fully evaluate existing policy decisions in light of socio-cultural issues. For example, WAG's (2010) RAISE policy to bring in outside role models to promote children's career aspirations may be completely ineffectual as pupils will not be able to relate to them; the gimmick of a sports star enlightening children about the route to success may encourage children to consider that as a career option but as an approach to motivate pupils is inadequate. In order to create sustained learning, as this study demonstrates, role models from within the locale need to be sought, i.e. those who can relate to the Coalshire way of living and who provide an immediate and accessible path to follow.

The current culture of Coalshire is to leave in order to pursue success; children therefore need to be shown how native insiders can create success beyond the academy. Educational policy needs to address this. Finally, policy makers ought to attend to the wider socio-cultural context of effective (HA) schools. These schools are anchored at the heart of the community and, over generations of hard work and outreach, have established effective school-home partnerships which result in strong learning communities and, subsequently, higher academic achievement. While policy makers and local authorities are primarily driven by economic factors, the persistent pattern of school closures and amalgamations (as discussed in the postscript) could result in untold damage, as articulated by the newer LA schools who identify lack of partnership and community as a key determinant in poor educational performance.

Research: Future research needs to acknowledge that motivation cannot be fully understood within a restrictive cognitive framework that fails to include a theoretical conception of the social world. Utilising a socio-cultural framework enables researchers to understand pedagogic and motivational factors while accounting for the relationship between the individual and society. Future research would benefit from rethinking traditional measures of cognitive development and attend to the embedded socio-cultural history and practices of children's outside world that, as Rogoff (1995) argued, channel cognitive development. Further research is also needed to explore individuals' recognition of abstract concepts over their reproduction of drilled subject knowledge within educational contexts.

Practice: Practitioners need to understand how and why some pupils do well; not because of some innate God-given ability or luck (which dissolves teachers of any responsibility in improving the child's academic performance), but because of the role of classroom culture, the social representations teachers hold of pupils and how they teach. Educators also need to become more cognisant of central and peripheral learners within the context of the learning environment. If teachers are aware of the shared characteristics of peripheral learners, they can critically reconsider current practice and create dynamic classroom cultures between themselves and pupils to enable peripheral learners to engage better. The creation of classroom practices that recognise, value and draw on pupils' personal experiences will promote greater permeability of home-school boundaries, thus benefitting learners who can bridge between inside and outside school lives. Practitioners might also benefit from

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attending to and seeking to replicate the features of successful (HA) schools in this study (summarised in section 10.1). By raising awareness of the need for learners to become central members of learning communities, schools can begin to counter issues of peripherality and create meaningful learning experiences for all children.

10.6   Conclusion

Although some children appear to arrive at school with personal qualities that seem to make them more resilient to life's challenges, namely those identified as central learners, other children do not. It is these (peripheral) children that cause the greatest concern to practitioners and policy makers. Unlike central children who progress through the academy as expected, peripheral children are more of a concern for a variety of reasons and are often labelled as unmotivated and disengaged. Attempts to motivate these learners using traditional individual motivational strategies will never work for these children. These pupils do not arrive at school with the socio-cognitive resources needed to succeed in completing novel tasks. For some, they do not arrive in a ready state to learn. For others, broader socio-historical influences prevent them from seeing the value and purpose of education, particularly when they perceive society as having nothing to offer them on completion of formal schooling. Children identified on the periphery of classroom engagement therefore need help before they can approach tasks in the same way that central children do. Within the four planes of analysis (locale, institution, classroom and individual) used in this study, interesting findings have been revealed within each plane but heavy emphasis has to be placed on the classroom. It is within this plane that children can be provided with the greatest resilience to educational underachievement. This study has identified that pupils, particularly peripheral learners, are not likely to succeed unless teachers create classroom cultures that offer children a sense of belonging, community, promote autonomy, bridge across home and school boundaries, recognise children's cultural resources and encourage children to use accessible tools and artefacts within the classroom context to mediate their learning. Only when teachers attend to the classroom, school, home and community/locale contexts in which pupils are embedded will motivation increase. Finally, this study has identified that traditional academic tests need to be reconsidered. The narrowing of the curriculum which has resulted from pressure placed on teachers to attain top positions in league tables is neither beneficial for teachers nor learners. Alternative approaches, as identified in this study, could

