Qualifications, Knowledge and Curriculum Divisions: An analysis of the Welsh Baccalaureate Advanced Diploma

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Declarations

This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed *S. Bibila*

Date 30 May 2017

STATEMENT 1

This thesis is being submitted in partial fulfilment of the requirements for the degree of PhD in Social Sciences (Education).

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This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by explicit references. The views expressed are my own.

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Date 30 May 2017

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I hereby give consent for my thesis, if accepted, to be available online in the University's Open Access repository and for inter-library loan, and for the title and abstract to be made available to outside organisations.

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Date 30 May 2017

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Dedication

Στη Μητέρα μου,

με απέραντη ευγνωμοσύνη…

To my Mother,

with immense gratitude…

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Abstract

This thesis is based on a research study that examined aspects of the implementation of the Welsh Baccalaureate Advanced Diploma. Particular emphasis is given to the compulsory integration of Essential Skills Wales into the upper-secondary curriculum and the extent to which this contributes towards fulfilling the policy promise to offer a common learning Core to all students irrespective of their programmes of study and site of learning.

By drawing insights from Bernstein's sociology, I provide a principled analysis of the challenge of integrating these generic forms of everyday knowledge and make empirically visible their theoretically identified misrecognition and complexity. Based on a comparative twin case study (i.e. Communication and Application of Number) carried out across six considerably different educational sites, my findings uncover the peculiarities and challenges of pacing and evaluating the teaching and learning involved in Essential Skills Wales, and also point to administrative constraints, individual and institutional commitment to the demonstration of knowledge acquisition (i.e. certification).

Students' choices of subjects and qualifications (i.e. A level and BTECs), and the prioritisation of these, point to the power Higher Education institutions have to influence upper-secondary education. This is a separate strand of empirical work in the study, through which we see the possibility of a shift towards vocational qualifications under the overarching Welsh Baccalaureate Advanced Diploma. Based on this indication, I put forward the suggestion that, although the Welsh Baccalaureate is a notable attempt to change the relationship between specialised and everyday knowledge, and between academic (general) and vocational qualifications, it remains the latest form of the applied studies track in a tripartite upper-secondary system.

To conclude, the Welsh Baccalaureate may contribute to the creation of a more subtle system of pedagogic differentiation, but upper-secondary education in Wales and the rest of the UK will most likely continue to be highly specialised, competitive and stratified.

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List of Abbreviations

A level	**GCE Advanced Level -** General Certificate of Education Advanced Level
AS level	**GCE Advanced Subsidiary Level -** As above - Advanced Subsidiary
BTEC	Business and Technology Education Council
CPVE	Certificate of Pre-Vocational Education
CQFW	Credit and Qualifications Framework for Wales
DCELLS	Department for Children, Education, Lifelong Learning and Skills
DES	Department of Education and Skills
DOE	Department of Education
DVE	Diploma of Vocational Education
EQF	European Qualification Framework
ESOL	English for Speakers of Other Languages
ESW	Essential Skills Wales
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
ICT	Information and Communication Technology
IPPR	Institute for Public Policy Research
IWA	Institute of Welsh Affairs
LEA	Local Education Authority
MSC	Manpower Services Commissions
NSOE	New Sociology Of Education
NVQ	National Vocational Qualification
OCR	Oxford, Cambridge and RSE Examinations
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
PSE	Personal and Social Education
QF -EHEA	Qualification Frameworks in European Higher Education Area
SCANS	The Secretary's Commission on Achieving Necessary Skills
STEM	Science Technology Engineering Mathematics
TVEI	Technical and Vocational Education Initiative
WAG	Welsh Assembly Government
WBQ	Welsh Baccalaureate Qualification
WEW	Wales, Europe and the World
WG	Welsh Government
WJEC	Welsh Joint Education Committee
WO	Welsh Office
WRE	Work Related Education

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Chapter 1. Introduction

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1. Introduction

1.1 Chapter Overview

"If all knowledge is from a standpoint and there are no standpoint-independent criteria for making judgements, appeals in terms of 'social justice' or the 'common good' become no more than other standpoints." *Young (2008, p. 27)*

"Irreducible sets of robustness criteria – epistemic, ethical and aesthetic – have always contested for dominance in the academy (…) each has had its day of dominance. This should not mean that their natural disciplinary carriers should fall from favour simply because one set dominates at any given historical moment."

Young and Muller (2013, p. 237)

My aim in this chapter is to provide a comprehensive introduction to my research study, starting with my motivations and personal background, moving on to the empirical undertaking and the wider socio-political context in which the research was located and concluding with the contribution it makes to upper-secondary education in Wales and to curriculum studies. I use the opening quotes as an indication of my underlying motivation for completing this study, that is, my belief that researching curriculum principles and principles of justice can potentially contribute towards achieving educational equity and minimising educational disadvantage in a particularly competitive level of study (i.e. upper-secondary).

I start the chapter by introducing the Welsh Baccalaureate as a secondary education qualification and curriculum framework. Here, I point out the limited research that exists on this important development, a development that is almost a 'trademark' of the increasingly distinct educational approaches followed by two countries that were until very recently considered to form one 14–19 education system, that of England and Wales. In this chapter, I point out the under-studied Welsh Baccalaureate Advanced Diploma as an upper-secondary qualification and curriculum framework and the under-studied, complex and misrecognised generic modes of pedagogised knowledge (Bernstein, 2000, pp. 53–59) such as Communication and Application of Number.

By giving an account of practical considerations and how I theoretically draw from Bernstein's sociological project, I make clear my research objectives, summarise my conceptualisation of the study and justify my methodological choices. In the last section, I give details of how this thesis is organised and I outline the content of each of the nine chapters. Here, I also summarise my findings and final position on the issues I set out to examine.

1.2 A (Personal) Tale of Two Systems

As a student nurse newly arrived in the UK, and having completed my secondary studies in Greece, I was astonished by certain features of the secondary education system in England and Wales: the existence of qualification awarding bodies, the plethora of available qualifications, an academic (general) upper-secondary curriculum based entirely on free choice and the total lack of a general education element for students of vocational programmes. By the end of my PhD studies, these early observations became a clearer understanding of the idiosyncrasies of a qualification-driven system and the unsuccessful attempts to bring together academic and vocational education.

More than a decade after my arrival in the UK, and again through my PhD studies, I was once more taken by surprise to read about the existence of a trisected system of education that dated back to the mid-1800s and a series of reports and Acts of Parliament that dealt with the education provision for upper, middle and labouring social classes separately (Maclure, 2006, pp. 70–97).[1] This tradition still seemed apparent in the recommendations of the Norwood Report in 1943 (McCulloch, 2007) and the arrangement of state-

[1] The 1864 Clarendon Report (cited in Maclure, 2006, pp. 83–88) recommended that the curriculum of the elite boarding public schools found only in England should consist of Classics, a Modern Language, Mathematics, two Sciences, History, Geography, Fine Arts (drawing) and music. It was followed by the 1868 Public Schools Act. The Taunton Report (1868) (cited in Maclure, 2006, pp. 89–97) dealt with the education provision for upper and lower middle-class children in England and Wales and recommended different leaving ages and curricula according to the differing purposes of their education. It was followed by the 1869 Endowed Schools Act. The 1861 Newcastle Report (cited in Maclure, 2006, pp. 70–78) on the education of working-class children and the 1870 Elementary Education Act which followed it extended elementary provision to all children aged 5–13 based on the 3Rs = Reading, 'Riting (writing) and 'Rithmetic (arithmetic).

funded secondary education based on grammar, technical or secondary modern schools (Brooks, 2008). Arguably, the raising of the school leaving age to 16 in the 1970s and how consecutive governments have responded to the socio-economic turbulence of the 1980s have given tripartism many distinct forms, with the Welsh Baccalaureate Advanced Diploma being the newest applied studies track as I claim in sub-section 9.3.1 of chapter 9.

The first country in the UK that attempted to unify (Spours and Young, 1996; Raffe et al., 1997; 1998a; Spours et al., 2000) its 14–19 curriculum and assessment system was Scotland through its 1999 *Higher Still* initiative. By re-engineering study pathways, the reform aimed to tackle a wider challenge all (post-) industrialised countries have been facing in the last 30 years: to accommodate in an expanding secondary education system an increasing number of young people, of varying abilities and in different life circumstances, and to offer them clear and accredited routes for progression on to work or further study.

While Scotland has had a distinct education system since the establishment of state education, the differences between England and Wales have been less profound. In that respect, the democratic devolution in 1999 signalled new directions for 14–19 education in what was until then considered an 'England and Wales' system. Since the late 1970s, Wales had been resisting reforms and initiatives that were favoured in England (Whitty and Power, 2000; Raffe, 2005a) and that had promoted the 'rise of the market' in education through the publishing of league tables, the weakening of Local Education Authorities (LEAs), the selection of students by schools and the creation of wider diversity among schools.

Shortly after my arrival in the UK, the then First Minister of Wales Rhodri Morgan made a speech to the National Institute for Public Policy Research at the University of Swansea. His memorable expression of the "clear red water" (that came to my attention more than a decade after!) not only separated the policies of his administration from those of New Labour in England, but it sealed a commitment to the deep-seated social democratic ideals of Welsh society:

universal entitlements, equality of outcome and collaborative forms of public service provision.

It was in this spirit that the Welsh Baccalaureate of the study was introduced to schools and colleges as a pilot project in 2003, embracing part of the vision of the Working Group for 14–19 Reform (2004) for an entitlement to a common curriculum and qualifications for all secondary students – a vision that the English government went on to reject at the time. This partial embracement, which I discuss in more detail in chapter 2, unlocks a number of potential opportunities and limitations for equalising the attainment of cultural and material capital by upper-secondary students of the Welsh Baccalaureate. Based on my empirical work and findings, I discuss these opportunities and limitations in chapters 6, 7 and 8. Drawing upon these insights, in sub-section 9.3.3 of chapter 9, I move on to discuss the implications of my findings for teaching and learning on new Welsh Baccalaureate Advanced (see Figure 11, p.241) which was introduced in September 2015 and will be first awarded in 2017.

1.2.1 The Welsh Baccalaureate

The Welsh Baccalaureate is the first national attempt in the UK to establish a baccalaureate-type curriculum model under a single qualification frame for all stages of 14–19 education. I refer to it as a baccalaureate-type curriculum model because unlike a 'typical' Baccalaureate curriculum, for example the French Baccalaureate or other proposed models of UK Baccalaureates (see section 2.3 of chapter 2), it is not based on a range of curriculum subjects and it retains within its structure blocks of study based on Optional qualifications (e.g. GCE Advanced Levels, BTECs, NVQs) that pre-existed its development.