be used to motivate and engage pupils better and to help children develop a deeper understanding of curriculum content. To conclude, this study has found that schools can and do indeed make a difference to pupils' success and motivation to achieve. It is only when motivation is explored from a socio-cultural framework that schools and teachers can begin to identify how pupils can be motivated to achieve.

Postscript

Since this thesis was written, Coalshire has been formally recognised as an underachieving locale. Her Majesty's Inspectorate for Education and Training in Wales, Estyn, has found Coalshire's Local Authority Education Services for Children and Young People to be unsatisfactory because "children and young people do not make good progress and standards are well below what is expected" (WAG, 2011c; p.1). Estyn further identify a systemic failure of management which has resulted in educational provision that is poor value for money. The following information, taken from Estyn's (2011) report on the quality of education in Coalshire, highlights the current areas of concern within the educational arena in this locale.

Estyn's (2011) overall assessment of educational outcomes was found to be unsatisfactory for the following reasons: performance in all Key Stages was among the lowest in Wales over the last four years; Coalshire did not meet any of the three Welsh Assembly Government expected benchmarks for performance in secondary schools; and the percentage of learners leaving school without a recognised qualification remains the worst in Wales (Estyn, 2011). Moreover, the achievement gap between boys and girls is larger than the average across Wales.

Support for school improvement was also found to be unsatisfactory, particularly at primary level. Estyn (2011) report that Coalshire authority "does not know all of its schools well enough" (p.7); it was not aware of the issues which resulted in one of its schools being placed in special measures.

Support for additional learning needs was also found to be unsatisfactory. The percentage of learners with statemented special educational needs in Coalshire has risen over the last three years and remains 0.6% above the Welsh average. Estyn found a small percentage of parents and carers lack confidence in Coalshire authority to meet the learning needs of their children.

Leadership and management were also found to be unsatisfactory. Estyn (2011) note how Coalshire has suffered from a history of instability in the leadership of education services and suggest that previous administrations failed to take the difficult decisions needed to tackle significant shortcomings. Estyn further report that "the scrutiny of performance in education by elected members has too often been sidetracked by political point scoring. This has meant that officers and head teachers who have failed to address poor standards have not been

called properly to account" (Estyn, 2001; p.10). Furthermore, school governors were found to have failed in effectively challenging underperformance in schools in Coalshire. Absenteeism rates in Coalshire continue to rise and remain amongst the worst in Wales (Estyn, 2011).

Quality improvement was also found to be unsatisfactory. Estyn (2011) report that Coalshire has unsatisfactory prospects for improvement because unsatisfactory leadership has not challenged underperformance and poor learning outcomes effectively; managers are not making effective use of data to inform the targeting of resources of learners with the greatest need; and leaders have a track record of "slow and incomplete responses to recommendations from successive Estyn reports" (Estyn, 2011; p.2).

Finally, resource management was found to be unsatisfactory. Although Coalshire has the highest total expenditure per pupil in Wales, standards are unsatisfactory. Estyn (2011) found that the education authority do not know whether all learners are appropriately placed and subsequently cannot be sure that its resources are targeted effectively.

Despite these unsatisfactory findings, Coalshire is recognised, by Estyn, as providing adequate measures to promote social inclusion and wellbeing and adequate partnership working. Coalshire is commended for providing good access and school places for pupils.

In light of these findings, Estyn recommend the whole authority requires special measures.

Leighton Andrews, former Minister for Education and Skills, responded to Estyn's "damming indictment of the poor standards of educational attainment and leadership in some of our most deprived communities" (Thomas, 2011; p.1) by arguing that there is no excuse for Coalshire to be failing so many learners, particularly as other small authorities facing similar challenges perform considerably better. Andrews announced in July 2011 that urgent action is required to redress the issues highlighted in the Estyn report, stating that:

> "I will intervene to put the necessary arrangements and support in place to secure improvement as quickly as possible. It is clear that Coalshire requires significant support to secure effective delivery of the improvements needed. My intervention will mean that such support will be provided urgently, which is what this situation demands. There will be a task force led by (another) County Borough Council...One option open to me is handing over responsibility for some or all of Coalshire's executive functions in relation to its education services to another public or private body. I intend to do that and to establish an independent recovery board to oversee the improvements needed, monitor progress made, and provide accountability" (p.3).

Earlier in 2011, the Welsh Assembly Government published added value tables which rated Coalshire as third overall in Wales with two of the top-performing schools in Wales (Thomas, 2011); thus questioning which figures are to be believed.

Finally, it is worth noting that Highbury Park and Lowerbridge schools have been closed since this study was completed. The increased outward migration of Coalshire residents noted in Chapter 4 caused pupil roll numbers to decline. Consequently, Highbury Park, which was firmly rooted at the heart of the community, was amalgamated with a number of other local primary and secondary schools to form a 'super community college' for pupils aged 3-18 years. The strengths of this school identified in this study may have been lost with children no longer having a primary school in their immediate local community. As staff at Fallowfield reported, their problems started when former long-standing community schools were closed and relocated to modern buildings away from the community which fractured relationships with locals and parents. Time will tell what the implications will be for former Highbury Park pupils. Lowerbridge also encountered a merger with an infant school and relocated to another site. North Higherbank and Fallowfield remain as primary schools but Coalshire Local Authority continue to plan mergers and school closures.

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Appendices

Sociocultural Experience Chart

ACTIVITY	Yesterday or Sooner	Within the Last Week	Within the Last Month	Within the Last Year	Ever (More than 1 year)
Park					
Beach					
Zoo					
Museum					
Fun Fair					
Holiday					
Aeroplane					
Boat					
Train					
Bus					
Car					
Van					
Mountain					
Picnic					
Family Outing					
Taxi					
Town					
Nan & Grancha					
Auntie's House					
Saw Mum					

Saw Dad					
Went Somewhere Alone					
Went with Friend					
Watched TV					
Watched Sky					
Watched Video					
Watched DVD					
Cinema					
Theatre					
Ice Skating					
Bowling					
Library					
Helped Mum					
Helped Dad					
Read a Book					
Read a Magazine					
Read with S'body					
Went to Doctor's					
Dentists					
Opticians					
Hairdressers					
Restaurant					
Pub					

Swimming					
Football					
Netball					
Kickboxing					
Tennis					
Rugby					
Hockey					
Went to England					
Went Abroad					
Played Dinosaurs					
Played Sharks					
Toys (other)					
Brought Work into School					
Enjoyed Maths					
Enjoyed English					
Enjoyed Science					
Enjoyed School					
Enjoyed Learning					
Enjoyed Home					

Played with Parent					
Played with Friend					
Played WordGame					
Played Number Game					
Did Homework					
Playstation					
Used P.C. (Games)					
Used P.C. (Work)					
Internet					
Drawing					
Colouring					
Writing (for fun)					
Scooter					
Bike					
Go-Kart					
Quad Bike					
Motorbike					
Pokemon Cards					
Construction					
Lego					
Dolls					
Played on Streets					
Gameboy					

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WILDTRACK MAGAZINE 1
EDITION

APPENDIX B - KS2 ENGLISH RESEARCH SATS TEST

OCEAN VOICES

ENGLISH

KEY STAGE 2 2001

READING LEVELS 3-5

APPENDIX B CONT.