Its promise to offer a common learning Core to all students irrespective of their Optional programmes of study and site of learning (WAG, 2002a; 2002b; 2003; WJEC, 2008b; 2010a; 2010b; 2010c) is limited to the 'attachment' of a compulsory common Core programme/Certificate. For the Welsh Baccalaureate of the study this is comprised of two interdisciplinary and theme-based taught components (Wales, Europe and the World; Personal and Social Education), a work experience placement (Work-Related Education), a research project (Individual Investigation) and a suite of six Essential and Wider Key Skill

qualifications.[2] Completion of both the Optional programmes of study/qualifications and the Core programme/certificate leads to the award of the Welsh Baccalaureate Diploma which is offered at a Foundation, Intermediate and Advanced level. Figure 1 shows the structure of the Welsh Baccalaureate.

Figure 1. *The structure of the Welsh Baccalaureate (Taken from WJEC, 2013a, p. 6)*

Although this qualification and curriculum model has not been the statutory provision for all secondary students in Wales at the time of the study, the government has been systematically promoting its take-up by schools and colleges by providing financial and performance-related[3] incentives. The vision to place the Welsh Baccalaureate at the centre of the newly developed national qualifications system was also reflected in Huw Evans' review of qualifications for 14- to 19-year-olds in Wales (WG, 2012b).

Despite the increasing importance of the Welsh Baccalaureate within the 14–19 education system in Wales, and the government's systematic efforts to establish its universal adoption (Dauncey, 2015), there has been very limited research on

[2] The three Essential Skills Wales of the Welsh Baccalaureate of the study are: Communication, Application of Number and Information and Communication Technology (ICT). The three Wider Key Skills are: Improving Own Learning and Performance, Problem Solving and Working with Others.

[3] Performance-related measures are calculated using points based on exam results for nine (as per July 2014) qualifications. Following the introduction of the New Welsh Baccalaureate Advanced in September 2015, the Welsh Baccalaureate measures will be introduced for reporting in 2018.

it. With the exception of the two evaluations of its pilot scheme (Greatbatch et al., 2006; Hayden and Thompson, 2006a–h; 2007), research reported for internal purposes by the Welsh Joint Education Committee (WJEC)[4] on the integration of Key Skills (WJEC, 2010a; 2010b; 2010c) and two research studies that examined the role of the Welsh Baccalaureate Advanced Diploma in widening access to Higher Education (Taylor et al., 2013a) and its impact on the academic performance of undergraduate Biomedical Sciences students at a Russell Group Higher Education institution (Yhnell et al., 2016), there is no other research literature in the public domain.

By locating my research study at the threshold delineating policy intentions, curriculum principles and actual pedagogic practices, I provide a principled analysis of this overarching qualification and curriculum innovation with a view to identifying its strengths and weaknesses, thus clarifying those areas where further efforts will be required.

1.3 The Study

The starting point for my research was a commitment to educational equity and my desire to support the search for curriculum principles and principles of justice to contribute to the education of young people in Wales. I was particularly intrigued by policy promises that the Welsh Baccalaureate can bring together academic (general) and vocational education and can provide a common learning Core to all young people irrespective of their Optional studies and site of learning.

Defining what 'academic' and 'vocational' is and how to 'measure' their distance was an ongoing conceptual and empirical challenge, together with my analytical decision to keep qualificational and curricular aspects of this 'bringing together'

[4] The Welsh Joint Education Committee (WJEC) was the awarding body/examination board responsible for administering and awarding the Welsh Baccalaureate Qualification at the time of the study. During the study, Qualifications Wales was being established with the intention to begin its operation by the end of 2015 (see also footnote 16 , section 2.3 of chapter 2).

distinct.[5] At many points during the study, I acknowledged that these aspects are inextricably intertwined and their linkage seems to be at the joining point of evaluation (assessment).

1.3.1 Part 1 of the Study

Being unfamiliar with the Welsh Baccalaureate itself and with features of upper-secondary education in Wales and the rest of the UK, I used the first part of the study to engage with the broad literature to gain an understanding of how the Welsh Baccalaureate was developed, and the wider socio-political context in which it is located, and to narrow down the focus of the study.

Both the internal (Hayden and Thompson, 2006c; 2006d; 2006f) and external evaluations (Greatbatch et al., 2006) of the Welsh Baccalaureate pilots and Taylor et al. (2013a) uncovered concerns over students' prioritisation of its different components (i.e. Core Certificate, Key Skills and Optional qualifications). These studies also pointed out that these qualifications and the Welsh Baccalaureate Advanced Diploma as their overarching award are not uniformly accepted by Higher Education institutions, especially highly competitive ones (e.g. Russell Group and the 'elite' such as Oxford, Cambridge Imperial and LSE) whose graduates can expect higher earnings and higher-status jobs (Bratti et al., 2004; Power and Whitty, 2008).

Academic (general) and vocational in this part of the study refer to different kinds of upper-secondary qualifications (e.g. A levels, BTECs, NVQs, Essential Skills) that open up different progression routes to Higher Education. The first research objective for this part of the study was to:

> 1. Establish the percentage of students that combine academic (general) and vocational qualifications as part of their Optional studies.

As the study unfolded, I developed two further research objectives:

[5] When I refer to the Welsh Baccalaureate as a qualification, or when I discuss issues pertinent to certification, I tend to use the term Welsh Baccalaureate Advanced Diploma or Welsh Baccalaureate Qualification (WBQ).

2. Examine how Essential and Wider Skills are portrayed in official pedagogic documents of the Welsh 14–19 education context and

3. Examine how key agents involved in curriculum development and practice perceive the purpose and practicability of integrating Communication and Application of Number in the Welsh Baccalaureate.

In this first part of the study, I followed a multi-methodological approach (Mingers and Brocklesby, 1997) and combined an examination of observable social trends, policy implications and actors' views. This approach allowed me to be flexible and to capture many contextual aspects, also giving me the opportunity to return to this part of the study and interpret findings within a single conceptual framework. I collected data from a variety of sources (Essential Skills guidelines, teaching specification, and policy documents, and interviews) that I analysed using basic textual/lexical analysis (Cruse, 1986; Stubbs, 2001) and framework analysis (Richie and Spencer, 1994; 2002). I found framework analysis particularly suitable for this stage of the study as it allowed me to address contextual and diagnostic (Richie and Spencer, 2002, p. 307) research concerns, helping me in this way to sharpen my research focus and to provide a contextualising basis for interpreting the findings of the second part of the study.

The value of the first part of the study, however, extends beyond these aspects as I bring to attention the possibility of a shift towards vocational qualifications under the overarching Welsh Baccalaureate Advanced Diploma, an issue that has not been previously discussed.

1.3.2 Part Two of the Study

Introducing Key Skills in the curriculum is a typical example of an integrative approach to bring together academic (general) and vocational education by "creating a new kind of curriculum, rather than simply mix academic and

vocational elements" (Raffe, 2002, p. 3). The form of Essential and Wider Key Skills, as well as their integration into the curriculum, is very similar to the 'Dearing' Key Skills (Dearing, 1996) and the Curriculum 2000 reforms in England. In both cases, major challenges stemmed from the assessment-led approach to their teaching (James and Brewer, 1998; Hodgson et al., 2001; Ecclestone, 2002; Hodgson and Spours, 2002; 2003; 2005; Greatbatch et al., 2006; Hayden and Thompson, 2006a; WG, 2012b) as well as the lack of experience of schools to teach Skills, especially at an upper-secondary level (West et al., 2000; Hodgson et al., 2001; Greatbatch et al., 2006; Hayden and Thompson, 2006a).

Internal research carried out by the WJEC (2010a; 2010b; 2010c) also highlighted that apart from previously identified problems such as administrative burdens and increased paperwork relating to portfolio building, there are also challenges with the curriculum and assessment principle of naturally occurring evidence and the potential conflict between the "integrity of subjects and the need to show Key Skill development" (WJEC, 2010b, p. 5). By bringing to the fore the organisation of the curriculum and pedagogic practices as the objects of the study, in the second part of my research, the distinction between 'academic' and vocational' education dissolves into Bernstein's three modes of pedagogised knowledge (i.e. singulars, regions and generics; see sub-section 3.2.1 of chapter 3) (2000, pp. 51–53). These modes are characterised by differing knowledge bases, foci and social relations and are differentially positioned in the fields of re-contextualisation and reproduction. Bernstein (2000, pp. 28–34 and pp. 60–61) uses re-contextualisation to refer to the process of selecting and organising different classes of knowledge available in society (intellectual, practical, expressive, official or local) into pedagogic discourse. Knowledge therefore undergoes one transformation from the field of production (universities, research centres, art sites, etc.) as it becomes curriculum knowledge, and a second transformation in the field of reproduction (education sites/classrooms) as it becomes classroom knowledge through the interaction of students and teachers (Delamont, 1983; Delamont and Galton, 1986).

The misrecognition and complexity of generics is acknowledged by Bernstein (2000, p. 53, 55, 59) but social realist[6] studies that looked at the structuring of curriculum knowledge (Bertram, 2012; Shay, 2013; Hewlett, 2013; Winberg et al., 2014; Johnson et al., 2015) did not place generics at the centre of their analysis. One study that empirically captures a rarefied (Maton, 2009; 2011; 2013; 2014b) (or we might say generic) principle of knowledge organisation in the curriculum is Shay and Steyn's study (2014). However, their study examines the particular curricular principle only in relation to the progression from novice to expert in a specific vocational course (i.e. design) rather than in relation to the genericism of the new vocationalism (Bates et al., 1984; Chitty, 1991 Avis et al., 1996; Hyland, 1999;).

To my knowledge, my research is the first empirical attempt that seeks to comparatively describe how two exemplary 'species' of genericism are integrated into different components of the upper-secondary curriculum across a number of distinctively different education sites. I concentrate solely on Communication and Application of Number as these have been the 'staple' provision of Skills in education since the Further Education Unit's - FEU (1979) *A Basis for Choice* report, through the Curriculum 2000 reforms and to the Welsh Baccalaureate.

My research objectives in this part of the study were as follows:

1) Explore Bernstein's (2000, pp. 51–53) concept of generics through the empirical endeavour I describe in objective 2

2) Describe instances of integrating Communication and Application of Number with different components (Options – Core) of the Welsh Baccalaureate curriculum and by focusing on the organisation of knowledge in the curriculum, its orientation in terms of introverted or extroverted meanings, and its transmission through pedagogic practices

[6] This is a broad school of thought in curriculum studies drawing largely from the sociology of Bernstein.

In meeting these objectives, I accessed participants and data from four schools and two colleges, each acting as a maximum variation case (Flyvbjerg, 2006). All education sites are located in southern Wales either in deprived inner-city urban areas, more affluent suburban areas or in exurban areas that serve wider rural locations. The six sites differ on the number of years they have been offering the Welsh Baccalaureate and the make-up of their student population (based on student attainment and eligibility for free meals).