KS2 ENGLISH SATS TEST ANSWER BOOK

Page	Marks
5	
7	
9	
11	
13	
15	
Total	
Borderline check	

Reading Answer Booklet

Ocean Voices

2
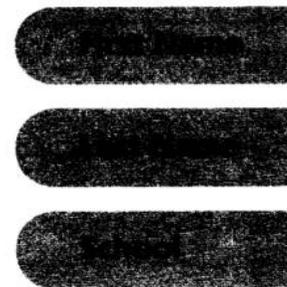
Getting to Know
Dogs

Name	
Score	Level and grade

MATHEMATICS

KEY STAGE 2 2001

LEVELS
3-5

CALCULATOR NOT ALLOWED

PAGE	MARKS
3	
5	
7	
9	
11	
13	
15	
17	
TOTAL	
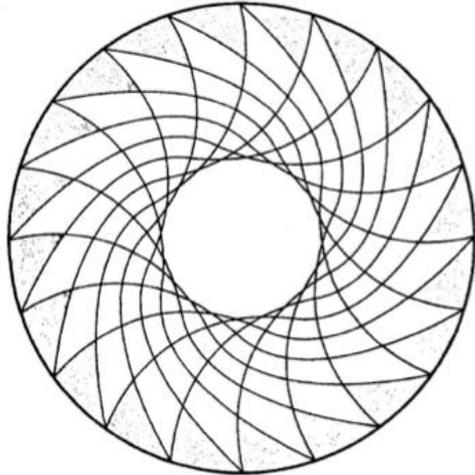
First Name

Last Name

School

Key stage I
2000

Mathematics booklet

Name

Score

Level and grade

464
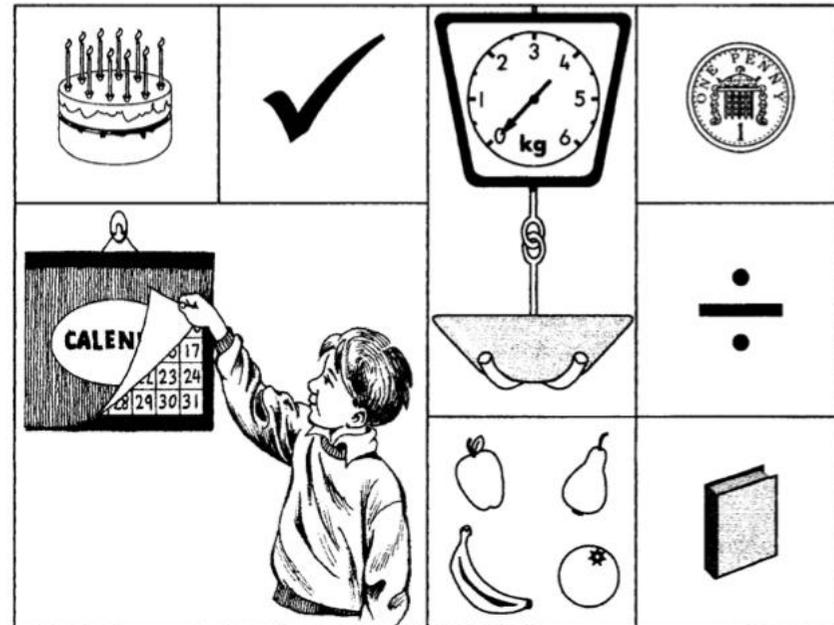
APPENDIX F - TEACHER RATING SCALE

School_____   Name_____

Please would you identify four children you consider to be most involved in learning:

1.
2.
3.
4.

Please would you identify four children you consider to be the least involved in learning:

5.
6.
7.
8.

Please answer the following questions as fully as possible:

1. What was involved in making your judgement for each group?

2. How would you describe each of these groups?

3. What characteristics / attributes did you consider?

4. How do you perceive the future success of the children in each of these groups?

Please rate each child from 5 (highest score) to 1 (lowest score) on each of the following items:

Name of child: _____

Involved	5	4	3	2	1	Passive
Motivated	5	4	3	2	1	Lazy
Social	5	4	3	2	1	Reticent
Hardworking	5	4	3	2	1	Makes minimal effort
Well-behaved	5	4	3	2	1	Challenging behaviour
Joy to teach	5	4	3	2	1	Difficult to teach
Anticipate success	5	4	3	2	1	Anticipate failure
Able academically	5	4	3	2	1	Struggles academically
Well-suited to teaching style	5	4	3	2	1	Not suited to school life
Learning occurs outside classroom	5	4	3	2	1	No learning outside school

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Thank you for completing this task.