Overall, I followed a comparative twin case study design (Communication and Application of Number) and an analytical strategy based on multiple comparisons within (based on the six education sites) and across these two case studies, as I sought to provide a detailed description of commonalities and differences across instances of integration. I collected data through 14 semi-structured interviews with 11 WBQ co-ordinators and Essential Skills Wales - ESW/Literacy/Numeracy co-ordinators and a WJEC official. I also collected curriculum documents, course specification documents, portfolios of student work, and assessors' and moderators' reports. For the analysis of the interview data, I followed a hybrid thematic analysis approach (Fereday and Muir-Cochrane, 2006) based on theory and data-driven codes (see appendices 1, 3, 4 and 8), and to analyse the documents, I used a directed qualitative content analysis approach (Hsieh and Shannon, 2005).

Although I do not connect the two parts of the study within a single theoretical framework, I make an attempt to bring together and discuss the findings of these two parts (see sub-section 9.3.4 of chapter 9). In this attempt, I also address my analytical decision to treat qualificational and curricular aspects of bringing together academic (general) and vocational education as distinct, while accommodating observations that they are inextricably intertwined. As part of this attempt, I engage with the concept of powerful knowledge (Wheelahan, 2007; 2010; Young, 2008; Young and Muller, 2013). More specifically, I consider the dual basis of social (curriculum) justice, namely distributing different 'goods' of education (i.e. certification and knowledge) using distinct principles and reducing monopoly of access (i.e. access to disciplinary frameworks of

meanings). For my discussion, I draw from my empirical findings on how this dual basis is played out in practice.

1.4 Thesis Outline

I have divided this thesis into nine chapters. Following on from this introduction, in the next chapter I present and discuss the development of the Welsh Baccalaureate and locate it within its wider socio-political context. Through this chapter, we can see that wider social and economic pressures are shaped by national political decisions and processes giving Welsh secondary education a distinct shape. When read together with my discussion in chapter 6, we can see that divisions between 'powerful' and 'less powerful' qualifications as well as divisions between traditional subjects, established professional areas and new 'volatile' vocational areas of study (Young and Muller, 2014) are likely to persist. The introduction of the Welsh Baccalaureate means that these divisions may now exist in a more covert manner; nonetheless, the tripartite system engineered to accommodate an increasing number of young people entering upper-secondary education is more likely to change form than to disappear.

In chapter 3, I move my focus away from qualifications to curricular divisions based on different knowledge content and the different ways the Optional and Core programmes of study are organised. My primary aim in this chapter is to introduce the key concepts of the study and theoretical influences on which I further elaborate in chapter 4. Although chapters 2 and 3 are based on the literature I engaged with, they cannot be considered part of a conventional literature review as I go on to incorporate research, theoretical and policy literature throughout my thesis. Chapter 3 in particular has a largely theoretical basis and brings to the fore how my main motivation behind this research project – my commitment to educational equity – was eventually transformed into a conceptual framework for the research study I present here.

In chapter 4, I further elaborate on this transformation and on the theoretical influences I introduced in the previous chapter. My aim here is to discuss how I theorised the integration of Communication and Application of Number in the

Welsh Baccalaureate curriculum by drawing from Bernstein's sociological project. My theorisation of this integration was an ongoing process as empirical data prompted me to see certain aspects of integration through complementary perspectives. For this reason, I consider the chapter 5 to be the most important in the whole thesis as it brings together the scope of my research, my theorisation of the study and how I accomplished its empirical parts. In chapter 5, I discuss and justify the methods I employed to collect and analyse data as part of wider methodological decisions that I took. Here, I also explain how practical limitations and methodological considerations shaped the course of the study.

Chapter 6 is an empirical chapter in which I suggest that, as an overarching qualification accepted as currency for Higher Education entry, the Welsh Baccalaureate Advanced Diploma has the potential to change the relationship between academic (general) and vocational qualifications and their hierarchical ordering. The power of Higher Education institutions to influence upper-secondary curricula, however, means that single-subject A levels will continue to be the preferred preparation route for students, particularly for those applying to highly competitive universities and courses. Within this view, the purpose and value of Essential Skills qualifications in the Welsh Baccalaureate are questionable and of little significance.

In chapter 7, I raise the point that the *universalism* underpinning generic skills and students' internal commonalities and abilities to acquire them is in conflict with the reality of Communication and Application of Number being modes of pedagogised knowledge that are subject to official assessment based on external criteria. By focusing my analysis on instances of integrating these two Essential Skills, I present an important manifestation of the complexity of generics and their pedagogic practices, that is, efforts to arrange the pedagogic context in ways that create opportunities for students to realise their internal shared ability (i.e. trainability). This is the *Material - Topic - Problem level of integration* that I present in this chapter. Through my discussion in this chapter, we also see that the extent to which the Welsh Baccalaureate can provide a common learning Core to all students through the integration of Communication and

Application of Number into its curriculum is very limited. I complement this view in chapter 8.

Chapter 8 is the final empirical chapter in which we see the role of the Core and Optional components of the curriculum as the main 'sites' of specialised (re-contextualised disciplinary) knowledge transmission and acquisition. In this chapter, I also discuss the dual role that school teachers and college tutors have as *instructors* and *formal* assessors of Communication and Application of Number. Through this discussion, we see *the power of certification* in the integration of generics in the Welsh Baccalaureate curriculum and by extension its ability to define 'what matters' in Communication and Application of Number practices. By focusing my analysis on the different realisations of these pedagogic practices, we see that the Welsh Baccalaureate of the study comes closer to fulfilling its promise of providing a common learning Core to all students through *instructional forms* of Communication and Application of Number practices.

When taken together, the chapters of this thesis illustrate the Welsh Baccalaureate as an attempt to change the relationship between academic (general) and vocational qualifications and between specialised (re-contextualised disciplinary) and everyday knowledge. Assessment plays a pivotal role in the repositioning of these educational poles and in re-configuring their relationship. These issues provide the focus around which I centre my discussion in chapter 9 as I conclude that the Welsh Baccalaureate in its current form, or any form for that matter, cannot bring together academic (general) and vocational education in line with the deep-seated social democratic ideals of Welsh society: universal entitlements and equality of outcome.

In returning to my underlying motivation for completing this research project and the two opening quotes I used in this chapter, it seems that there are two challenges for social realism as a curriculum theory and its principle of powerful knowledge. The first is to find principles of social (curriculum) justice that adopt a relational view of social justice and transcend both intrinsic and

relativistic/conventionalist ways of linking justice to the 'common good'. The second challenge, and this is the one which my empirical findings partly address, is to acknowledge that in practice, it may be extremely difficult, if not impossible, to reduce monopoly of access (e.g. providing access to powerful knowledge to everyone) or to distribute certification and knowledge, as the two 'goods' of education, based on distinct distributive principles.

Chapter 2. The Welsh Baccalaureate in Context

Contents

2. The Welsh Baccalaureate in Context

2.1 Chapter Overview

"The WelshBac could become just an interesting idea, or it could be a defining initiative for Wales in the coming century […] the reward for successful experimentation in this field will be boundless for us all."

G. T. Davies, Institute of Welsh Affairs Chairman, Foreword to Jenkins et al. (1997)

The Institute of Welsh Affairs' (IWA) model of the Welsh Baccalaureate to which Geraint Talfan Davies referred certainly remained "an interesting idea" as it never materialised in practice. The WJEC model, developed in 2001 and examined in this study, aligned itself more closely with the Welsh government's 14–19 Learning Pathways policy strategy as it aims is to create opportunities for students of all abilities and motivations, to increase participation and attainment, and to provide credible and flexible routes to employment and further study. Having placed the study at the threshold delineating policy intentions, curriculum principles and actual pedagogic practices, it is important to understand the broader socio-political context in which the Welsh Baccalaureate came into existence. One way to view the development of the Welsh Baccalaureate is as a reaction to wider, generic socio-economic pressures and trends. The problem with this view, and as I show in this chapter, is that it gives us a partial, if not distorted, picture by masking the effects of national 'internal' pressures and political processes. Through my observations, which I base on chronologically ordered events, we can see that the engineering of qualifications, curricula and progression routes brings with it various intentional and unintentional consequences and challenges. Equally, many of the divisions found within the Welsh Baccalaureate, the Welsh upper-secondary education system and the UK society as a whole are structurally well established and have a reality of their own. It is this reality that I partly examine in chapter 6, the findings of which are complemented by my discussion here.

2.2 Vocationalisation – 1980s

During the 1970s and 1980s, the education landscape in most (post-) industrialised countries started to change dramatically in two respects: firstly, 13[7] of the founding member states of the Organisation for Economic Co-operation and Development (OECD) had already raised the compulsory schooling age (Fort, 2006; Brunello et al., 2009) by 1983, initiating an expansion of their secondary education systems. Secondly, the oil crises that occurred in these two decades led to a turbulent and fragmented labour market and the changing economic climate paved the road to the *vocationalisation*[8] of upper-secondary education in many OECD member states (Skilbeck et al., 1994).

In the UK, with manufacturing's share of the total economy in irreversible decline, the traditional apprenticeship system had been brought to its knees by the late 1970s and the service sector was starting to grow. A main challenge then for policy-makers was to accommodate unemployed youths who were not 'academically' inclined in some form of education while preparing them for low-skilled service occupations and an uncertain future. The compulsory schooling age in England, Wales and Northern Ireland was extended to the age of 16 in 1973 and just as the old divide between grammar and secondary modern schools was fading away, new divides were set to emerge together with young people's aspirations to progress on to Higher Education.

Two Acts of Parliament were the concrete proof of the shifting education policy that successive UK governments had been following since the Second World War: the Work Experience Act (1973) made it possible for LEAs to offer work placements to secondary education students in their final year. The Employment and Training Act (1973) led to the establishment of the Manpower Services Commission (MSC), a public body based in the Department of Employment. The shifting education policy and the tightening of the links

[7] Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, Spain and the UK.

[8] Initiatives and reforms that aim to bring together academic (general) and vocational education. These include the introduction of work-focused placements (work experience), the integration of Key Skills in both academic (general) and vocational programmes of study and the option to select and mix programmes of study.

between education and the labour market were officially announced by James Callaghan in his 1976 Ruskin College speech. By appealing to concerns about the poor Numeracy skills of school leavers, by calling for a 'core' curriculum and by setting the main purpose of education as preparation for employment, Callaghan arguably created the space for Core Skills in upper-secondary education. Up to that point, Communication Skills were only a small part of the declining City and Guilds traditional apprenticeships (Kelly, 2001). Having already been re-located once from their knowledge base in manual training and while continuing to be rooted in the behaviouristic task analysis methods of Victor della Vos from the 1800s (Field, 2001, p. 109), Core Skills were now set to become an inseparable part of pre-vocational programmes of study and voluntary educational initiatives developed outside the 'pedagogic field' for the first time.

In the early 1980s, the MSC launched the Technical and Vocational Education Initiative (TVEI). Developed and delivered under the aegis of the Department of Employment, this was the first educational initiative that circumvented LEAs and pedagogic agencies. Consequently, it was 'culturally rejected' in the pedagogic field (Gleeson and McLean, 1994) and was short-lived. As a curriculum-driven reform, the TVEI provided a common programme of study to all students in schools and colleges that included Core Skills. In this sense, this was the first attempt to link academic (general) and vocational tracks (Spours and Young, 1996; Raffe et al., 1997; 1998b; Spours et al., 2000) and the first time generic (Bernstein, 2000, pp. 53–56) forms of pedagogic practice were introduced in schools.

Around the same time, Core Skills became part of the newly developed Certificate of Pre-Vocational Education (CPVE). This was a competency-based pre-vocational programme of study that was eventually associated with less 'able' students when compared to those on vocational programmes such as the Business and Technology Education Council (BTEC) First award (Sharp, 1997). The CPVE was succeeded by the Diploma of Vocational Education (DVE) which was in turn phased out after the introduction of General National Vocational

Qualifications (GNVQs). This was in effect the establishment of the applied studies track of the modern tripartite system of upper-secondary education, a track that opened progression routes mainly to modern,[9] less competitive universities and courses.

During the 1980s, support for skill-building also started to be drawn on the basis of international comparative studies and the need for the UK to outperform its global economic competitors. Motivated by human capital theory and a direct link between skills, productivity and economic competitiveness, a familiar scene was set on the other side of the Atlantic with the 1983 *A Nation at Risk* report published during the Reagan administration. This was a report that pointed to the need to reform the US education system by appealing to the failing standards of schools and the nation's need to compete on a global scale by improving young peoples' skills and competences. In Wales, the then Secretary of State for Wales John Redwood wrote in the foreword of a Welsh Office document that "the prosperity of Wales depends upon our people having the skills to match the best in the world. All in education, training and enterprise should help us carry this plan into effect" (WO, 1995, p. 4 cited in Phillips and Daugherty, 2001, p. 95). According to Phillips and Daugherty (2001, p. 95), a series of Welsh Office documents written in the 1990s emphasised the linkages between education and the economy and made appeals to improve school performance and upskilling the nation.

Such skills are of course those needed in high value-added sectors of the economy rather than the mass production and service sectors. The youths that were following pre-vocational and vocational courses using Core Skills as a substitute for general education were more likely to find themselves in low-

9 Modern universities are post-1992 universities, also referred to as recruiting universities. In contrast to old universities that are in a position to select their students from a pool of high(er) achieving applicants, modern universities are considered less prestigious and often adopt a recruiting policy to maintain their student numbers. Following recent changes in admissions, selective universities belonging to the Russell Group also enter a recruitment phase known as clearing. However, certain 'elite' universities such as Oxford, Cambridge, UCL, LSE and Imperial opt out of this phase. Selective universities that do recruit students offer no 'clearing' places on competitive courses such as Medicine and Dentistry and very limited places on courses such as Pharmacy and Engineering.

skilled sectors characterised by Tayloristic practices, neo-Fordist price-based competition and hierarchical managerial structures (Keep and Mayhew, 1998; 1999). The integration of Core Skills to upper-secondary education, similarly to the introduction of SCANS[10] in the US, has largely been underpinned by a narrow utilitarian rationale (Grubb, 1996; Grubb and Lazerson, 2005) and rhetoric about the skills that employers wanted. This economic instrumentalism (as we will see in more detail in chapter 6) continues to be a policy vision for Welsh 14–19 education and is reproduced in official Welsh Baccalaureate teaching documents (WJEC, 2013c).

Interestingly, employers who recruit young people in England (table 1) and Wales (table 2) find them unprepared for employment due to their lack of maturity, motivation, work experience and positive attitude rather than poor Literacy or Numeracy skills. Similarly, WBQ co-ordinators placed little emphasis on seeing Essential Skills as preparation for work and 'life', and prioritised universal purposes for their integration such as remediating for previous education 'failings', complementing Optional programmes of study and making up for the early specialisation at the age of 16 (see sub- section 7.2.3 chapter 7).

Despite this evidence, and under the guise of promoting employability and everyday usefulness, global policy instruments such as the OECD's PISA testing and the EU Framework for Key Competences for Lifelong Learning are likely to continue to push literacy and numeracy to the forefront of the Welsh educational policy agenda for all levels of education, often through peer pressure to comply, naming and shaming and pressure to compete and outperform (Ball, 2008).

[10] In 1991 the Secretary's Commission on Achieving Necessary Skills (SCANS) listed the skills young people need to succeed in the world of work: Basic Skills (Reading, Writing, Arithmetic and Mathematical Operations, Listening and Speaking), Thinking Skills (Creative Thinking, Decision Making, Problem Solving, Seeing things in the Mind's Eye, Knowing how to Learn, Reasoning), Personal Qualities (Responsibility, Self-esteem, Sociability, Self-management, Integrity/Honesty).

Table 1. *Proportion of all employers recruiting young people by reason for low level of preparedness. (Adapted from the UKCES, 2010, p. 48)*

ENGLAND	16-year-old school leavers	17- or 18-year-old school or college leavers	University or HE leavers
Unweighted base*	1,764	2,380	1,088
Weighted base*	4,400	33,560	16,663
	%	**%**	**%**
Lack of working world, life experience or maturity	55	54	55
Poor attitude, personality, lack of motivation (e.g. poor work ethic, punctuality, appearance, manners)	49	45	38
Lack of required skills or competences (e.g. technical or job specific, IT skills, problem-solving skills, team-working skills)	30	35	44
Lack of common sense	17	19	17
Literacy/Numeracy skills	12	9	5
Poor education	9	8	6
Other	1	1	1

*Base: All employers that have recruited each type of 16- to 24-year-old leaver from education in previous 12 months and who say some of these recruits were poorly prepared.

Table 2. *Main skills and attributes lacking in Welsh education leavers, as reported by employers (Adapted from Winterbotham et al., 2013, p. 84)*

WALES	16-year-old school leavers	17- or 18-year-old school or college leavers	FE college leavers	University/HE leavers
Unweighted base	630	931	913	1,080
	%	**%**	**%**	**%**
Lack of working world, life experience or maturity	26	18	13	10
Poor attitude, personality, lack of motivation (e.g. poor work ethic, punctuality, appearance, manners)	23	16	11	7
Lack of required skills or competences (e.g. technical or job specific, IT skills, problem-solving skills, team-working skills)	11	9	9	5
Lack of common sense	5	4	3	2
Literacy/Numeracy skills	6	3	3	*
Poor education	4	3	1	*

In concluding this section, one way to view the development of the Welsh Baccalaureate with its compulsory Essential and Wider Key Skills is as a reaction to wider socio-economic pressures and trends. This view, however, does not give us the full picture as it fails to acknowledge the mediating effects of 'internal' socio-political concerns. I discuss these in the following section.

2.3 Baccalaureate Proposals – 1990s

It was in the 1990s that the first proposals for a complete reform of secondary education based on a baccalaureate model were made in England and Wales. The proposals sought to unify curriculum and qualifications for all students and to replace academic (general) and vocational qualifications with a single Advanced Diploma. Instead, a new suite of qualifications (GNVQs) was implemented, opening up an alternative route to Higher Education alongside the academic (general) A level route. The first proposal for a Welsh Baccalaureate was also put forward during this time, albeit motivated by different political concerns than the bridging of the academic (general) and vocational education division.

The British Baccalauréat (Finegold et al., 1990) was first discussed at a seminar of the Institute for Public Policy Research (IPPR) in January 1990 with the vision of creating a unified upper-secondary education system (Spours and Young, 1996; Raffe et al., 1997; 1998b; Spours et al., 2000). This proposal reflected three 'internal' UK socio-political concerns: a divided education system which reflects a highly stratified society, the early specialisation at the age of 16, and the low esteem of the vocational track. Unlike countries with a dual system,[11] vocational education in the UK has been traditionally work-based and narrow in the sense that it lacks any extensive general educational input or vocationally related theoretical lessons. This has been a UK weakness for over 100 years (Green, 1997; 1998), making Core/Key Skills appear to be a cost-effective

[11] The dual system combines work-based apprenticeship with school-based lessons (including vocationally relevant theoretical lessons and more general lessons such as languages and economics). A number of countries in Europe use this system including Germany, Austria, France and the Netherlands.

alternative to academic (general) education provision. The British Baccalauréat called for a replacement of A levels and the low-esteemed and poorly co-ordinated vocational qualifications with a single modular Diploma that drew from a range of subjects and skill-based units of study. Similar proposals were put forward by the Royal Society (1991) with the aim of counterbalancing the poor uptake of subjects such as physics and chemistry, a pattern that has been persistent until recently (Royal Society, 2008).

Given that historically A level syllabi were controlled by university examining boards, one function of this particular academic (general) qualification has always been to prepare students to complete Higher Education studies in specific academic disciplines. With a three-year undergraduate degree structure in place as the norm in England and Wales, a small but significant part of this preparation takes place within upper-secondary education. Inevitably, A levels have been seen as both the 'gold standard' of upper-secondary education and the 'elitist' qualification that can potentially exclude from further study those who fail to achieve good grades. More often than not, these less successful students come from disadvantaged socio-economic backgrounds (Demie et al., 2002; Lupton, 2004; Hansen and Vignoles, 2005; Gorard and See, 2009; Taylor et al., 2013b).

Despite the wider educational community's uneasiness of these 'internal' concerns, the government rejected the British Baccalauréat proposals at the time. It remained committed to retaining A levels and set out to reform upper-secondary education on the basis of creating an applied studies track (DES, 1991, p. 18), a move that had been advocated by Crowther back in 1959 (Semper, 1960). Consequently, GNVQs were introduced in England, Wales and Northern Ireland in 1993 alongside the already established BTEC vocational qualifications. GNVQs were school- or college-based full-time programmes of study relating to broad employment sectors such as Health and Social Care, Business, Leisure and Tourism rather than specific occupations. They had three

Skills[12] as an optional part of their curriculum and three Skills[13] as a compulsory part in the form of separate qualifications that were incorporated into their assessment framework. The aspiration of GNVQs was to become the 'vocational A level' and to have equal standing with these academic (general) education qualifications. The extent to which these 'quasi-vocational' programmes of study managed to achieve this is questionable (Edwards et al., 1997; Wolf, 1997) and equally questionable is the place and role of Core Skills in them (Abbott, 1997). What GNVQs managed to do, however, was to establish clear progression routes to further study for young people who would not have otherwise stayed in full-time education. This, together with the re-designation of polytechnics[14] as universities in terms of their degree-awarding powers in 1992, saw a tenfold increase in the number of UCAS[15] applicants holding or preparing for Advanced GNVQs in 1995 (Nash, 1995).