Teacher Perceptions

Involvement
- Why do you think some children are keener to get involved in the learning process than others?
- What do you think are the main influences on a pupil's motivation?
- Do you think innate ability or support and encouragement from home is more of a determining factor?
- Is achievement more related to innate ability or involvement and motivation?
- How much of a difference does parental involvement have on a child's success in school?
- Why do you think the NC benefits some children and not others?
- How much 'out of school learning' occurs for the children in your class?
- How much support do you receive (parental/classroom assistant/SENCO?)

Locale
- How would you describe the school catchment area?
- How would you describe the social and cultural experiences of the children in your class?
- Is this LEA very different to others? (i.e. achievement and experiences?)
- Would you say the children's home and school worlds are closely matched?

Results
- What did you think of the SATs results (last year?)
- How were the children prepared for the SATs?
- Were there many surprises?
- What do you think are the key barriers to success?
- If there was one thing that would help children achieve, what would it be?
- Why do you think there is so much variation of results amongst schools within the same area?
- Why do you think it is that some schools aren't able to achieve promising results year on year?
- In what way are these schools different to your school?
- How do you think other teachers/schools collectively should be raising standards?
- Do you think SATs/Assessments are really necessary in primary schools?

Focus Children
- Looking back at the focus children, how did they do (meet predictions or do better?)
- How do you anticipate the future success of the children in your class?
- Could you rank the curriculum subjects in order of importance?

Terminology
Targets / Predictions / Assessment
Teacher assessment published
School's strategic thinking for not putting children in for tests – advantages?
Availability of league tables / how widely information is published

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Name _____   School _____

APPENDIX H- KS2 ENGLISH QUESTIONNAIRE

1   Do you enjoy English?_____
Why?_____

2 Which parts of this test did you like?
_____
Why?_____

3   Which parts did you dislike?
_____
Why? _____

4   Did you find the questions difficult or easy?
_____
Why? _____

5   Was this a challenging test? _____
Why? _____
Which was the most challenging bit? _____

_____

6   Did you try hard in this test or give up on
some of the questions? _____
Why? _____

7   Did you have to rush to finish the test in
time? _____

8   How can this test be made more
interesting?_____

9   How well do you think you have done? / teacher ?
_____ / _____

10   Are you interested in whales and sea
creatures?_____

11   What topic would you rather read about in a
test? _____

12   Name your favourite *types/genres* of books
_____

13   Do you think you are a good reader? /speller / writer
a)_____ b)_____ c)_____

14   How often do you read at home? / How many books?
_____ / _____

15   Does anybody ever read with you?
_____

16   Do you think you will have to use English
when you finish your education?_____
What for?
_____

17   When might you use English outside the
classroom?
_____

18   The job I most want to have is _____

19. I actually think I will be _____

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NAME_____ SCHOOL_____

Getting to know Dogs

1. Did you enjoy this story?

2. Did you find it easy?

3. Did you have to rush to finish?

4. How much did you want to finish?

5. Do you think you got the answers right?

6. Did you try your best?

7. Do you think your teacher will say you have done well?

8. Do you think your friends will think you have done well?

9. Would you like to read more about dogs?

YES   NO

10. Draw your favourite part?

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11. Do you read books with anybody at home?

YES   NO

12. Who reads with you? _____

13. Do you like reading books?

YES   NO

14. What do you like reading about?_____

15. Are you good at reading?

YES   NO

16. Are you good at spelling??

YES   NO

17. Are you good at writing stories?

YES   NO

18. How often do you read at home?
_____

19. How many books do you own?
_____

20. What do you like doing at home?

21. Do you go to any clubs?

YES   NO

22. What are they?_____

23. Draw what you like to do in the holidays?

1.   2.   3.