The British Baccalauréat proposal had a distinct socio-political undertone and came at a time of increasing uneasiness about the future of comprehensive secondary education, the divided and unequal academic (general) and vocational study tracks, and the creation of a school marketplace (NCE, 1993; 1995a; 1995b) that went hand in hand with increasing centralised control and prescription in lower stages of education through the introduction of a National Curriculum (Whitty, 1989). The IWA's proposal for a Welsh Baccalaureate came at a time when the equality between English and Welsh language in the administration of justice and public affairs had just been given legal status.[16] There was also widespread discontent with the 1998 Education Reform Act, not only for shifting powers from LEAs to the Secretary of State, but for setting the

[12] Working with Others, Problem Solving and Improving Own Learning and Performance.

[13] Communication, Application of Number and ICT.

[14] Polytechnics were Institutes of Technology or Technical Universities that taught professional vocational degrees. Prior to the Further and Higher Education Act 1992, the academic degrees offered by polytechnics were validated by the Council for National Academic Awards (CNAA), a degree-awarding body. See also footnote 9.

[15] UCAS (Universities & Colleges Admission Service) is the organisation that provides a central system for organising all undergraduate applications to UK Universities.

[16] The Welsh Language Act (1993) permitted the use of Welsh in court proceedings and obliged all public sector bodies including schools, colleges, universities and the Higher Education Funding Council for Wales to provide services in Welsh.

same attainment targets for primary and secondary schools in England and Wales, dismissing in this way the resources needed for an additional but compulsory part of the Welsh curriculum: Welsh language.

The idea of developing a Welsh Baccalaureate can be traced back to 1993 and a social and economic review published by the Institute of Welsh Affairs (IWA, 1993). Welsh language education was an area that had already adopted distinct and separate policies and the IWA suggested that separate education policies at all levels was the only way forward for Wales (Bellin et al., 1994). The IWA's proposals for the Welsh Baccalaureate were not motivated by the unification of academic (general) and vocational study tracks, but they addressed concerns about the early specialisation associated with A levels, strengthening vocational education and promoting the study of Welsh language and culture in secondary education.

If A levels were seen as the 'gold standard' of upper-secondary education, the IWA was not short of ambition to put forward plans for a 'platinum standard' (Jenkins et al., 1997). In their proposed model of the Welsh Baccalaureate, students of the academic (general) education track would choose one subject from the following six groups:

(1) English – Welsh

(2) A foreign language – including Welsh

(3) Welsh Studies – History – Geography – Economics – Sociology – Politics

(4) Mathematics – Biology – Chemistry – Physics – Design Technology – Environmental Systems

(5) Art – Music – Theatre Studies

(6) An additional subject from the five subject groups above

Students of the vocational track would have to choose one subject from groups (1) and (2) and build a programme of study from existing vocational programmes and units. These units would come mainly from GNVQs but the possibility of including NVQs was left open. All students would be required to complete a 5,000-word essay, as part of a research/writing project, and 150 hours of Core Studies that would be constructed from the following six fields:

(1) Theory of Knowledge
(2) Global Concerns
(3) Religious Education
(4) Information Technology
(5) Community Partnership and Action
(6) Physical Education

At the time, there were concerns about the acceptability of the qualification outside Wales, although an IWA survey found that UK Higher Education institutions were ready to accept it as a basis for university admission (Black and David, 2000). Equally concerning was how technical aspects of quality assurance, assessment and certification would be managed in the absence of an independent Welsh qualification system.[17] Similar to all previous ill-fated attempts to divert upper-secondary education away from A levels at a national level,[18] the proposals of the IWA were never to materialise. The WJEC was the sole tender to an invitation by the Welsh government to administer and award the Welsh Baccalaureate Qualification. They were consequently contracted in 2001 to develop their model, the model that I present and discuss in the following section.

Going beyond the wider, generic socio-economic pressures I discussed in the first section of this chapter, 'internal' UK socio-political concerns driving the development of the Welsh Baccalaureate include a highly divided education system, the early specialisation at the age of 16, and the low(er) esteem of the vocational route. Although these pressures are common to the four UK nations, Wales has adopted the Welsh Baccalaureate as one of its distinct strategies to deal with these. As I discuss in chapters 7 and 8, however, the compulsory

[17] During this study, Qualifications Wales (a Welsh government-sponsored body) was being created with the intention to begin its operation by the end of 2015. As an independent regulator of general (academic) and vocational qualifications leading to Entry, Essential Skills, GCSEs, AS/A levels, Vocational qualifications, the Welsh Baccalaureate Qualification and the qualification system, it will initially undertake quality assurance functions with proposals being made about eventually taking responsibility for awarding qualifications.

[18] See Hodgson and Spours (2009) for a comprehensive historical account of tracked, linked and unified approaches to reforming 14–19 qualifications and the curriculum.

integration of Essential Skills in the Welsh Baccalaureate does not seem to be a potent solution to address such universalist concerns. What the Welsh Baccalaureate Advanced Diploma can potentially do, as an overarching upper-secondary qualification, is to re-position certain academic (general) and vocational qualifications under its overarching award and to mask the divisions between more or less 'powerful' qualifications and preparatory routes to Higher Education. Following the withdrawal of GNVQs, it also re-instates the applied study track in a predominantly comprehensive secondary education system (see sub-section 9.3.1 of chapter 9).

2.4 The Welsh Baccalaureate – 2000s

If the IWA Welsh Baccalaureate promised academic rigour and a broad basis of academic (general) education subjects, the WJEC model of the Welsh Baccalaureate promised accessibility, common entitlements, more opportunities for progression on to further study and student choice. It is part of the wider 14–19 Learning Pathways policy initiative that can be seen as the newest policy attempt to continue the *vocationalisation* of upper-secondary education (see section 6.2 of chapter 6).

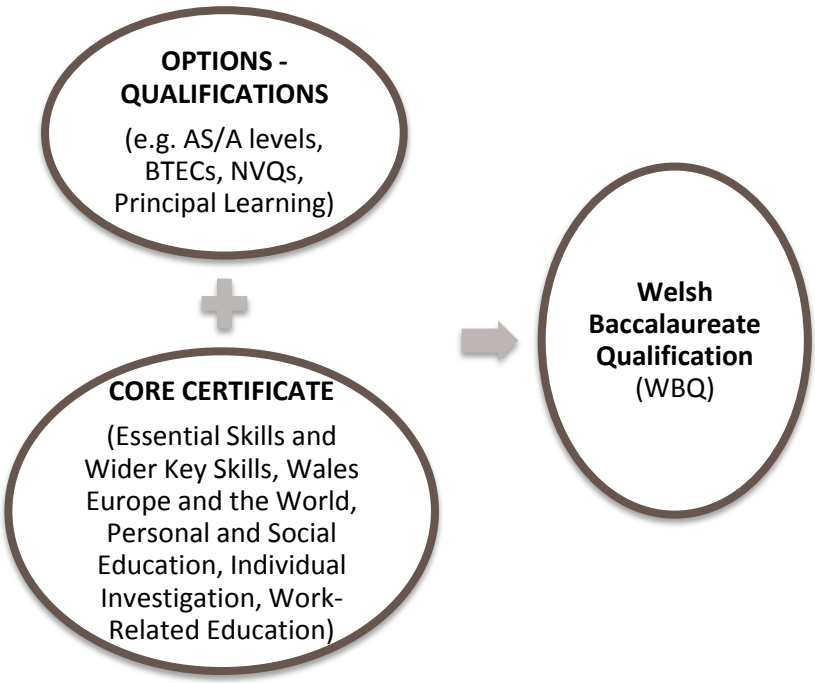
The Welsh Baccalaureate of the study was introduced in 2003 on a pilot basis to 18 schools and colleges. By the time the pilot programme was externally evaluated by Greatbatch et al. (2006), it had been introduced into 31 schools and colleges and was eventually rolled out across Wales in 2007. Since 2009, it has been made available to students at all stages of secondary education in the following formats: the Foundation Diploma as a Level 1[19] qualification for pre- and post-16 students; the Intermediate Diploma as a Level 2 qualification for pre- and post-16 students; and the Advanced Diploma as a Level 3 qualification for post-16 students[20].

[19] These Levels (capitalised) refer to the Levels of the Credit and Qualifications Framework for Wales (CQFW); see footnote 19 for details about the CQFW.

[20] The new Welsh Baccalaureate, and reflecting its universal adoption as the national 14-19 qualification, is offered in four formats at the following levels of study: National/Foundation Key Stage 4 - Level 1, Foundation (post-16) - Level 1, National (post-16) - Level 2 and Advanced - Level 3.

As an 'option plus core' curriculum model (Thompson et al., 2003, p. 40), it is based on a compulsory common Core and a free selection of Optional programmes of study leading to different academic (general) and vocational qualifications (figure 2).

Figure 2. *The WJEC model of the Welsh Baccalaureate*



The compulsory common Core of the Welsh Baccalaureate of the study includes the following five components:

1. Key Skills qualifications (offered as separate qualifications on Communication, Application of Number, ICT, Problem Solving, Working with Others, Improving Own Learning and Performance)

2. Wales, Europe and the World (a taught component made up of study units on political, social, cultural, economic and technological issues. It includes the study of a modern foreign language)

3. Work-Related Education (a component made up of a team enterprise activity and includes a period of work experience with an employer)

4. Personal and Social Education (a taught component made up of study units in positive relationships, health and emotional well-being, active citizenship, sustainable development and global concerns. It includes a period of community engagement project/volunteering)

5. Individual Investigation (a research and writing project asking students to take a local/Welsh perspective on a contemporary issue).

For their Options, students can choose from programmes leading to a range of qualifications such as AS/A levels, BTECs, NVQs, Principal Learning and the Extended Project. All of the Optional qualifications pre-existed the development of the Welsh Baccalaureate. Students can also combine elements of these qualifications, provided that the 'building blocks' of them – for example, school timetabling and collaborative provision arrangements – allow for this mixing. However, and based on the findings I present in section 6.3 of chapter 6, students do not widely combine academic (general) and vocational qualifications, and there are indications that school students are switching from A levels to vocational qualifications. This is most likely an attempt to gain a positional advantage in gaining entry to Higher Education by materialising on the 'credit tag' of the Welsh Baccalaureate being equivalent to an A grade A level in terms of UCAS tariff points.[21]

Overall, the Welsh Baccalaureate that I examined aligns itself more closely with the Welsh government's strategy for a balanced universal and individualised model of secondary education provision. This strategy is reflected in the 14–19 Learning Pathways (WAG, 2002a; 2002b; 2003; 2004; 2006a; 2006b; 2013a) that can be summarised as the following six key elements:

Student Learning

1. *Individual learning pathways that include formal, non-formal and informal learning leading to approved qualifications and awards of credit (based on a single credit and qualifications framework)*

[21] The Welsh Baccalaureate of the study carried a total of 120 UCAS tariff points, the equivalent of an A grade A level, 48 of which were for the Core Certificate awarded as an ungraded Pass. In the new Welsh Baccalaureate, the Skills Challenge Certificate is still equivalent in terms of size and challenge to a GCE A level with a similar A*– E grading system. In the interim Welsh Baccalaureate (taught between 2013-2015) the Core certificate was graded on a four point scale A* - C.

2. *Wider choice of programmes of study and qualifications offering flexibility in terms of combining levels and pace of study*
3*. A universal core (based on Key Skills, work-focused experience and community participation) that sets out common knowledge, understanding, skills, attitudes, values and experience for all young learners aged 14–19 irrespective of the site of learning.*

Student Support
4. *Learning coach support*
5. *Access to personal support*
6. *Impartial careers information, advice and guidance.*

Although education policy in Wales has been diverging noticeably from England (Rees, 2007; 2011, Power, 2016), any divergence observed in the four tightly knitted socio-economic contexts of the UK is likely to be of "a degree rather than of kind" (Raffe, 2005b, pp. 2–3). Common upper-secondary education policy objectives include creating opportunities for students of all abilities; increasing participation and attainment; remediating for past education 'failures' by focusing on Literacy and Numeracy skills; providing credible and flexible routes to employment, training and Higher Education; and strengthening vocational education and its esteem. These objectives make upper-secondary education a minefield for policy-makers and a major transitory stage in the life of young people. This is because this stage of education is characterised by multiple social, economic, political, educational and personal goals (Pring et al., 2009) which are at times conflicting. For example, there is the need to provide learning opportunities that support social inclusion without compromising the status of education, a challenge particularly evident in the case of vocational education.

Addressing the lower status attributed to vocational education with its practical skills continues to be a challenge for policy makers and teaching professionals. This lower status, however, is part of a vicious circle that also entails the creation of programmes of low quality and an academic drift both in terms of the absolute increase in the number of students following classroom-based qualifications and the changing curricula of vocational qualifications that act as

an alternative route to Higher Education[22]. Arguably, the overall *academisation* of upper-secondary education can be seen as a symptom of its expansion and labour market changes (Wolf, 1993; Green et al., 1999) and it mirrors the wider expansion of academic-oriented tertiary education in the UK (OECD, 2013). In England and Wales, the academic drift is best reflected in the introduction of GNVQs as an attempt to accommodate an increasing number of young people in secondary education and to increase and widen access to Higher Education. This making of "what is practical more academic" (Wolf, 2011, p. 6), however, comes at the expense of both poles of education with the status of vocational education paying the highest price (Wolf, 2011).

The introduction of the Welsh Baccalaureate with its distinct Core Certificate (or Skills Challenge Certificate from 2015), a 'general vocational' curricular component, resembles to a large extent the introduction of the GNVQ. In sub-section 9.3.1 of chapter 9, and based on my findings in chapter 6, I briefly revisit the concept of academic drift when I discuss an important consequence the introduction of the Welsh Baccalaureate Advanced Diploma can have: the masking of the divide between more or less 'powerful' qualifications and preparatory routes to Higher Education.

As the first national baccalaureate attempt in the UK, the Welsh Baccalaureate has been received by many (e.g. Pring et al., 2009; Hodgson and Spours, 2009; 2011) with optimism and hope as a sign of commitment to the ideals of universal upper-secondary education entitlements, equality of outcome and collaborative forms of public service provision. The enthusiasm behind the Welsh Baccalaureate is partly due to the fact that it was implemented at a time when the Tomlinson unified proposals did not go ahead in England (DES, 2005). These proposals (Working Group on 14–19 Reform, 2004) went beyond incorporating existing qualifications to a total reform of the education system along the lines of the British Baccalauréat (Finegold et al., 1990).

[22] This conceptualisation of the academic drift draws from the work of Green et al. (1999) and their identification of how the drift is manifested.

The Tomlinson Working Group proposed four interlocking Levels of Diplomas (Entry, Foundation, Intermediate and Advanced), an 'option plus core' model and a switch from external examinations to internal assessment by teachers. The options (Main Learning) programme would be made up of credit-bearing components from existing qualifications, while Core Learning would be skill-based, have an extended project element and wider activities such as community participation. The proposals, similar to all previous unifying proposals and attempts, including the Scottish *Higher Still* introduced in 1999, did not account for the work-based route (apprenticeships), risking in this way a further devaluation of occupationally oriented education (Huddleston et al., 2005). Hodgson and Spours (2005) further point out that a major task in the Tomlinson Diplomas would have been designing the content of Main Learning as the proposals were ambiguous about how to modify existing programmes of study and qualifications into curricular content.

The Welsh Baccalaureate itself does not go all the way to a unified approach as its Options are built on programmes of study/qualifications that pre-existed its development, thus retaining to a large extent the academic (general) and vocational tracks. Equally, it does not account for work-based provision (apprenticeships), mainly because such provision is regulated by occupational standards and the industry. In general, the work-based route is less co-ordinated and significantly smaller than pedagogic routes in Wales. The government has made a significant investment in establishing a new delivery structure for the work-based route that is still in the process of settling (Turner, 2013). It may be that in the near future, and with the revival of apprenticeships, the upper-secondary education system in Wales will take the form of occupationally oriented provision and the two pedagogic provision strands (based on three or four A levels and the applied study track of the Welsh Baccalaureate) (see also discussion in sub- section 9.3.1 chapter 9).

Since completing my empirical stages of collecting and analysing data in 2015, two significant changes have been made to the Welsh Baccalaureate Advanced Diploma that partly reflect the recommendations made in the Wolf report

(2011), the review of 14–19 qualifications (WG, 2012b) and the study by Taylor et al. (2013a). In September 2013, a four point scale grading system (i.e. A* to C) was introduced for the Core Certificate, that is, the certificate awarded upon completion of the compulsory Core programme. The first cohort of students who completed the more rigorous common Core graduated in September 2015. This change, however, did not affect how Essential Skills were integrated in the Welsh Baccalaureate curriculum and these continued to be offered as standalone, ungraded qualifications. It was the combination of number and Level of study these qualifications were taken at, that impacted on the overall grade of the Core certificate.

The second, and more significant change, is the introduction the new Welsh Baccalaureate Advanced in September 2015. This will see the introduction of General Certificates of Secondary Education (GCSEs) in English (or Welsh) and Mathematics (or Mathematics - Numeracy) becoming compulsory for students who had not achieved such qualifications in their lower-secondary education stage at grades A*-C. Finally, in the new Welsh Baccalaureate Advanced, all components of the Core (see figure 2) have been replaced by an entirely skill-based programme of study (i.e. Skills Challenge Certificate) which is to provide the basis for integrating the six Skills.[23] This Certificate, and similarly to an A level, is graded on a six point scale (i.e. A*-E) to reflect an attempt to draw an equivalence between these two qualifications in terms of size and challenge. The introduction of the new Welsh Baccalaureate is a significant change concerning the purpose and practicability of integrating Essential Skills. I discuss these changes in more detail in my concluding chapter, as I consider the implications of my findings in relation to the Welsh Baccalaureate's policy promises I set out to examine.

Regarding the aim of the Welsh Baccalaureate to be an accessible and flexible qualification, this is partly afforded by interlocking Levels for Essential and Wider Key Skills, assessment methods based on assignments rather than

[23] The three Essential Skills of the new Welsh Baccalaureate Advanced are: Literacy, Numeracy and Digital Literacy. The four Employability Skills are: Planning and Organisation, Creativity and Innovation, Critical Thinking and Problem Solving, and Personal Effectiveness. See sub-section 9.3.3 of chapter 9 for a discussion of my findings in the face of the changes implemented from September 2015.

external exams for the Core Certificate, and multiple entry/exit points based on age and accumulation of study credit as part of the Credit and Qualifications Framework for Wales – CQFW.[24] Inevitably, and in order to promote flexible and accessible progression and attainment, a compromise has to be made not only on the range and type of its compulsory Core content, but also on the value and esteem of its different components and the qualification as a whole. In the internal evaluation of the Welsh Baccalaureate, for example, we see parents fearing that the additional workload of the Core could have "a negative impact on A level achievement" (Hayden and Thompson, 2007, p. 91). As we will see in chapter 6, A levels continue to be the 'real' qualification of upper-secondary education while in chapters 7 and 8, we will see some of the challenges of integrating Communication and Application of Number to a general education curriculum.

2.5 Linking Chapters 2 and 3

The 'gold standard' A level has proved too resilient and too powerfully entrenched for the Welsh 14–19 reform to displace. Nonetheless, there are indications that the Welsh Baccalaureate Advanced Diploma can potentially change the hierarchical relationship between its overarching academic (general) and vocational qualifications through its power as currency accepted for Higher Education entry (see my findings and discussion in chapter 6). As access to all levels of education has been made available to an increasing number of young people, the mainstreaming of skill-based education is likely to be an enduring feature of upper-secondary education in Wales. The integration of Skills to all programmes of study has been a gradual process throughout the last 40 years in the UK and it is now a stable and compulsory feature of the Welsh Baccalaureate. Overall, this particular curriculum framework and qualification can be considered one of the strategies the Welsh government is

[24] The Credit and Qualifications Framework for Wales (CQFW) was developed in 2002 and was implemented from 2003 to 2014. The levels of the framework (i.e. the different learning stages of qualifications as the translation of 'study demands' made on students) are referenced to the European Qualifications Framework (EQF) and the Framework for Qualifications of the European Higher Education Area (FQ-EHEA), the Bologna Framework. The Welsh Baccalaureate Advanced Diploma, for example, is a Level 3 qualification on the CQFW and a Level 4 on the EQF.

using to address particular challenges such as overcoming barriers to progression from lower- to upper-secondary education and onto Higher Education, remediating for past education 'failures', and being more responsive to social and economic developments such as the changing labour market(s), demographic changes and calls for educational equity. As we will see through my empirical chapters, the extent to which the compulsory integration of Communication and Application of Number can address some of these challenges is very limited. Through my empirical work, we also see that these certain divisions between more or less 'powerful' qualifications and Higher Education progression routes are likely to persist. In the next chapter, I wish to move away from qualificational divisions and discuss curricular divisions based on different knowledge content and organisation.