24. Do you go on outings?

YES   NO

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Name _____

1   Do you enjoy maths?_____
Why?_____

2   Which parts of this test did you like?
_____
Why?_____

3   Which parts did you dislike?
_____
Why? _____

4   Did you find the questions difficult or easy?
_____
Why? _____

5   Was this a challenging test? _____
Why? _____
Which was the most challenging bit? _____
_____

6   How well do you think you have done?
_____

7   Did you try hard in this test or give up on some of the questions?
_____

8   What made you want to keep trying when you couldn't find the answer?_____

9   What makes you work hard in school?
_____

10 Who encourages you to do well in school?
_____

11   Did you have to rush to finish the test in time? _____

12   How can the test be made more interesting?
_____

13   Do you sometimes compete with your friends to get the best marks? _____
Why?
_____

14   Do you think you will have to use maths when you finish your education?
_____
What for? _____

15   When might you use maths outside the classroom?
_____

16   Do you think it's 'cool' to work hard in school? _____
Why? _____

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NAME	SCHOOL

+   -   _M_ _THS_ X

1. Did you enjoy these sums?

2. Did you find it easy?

3. How much did you want to finish?

4. Do you think you got the answers right?

5. Did you try your best?

6. Do you think your teacher will say you have done well?

7. Did you finish all of the questions?

8. Would you like to do more work like this?

YES   NO

9. What was your favourite part?

_____

10. Do you do any maths with anybody at home?

YES   NO

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11. Who helps you?

MUM   DAD   GRAN

GRAMPS   BROTHER   SISTER
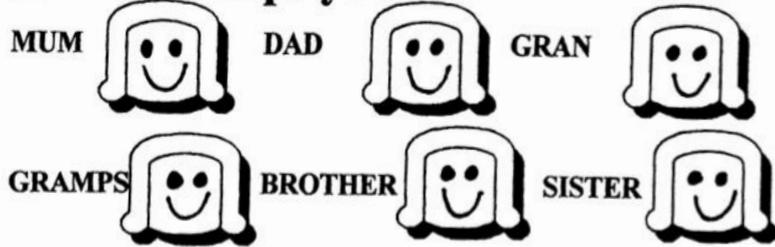
12. Do you like maths?