Chapter 3. Curriculum Theories

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3. Curriculum Theories

3.1 Chapter Overview

Ὅτι μὲν οὖν νομοθετητέον περὶ παιδείας καὶ ταύτην κοινὴν ποιητέον, φανερόν· τίς δ' ἔσται ἡ παιδεία καὶ πῶς χρὴ παιδεύεσθαι, δεῖ μὴ λανθάνειν. νῦν γὰρ ἀμφισβητεῖται περὶ τῶν ἔργων. […] ἔκ τε τῆς ἐμποδὼν παιδείας ταραχώδης ἡ σκέψις καὶ δῆλον οὐδὲν πότερον ἀσκεῖν δεῖ τὰ χρήσιμα πρὸς τὸν βίον ἢ τὰ τείνοντα πρὸς ἀρετὴν ἢ τὰ περιττά πάντα γὰρ εἴληφε ταῦτα κριτάς τινας"

(From the above) it became apparent (was proved) that there should be legislative provision for education and that this must be common for everyone, but it must not escape our attention, which this education should be and how the youth should be educated. For today there is disagreement on the educational programme that should be pursued (applied) […] because of these confusing views, we are hindered in finding the proper education and it is not becoming apparent what should be pursued: the useful for life, those pertinent to the acquisition of virtue (arête) or the unnecessary frills [because each of them has its (supporters) and critics]

Aristotle – Politics
1337a33-1340b19,
Moskovis (1989)
my translation

The purpose of education, what should be included in the curriculum and which teaching approaches are best suited for different educational purposes still remain unsettled debate subjects. The plurality of opinion is reflected in the history of curriculum theories starting from the early 'technocratic' approaches of Bobbitt (1918) and his behavioural objectives and divisions of human action that turn a curriculum planner into an "analyst of human nature and of human affairs" (Bobbitt, 1918, p. 43), through to social realist curriculum theorists (Young, 2000; 2003; 2008; 2010a; 2011; 2014a; 2014b; Moore and Young, 2001; Young and Muller, 2010; 2013; Wheelahan, 2010) that call for a 'return to knowledge' and an epistemological grounding for the contents and organisation of the curriculum. Having placed my analysis at the threshold delineating policy intentions, curriculum principles and actual pedagogic practices, I start this chapter by discussing a particular view of the Welsh Baccalaureate which I left unexplored in the previous chapter: its curricular content divisions and knowledge organisation. My aim in this chapter is to discuss the Welsh

Baccalaureate through the lens of curriculum theory and to introduce the key concepts of the study and its theoretical underpinning, issues that I further elaborate on in chapter 4. In the second part of the chapter, I discuss social realist curriculum theory, its Bernsteinian sociological influences, and its attempt to transcend foundationalist and relativist/postmodern views of (curriculum) knowledge categories. By analysing its principle of powerful knowledge and by questioning its social justice basis (an issue that I fully discuss in sub-section 9.3.4 of chapter 9), I make explicit how my main motivation behind my research, that is, my commitment to educational equity, was eventually transformed into a conceptual framework for the study that I report in this thesis.

3.2 The Welsh Baccalaureate through Curriculum Theory

In the previous chapter, I referred to the Welsh Baccalaureate as a curriculum framework to denote the flexibility afforded to students to combine different accredited Optional programmes of study. Given the non-compulsory nature of curriculum content in upper-secondary education in Wales and the rest of the UK nations, it is perhaps unusual to speak of a curriculum in the sense of implying a predetermined plan of what students are to be taught and achieve. This view of the curriculum as a set of specifications was adopted by early curriculum theorists (Bobbitt, 1918; Tyler, 1949; Taba, 1962; Popham, 1972a; 1972b) who advocated the use of behavioural objectives and the pedagogic model of input and outcomes.

As I discuss in my empirical chapters, a curriculum driven by learning outcomes and competences is more of an 'assessment strategy' as most of its pedagogic input (i.e. teacher input and knowledge) is reduced and pedagogy comes to mean a 'teaching method'. Yeomans (2008, p. 11) similarly argues that although GNVQs moved away from a competency-based model by increasingly paying attention to curriculum content, teacher input and underlying knowledge and understanding, they remained assessment-led. Such an assessment-driven curriculum, and as my empirical findings in chapters 7 and 8 show, still deprives

teachers/tutors of control over certain aspects of pedagogy (i.e. pacing, sequencing and evaluation) and fosters a notion of them as deliverers. These are the views fostered by technocratic and managerialist (Reynolds et al., 1996; Reynolds and Teddlie, 2001) approaches to the curriculum and they often go hand in hand with concerns of certification, attainment and progression to the next stage of education.

Ultimately, curriculum theories are normative projects: not only do they seek to provide a rationale for why certain elements of study should or should not be included and how this official knowledge (and students' experience of schooling) should be organised, but they also present a normative view of society and/or humanity. A typical example of such a theoretical project comes from the philosophy of education advocating a curriculum that creates the conditions, or offers certain learning experiences, in order to help students develop moral and practical capabilities leading them to live a fulfilled life. This is what Pring et al. (2009) refer to as the need for 14- to 19-year-olds to develop moral seriousness and the need to educate them holistically.

The notion of moral seriousness by Pring et al. (2009) draws partly from the two principles of White's curriculum theory: first of all, the notion of personal autonomy linked to rationality in a liberal democratic framework that has been cut off from the wider socio-political context and social action (White, 1973); and second, personal well-being as a form of hedonism linked to the ability to make informed choices in order to satisfy important preferences or desires and live the 'good' life (White, 1982; 1990). It is these curriculum principles that open up the debate exemplified in the introductory quote of this chapter regarding what a 'good' life is and the kind of education that can help students achieve this goal. Although social realist curriculum theorists depart from such liberalist and individualist standpoints and assert the sociality of knowledge and a view of the curriculum as a social fact, they are still committed to the idea of a 'common good', which does not seem to be wholly conventional (Young, 2008, p. 27). I return to briefly discuss the social (curriculum) justice basis of social realism in sub-section 9.3.4 of chapter 9.

A further curriculum theory from the philosophy of education is that of Hirst (1974; 1967) who views the pursuit of a broad range of forms of knowledge having intrinsic value. We can see this influential theorising reflected in the IWA model of the Welsh Baccalaureate and its subject groups (see section 2.3 of chapter 2) and in students' Optional choices of A level subjects in the current Welsh Baccalaureate (see section 6.3 of chapter 6). These curricular knowledge divisions precisely mirror Hirst's different forms of knowledge: *Logico-mathematical* (e.g. Mathematics), *Empirical* (e.g. Physics, Chemistry, Biology), *Interpersonal* (e.g. Sociology, History), *Moral* (e.g. Global Concerns), *Religious* (e.g. Religious Education), *Literature* (e.g. English/Welsh/Foreign Language), *Aesthetic* (e.g. Arts, Music), and *Philosophy* (Theory of Knowledge). This curriculum theory rests on the view that traditional subjects are an initiation into different forms of human logic with Hirst identifying a finite number of those cognitive structures that, although they can take different appearances, in principle remain uniformly stable. However, forms of knowledge are not curriculum subjects, as more than one subject can provide access to the same form of knowledge (for example, Music and Fine Arts to the *Aesthetic* form) and more than one form of knowledge can underpin the same subject (for example, the *Aesthetic* and *Logico-mathematical* forms in Design).

This 'traditionalist' curriculum theory exemplifies the ideal of an educated person within the liberal model of education as rational enquiry which is assigned a superior status in comparison to practically oriented education. On this, Wiener (1982) has gone as far as to claim that Britain's anti-industrial and anti-scientific turn in the early 19th century and the breeding of an unsuitable idealist ruling class educated through a Classical curriculum in public schools is responsible for its decline as a superpower. From the perspective of cultural reproduction theories and their neo-Marxist stance (Bourdieu, 1973; Barrett et al. (eds), 1979; Apple, 1982), Ainley (1993; 2000) argues that the divisions in the curriculum and in the education system (e.g. the tripartite tracks of academic/general, vocational/applied and occupational/technical education) are nothing more than a reflection of societal divisions and that the "superiority

of mental knowledge over manual skills is thus deeply embedded in English culture" (Ainley, 2000, p. 9).

Hirst's theory has been influential on education policy and curriculum decision-making at a national level (Munn Report, Scottish Education Department, 1977 cited in Croxford, 1994) in a similar manner to how the notion of powerful knowledge and its subject-based curriculum of social realists has been influential (DfE, 2011, p. 11). Social realists, however, criticise Hirst's foundationalist epistemology for failing to acknowledge that curriculum subjects and knowledge divisions are "the socio-historical products of a particular time" (Young, 1971, p. 23) and for its intellectualist stance (Muller, 2014) that sees practical knowledge as a cognitive operation rather than intuitively motivated action (Winch, 2010b; 2013).

Hirst's traditionalism underpins the neo-conservatism of Future 1 in social realism (Young, 2003; 2010b; 2011; Young and Muller, 2010) (see table 3), an educational future that is characterised by an under-socialised epistemology; by an elitist education system that when faced with the challenge of widening participation responds with an unequal distribution of access to different kinds of education and knowledge; and by a curriculum that is slow to respond to the changing economy and the need for interdisciplinary study and new forms of knowledge (e.g. biotechnology, mechatronics).

Table 3. *Future of knowledge and knowledgeable action*
(Adapted from Muller, 2012, p. 15)

FUTURE 1	**FUTURE 2**	**FUTURE 3**
Rationalist	**Practice-based**	**Relational**
Dualism	Personalism	Expertise
Disembodied	Embodied	Distinct but connected
'Know-that' severed from 'know-how' – 'know-that' as a cognitive operation	'Know-that' reduced to 'know-how' – 'know that' is a kind of 'know how'	'Know-that' and 'know-how' analytically distinct and related
Fact-based curriculum	Skills- or outcomes-based curriculum	Powerful knowledge-based curriculum
Descartes	Wittgenstein, Polanyi, McIntyre	Ryle
Stanley, Williamson, Chomsky	Dreyfus	McDowell, Brandom, Winch

Unlike the IWA model of the Welsh Baccalaureate with its six traditional curriculum subjects or an Optional programme of studies in the current Welsh Baccalaureate that is based on three A level subjects such as History, English and Mathematics that "go their own separate ways" (Bernstein, 1971, p. 49), the common Core of the Welsh Baccalaureate of the study (see sub-section 1.2.1 of chapter 1 or section 2.4 of chapter 2) is organised differently. In addition to the inclusion of work experience and Key Skills components, which resemble the CPVE and TVEI programmes of study that I discussed in chapter 2, another characteristic of the Welsh Baccalaureate Core is that it is based on interdisciplinary themes and 'real life' problems. For example, the themes of sustainable development and citizenship run through Wales, Europe and the World, and Personal and Social Education and they also provide students with some of the problems to be tackled in Communication and Application of Number and their Individual Investigation.