YES   NO

14. What do you like best? _____

15. Do you get pocket money money?

YES   NO

16. Do you save it?

YES   NO

17. Draw what you like to spend it on?

18. Do you help to do any jobs at home?

YES   NO

19. Do you do jobs for money?

YES   NO

20. Do you ever do the shopping?

YES   NO

21. Do you ever play any number games?

YES   NO

22. Is it important to be good at maths?

YES   NO

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**Interview Schedule**

1. Who do you live with?
2. Do your parents work?
3. What do you normally do when you get home from school?
4. How long do you stay out for (playing)?
5. What do you usually do in the evenings?
6. Do you ever talk to your family about school?
7. What do you tell them about?
8. Who would normally ask you about your school day?
9. Do you ever have homework?
10. How frequently?
11. How long does it normally take you to do?
12. When do you normally do your homework (immediately or last minute)?
13. Does anybody ever help you with it?
14. Do you have anybody that you can ask for help?
15. Do you think you work hard in school?
16. Do you always try to do your best?
17. Why?
18. Do you sometimes feel disappointed if you don't do your best?
19. Who is most disappointed if you don't do well?
20. Who is most pleased for you when you do well in school?
21. What would they normally say to you?
22. What is your normal going-to-bed time?
23. Are your parents usually strict about this?
24. Do you ever do anything to help around the house?
25. Do you ever do any jobs for money?
26. What sort of things?
27. Do you get told off much?
28. What things would you be told off for doing?
29. Do you try hard to please your parents?
30. Do your parents always come to parents evenings, school assemblies and concerts?
31. Do they often encourage you?
32. Do you think this makes a difference to how well you do in school?
33. What do you think it would be like if parents didn't encourage children to do well?
34. What hobbies do you have?
35. Who do you do these things with?
36. Why do you think they share this interest?
37. Do you go to any after-school clubs?
38. What activities do you do?
39. How much TV do you watch each night?
40. Do you have Sky or Cable TV?
41. What programmes do you watch?
42. Do you ever watch nature or documentary programmes?
43. Do you ever watch the news?
44. Do you have a favourite programme?
45. Why is it your favourite?
46. Do your parents read any newspapers or magazines?
47. Which ones?
48. Do they drive a car?
49. Which one(s)?
50. Do you have a P.C. computer?
51. Do you have a games console?
52. What are your favourite computer games?
53. How often do you play computer games?
54. Who in your family uses your P.C. the most?
55. Do you have the internet at home?
56. Do you ever look up any websites?
57. Which ones and why do you like them?
58. Do you ever use your computer for school work?
59. Do you ever do any school work for fun?
60. Do you ever do any work at home and bring it in to show at school?
61. Guess how many books you have at home?
62. How many of them are yours?
63. Have you read many of them?
64. Are you a keen reader?
65. Who reads the most in your family?
66. Do you usually read alone?
67. If you get stuck on a particular word, how do you work it out?
68. Do you ever ask anybody to help you?
69. What books do you enjoy reading?
70. Do you prefer fiction or factual books?
71. Do you ever read any comics or magazines?
72. Do you have a favourite author or poet?
73. Who normally buys books for you?
74. Does anybody in your family ever buy you books?
75. Do you ever spend your own pocket money on books?
76. How often do you visit the library in town. Who takes you there?
77. If it was your birthday or Christmas soon, what presents would you ask for?
78. What do you normally spend your pocket money on?
79. What do you normally do in the summer holidays?
80. Where do you go on holidays and who with?
81. Where do you normally stay?
82. Do you ever go to the beach?
83. Who usually looks after you in the holidays?
84. Do you ever go on day trips with your family?
85. Where to?
86. Do you ever go to the park?
87. Zoo?
88. Museums?
89. Techniquest/science museums?
90. Where's the furthest place you have ever been away from here?
91. Have you ever been on a train?
92. A ferry?
93. Aeroplane?
94. Do you ever go for walks, or picnics or bike rides with your family?
95. Have you ever been bowling?
96. To the cinema?

97. What is your favourite film?
98. Why is it your favourite?
99. Do you ever go swimming?
100. What do you do with your rime in the school holidays?
101. How often do you do things with your family in the holidays?
102. How much time would you spend watching TV or videos in the holidays?
103. Playing computer games?
104. How much do you read in the holidays?
105. Do you ever get bored at home?
106. Why is that?
107. Would you say your brothers and/or sisters are good in school?
108. What would you like to be when you grow up?
109. Do you think this will be easy to do?
110. Does this make you work harder in school?
111. Why?
112. What do you normally do during playtimes?
113. Who with?
114. Do you think it is important to eat breakfast before you come to school?
115. Why?
116. Do you always have it?
117. What foods do you normally have for lunch?
118. What about dinner?
119. What are your favourite things to eat?
120. How much and how often do you eat fruit and vegetables?
121. Do you ever have to make food for yourself, or does somebody always do it for you?
122. Have you ever been to a theatre?
123. Do you have a mobile phone?
124. Have you ever been to a restaurant?
125. Have you ever been to a pub?
126. Do you ever go on school trips?
127. Where have you been?
128. How many naughty children do you think there are in your class?
129. Why do you think some children always work hard in school?
130. Why are some children naughty in school?
131. Are you looking forward to going up to your next class?
132. Why is that?
133. Tell me about all the good things there are about school.
134. What are the bad things about school?
135. If your were in charge of the school for a day, what changes or improvements would you make, to make school better for children
136. When you are older, do you think you will still be living here, or will you move away?
137. Why is that?

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NAME _____ SCHOOL _____

Tick which 2 activities are most alike and explain why

1.

2.
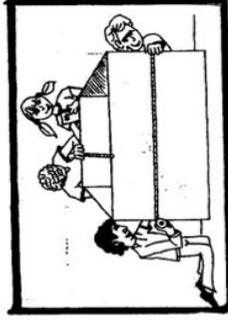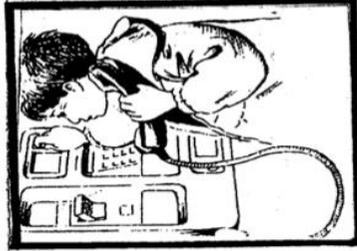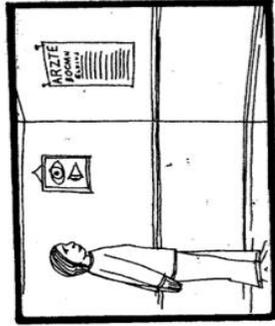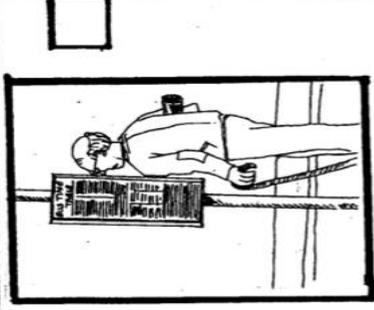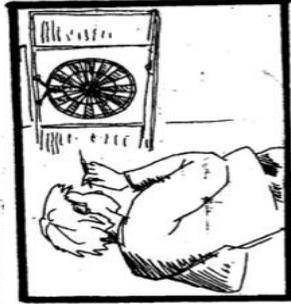
3.
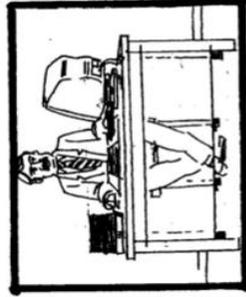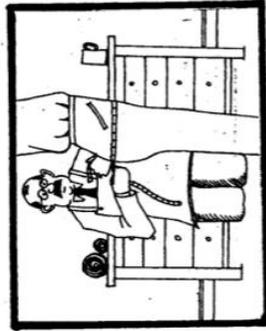
4.

How easy or difficult are you finding this? _____

475

Tick which 2 activities are most similar and explain why...

5.
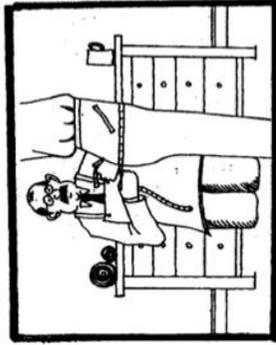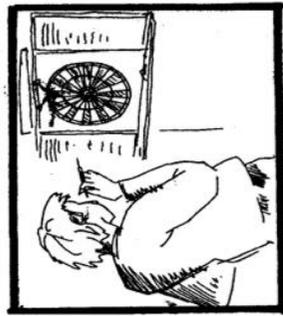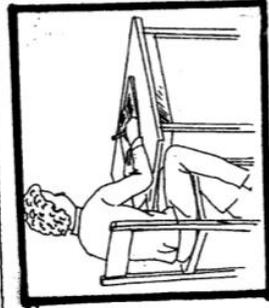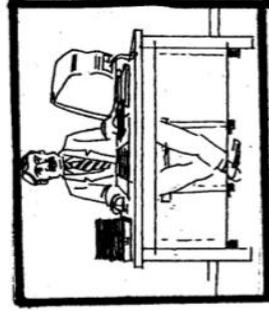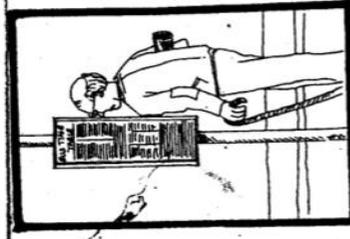
Did you enjoy this activity   Why?

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APPENDIX N - SORTING TASK

Book Sale
Any 3 books for £14.50

HOUSE
DOG
CAT
FISH
FROG

479

EO/mo

Science

480