In Bernstein's terms (2003a), the components of these themes stand in an open relationship to each other and are not bounded or insulated from each other. Based on these two different relationships between pedagogised (curriculum) knowledge, we can distinguish between a collection code, giving rise to a curriculum where its components stand in a close relation to each other (they are clearly bounded and insulated), and an integrated code, giving rise to a curriculum where its components stand in an open relation to each other (Bernstein, 2003a, pp. 160–167).

Bernstein (2003a, p. 161) makes a distinction between integration and interdisciplinarity or the sharing of theories between curriculum components that he calls the "intellectual inter-relationship" of knowledge. The latter components could have been part of a collection curriculum at some point in the history of its development. Integration, by contrast, is the "subordination of previously insulated subjects or courses to some relational idea which blurs the boundaries between the subjects" (Bernstein, 2003b, p. 161). What we have in both cases (integration and interdisciplinarity) is a change in the classification of knowledge rather than a weakening of it (Shay, 2013). This theoretical observation is crucial in my research as I conceptualise the integration of

Communication and Application of Number in terms of their boundaries with the curriculum components of which they become a part.

Drake and Barnes (2004) extend the distinctions between collection and integrated curricula and integration and interdisciplinarity to identify multidisciplinary, interdisciplinary and transdisciplinary curricula. Overall, the arrangement of the taught components of the Welsh Baccalaureate Core that I examined (Wales, Europe and the World, and Personal and Social Education) can be seen as examples of multidisciplinarity in that their focus is on a common theme (e.g. citizenship, physical exercise, well-being, lifespan development) that highlights the connections between different subjects (Sociology, Political Science, Psychology, Public Health, Physiology, Statistics, etc.).

This is exemplified by one of the Key Issues in Wales, Europe and the World as described in the WJEC teaching specification document: **[the students must look at]** "The social issues that people face in their everyday lives and responses to them", for which students engage in various activities and draw insights from History ("the legacy of the past and how it can affect communities today"), Sociology ("how social deprivation and inequality can affect people and communities") Mathematics/Statistics ("relative incomes in different parts of Wales and UK") and Politics ("the measures taken to tackle issues of social deprivation and inequality") (quotations from WJEC, 2013, p. 14, in bold my addition).

The retention of these interdisciplinary themes, as we will see further in chapters 7 and 8, is a decisive feature in offering some opportunities for the Welsh Baccalaureate to provide a common learning Core to all students irrespective of their Optional choices and site of learning.

Transdisciplinary curricula, on the other hand, dissolve the boundaries between curriculum subjects and the academic disciplines from which they draw their knowledge (discursive) base. Centring around 'real life' concerns and based on a wider project-based approach to teaching and learning, students are expected to develop a range of skills by solving practical problems. This curriculum logic underpins the instrumentalism of Future 2 in social realism (Young, 2003;

2010b; 2011; Young and Muller, 2010) (see table 3). This educational future is characterised by an over-socialised epistemology, by a 'pseudo-progressive' education system that when faced with the challenge of widening participation responds with an unequal distribution of access to different kinds of education and knowledge, and by a curriculum that in its response to the changing economy dissolves rather than facilitates the crossing of knowledge boundaries leaving those who are already disadvantaged unable to navigate through the conceptual structures of disciplinary knowledge(s).

Having discussed the Welsh Baccalaureate through curriculum theory, I introduced some of its curricular features and the main concepts of the study (i.e. integration, interdisciplinarity of Core themes and boundaries/classification of knowledge). I also exemplified the epistemological grounding of the social realist curriculum theory which attempts to transcend foundationalist and relativist/postmodern views of pedagogised knowledge categories. Whether it follows the same relational view of social justice in an attempt to transcend intrinsically worthy and relativistic/conventionalist ways of linking justice to the 'common good' is an issue I discuss in sub-section 9.3.4 of chapter 9.

In the remainder of this section, I wish to continue discussing the Welsh Baccalaureate through Bernstein's theory and introduce a different but complementary conceptualisation of curriculum knowledge and its organisation (i.e. as three distinct modes of pedagogised knowledge). I found that these insights gave me a strong conceptual and theoretical basis to examine Essential Skills and their integration to the Welsh Baccalaureate curriculum. This has been particularly important for my research for two reasons. First of all, I encountered conceptual and empirical difficulties in delineating and describing the different kinds of knowledge that are interconnected to competence (Mitchel and Wolf, 1991) as well as the conceptual imprecision (Hyland, 1993) of the notions of competence itself (Barnett, 1994; Mansfield, 2004) and skills (Barrow, 1987; Jonathan, 1987; Blunden, 1996; Hyland and Johnson, 1998; Ainley, 2000). Having made an initial attempt to draw insights from the philosophy of education, soon after completing my first round of data collection and analysis (two interviews), I realised that the distinctions made in the Key

Skill specification document (see table 4) between techniques and know-how (Part A), in other words between Essential Skills as a technique and as an agent property (Winch, 2010a, pp. 148–149) and between knowledge, judgements and its application as demonstration (Part A and Part B), cannot be easily captured empirically, if at all (Gribble, 1969, p. 58).

Table 4. *Distinctions between techniques, know-how and application of know-how (Adapted from QCA, 2004, p. 11)*

Part A	**PLUS**	**Part B**
The techniques and knowledge (the 'know-how')		The application of skills (the 'thinking and doing skills' involving judgement)

Secondly, I found Bernstein's theoretical insights suitable for allowing me to accommodate the thorny and debatable issue of Skill transferability (Bridges, 1992; Holmes, 1998; Hyland and Johnson, 1998; Wolf, 1991) and their double curricular aim to be "ends in themselves for setting up and working out problems and as transferable skills called upon in more general contexts" (WJEC, 2013b, p. 5).

3.2.1 Modes of Pedagogised Knowledge

Bernstein further developed his theory, and his integrated and collection curriculum codes are complemented, or rather replaced (Beck, 2002, p. 619), by two different models of pedagogic practice: competence[25] and performance (Bernstein, 2000, pp. 41–51). The characteristics of a competence model are the organisation of curriculum knowledge based on themes or projects; students' greater control of the selection, sequencing and pacing of (curriculum) knowledge; an emphasis on what students already know and the skills they already have; a facilitative rather than instructional form of teaching; and ungraded performances. These characteristics clash with the pedagogic practice of a performance model characterised by a hierarchy of what students need to

[25] This is unrelated to the competency-based model which centres on learning outcomes and assessment of observed behaviour.

learn and the skills they need to acquire; instructional forms of teaching based on strong pacing (rate of acquisition); and clear and visible evaluative criteria. These two models are based on different degrees of classification and framing (see sub-section 4.2.1 of chapter 4 for a discussion of these concepts) of the following six features:

i) knowledge basis (as discourse) – pedagogic spaces, time/age and progression
ii) evaluation criteria
iii) positional control which legitimises structures and classifications
iv) the pedagogic text expected to be reproduced (i.e. knowledge displayed as valid performance) and to be graded (i.e. the stratification of students – higher achiever or less 'able' students – based on different performances)
v) autonomy (the external regulation of specialised, re-contextualised disciplinary knowledge, for example by awarding bodies, by rules of the discipline or the demands of the market/economy)
vi) economy (costs).

The differing degrees of classification and framing of these six features "may give rise to what could be called a pedagogic pallet where mixes can take place" (Bernstein, 2000, p. 56). These mixes were part of my empirical focus in the second part of the study in which I examined the integration of Essential Skills in different schools and colleges by focusing on features of the knowledge basis, evaluation criteria, the reproduction of the pedagogic text and to a lesser extent autonomy (as orientation to meaning) of Communication and Application of Number. Informed by my empirical findings, in sub-section 9.3.2 of chapter 9, I discuss the misrecognition and complexity of Essential Skills as a generic mode of the performance model. In other words, I discuss their illusory resemblance to competence modes with their undifferentiated (ungraded) common performances that students are expected to demonstrate (underpinned by a set of transferable skills) when in fact their practices are goal-directed, guided by a set of peculiar sequencing rules (i.e. the rate of expected knowledge acquisition) and are subject to appraisal and assessment using external criteria. This observation has implications for the extent to which Essential Skills can

remediate for previous education 'failings', complement Optional programmes of study or make up for the early specialisation at the age of 16, these being their main purposes (see sub-section 7.2.3 of chapter 7). As I conclude in chapter 9, it is unlikely that the integration of generics such as Communication and Application of Number can contribute towards these universalist purposes and aspirations and it is equally unlikely that they can contribute to any great extent towards fulfilling the promise of the Welsh Baccalaureate to provide a common learning Core to all students. It should therefore come as no surprise to see the removal of Communication and Application of Number (and the full suite of Essential and Wider Skills) from the new Welsh Baccalaureate. Mirroring the recommendations made in the Wolf (2011) report and changes in the 14-19 education in England, the Welsh government has decided to fulfil the remediating purpose that Communication and Application of Number were to serve with more 'traditional' singulars, that is, a GCSE in English (or Welsh) and a GCSE in Mathematics (or Mathematics-Numeracy).

Performance pedagogic models are the norm in official upper-secondary education, with this stage of education (as I discussed in chapter 2) having an important selecting and preparatory function for Higher Education. Generics, singulars and regions are pedagogised knowledge modes of the performance model with each one of them reflecting a distinct knowledge base, focus and social organisation (Bernstein, 2000, pp. 51–53). Singulars describe academic disciplines: inward-facing specialised knowledge structures are strongly demarcated from other disciplinary knowledge and have "their own intellectual field of texts, practices, rules of entry, examinations, license to practice, distribution of rewards and punishments" (Bernstein, 2000, p. 52). This is how knowledge has been historically divided in universities to form different disciplines. These divisions are also reflected in students' Optional choices of A level subjects in the Welsh Baccalaureate of the study (see section 6.3 of chapter 6). Traditional curriculum subjects are considered the 'powerhouse' of the social realist curriculum theory for providing students with access to disciplinary concepts and systems of meanings, academic disciplinary communities and the tools to investigate the natural and social world from different perspectives.

Regions, on the other hand, are constructed by selecting and transforming singulars into larger units. Knowledge classification within them is weaker as their re-contextualising principle draws from the field of practice rather than disciplinary formations, rules and practices. Regions are the interface between disciplines (singulars) and the technologies they make possible, and as such, they operate both in the intellectual field of disciplines and in the field of external practice (Bernstein, 2000, p. 52). Examples of old regions, according to Beck and Young (2005), are Engineering, Medicine and Architecture, with these professions sharing deeply rooted historical links between their practices and their disciplinary knowledge bases. Examples of new regions, that is, 'volatile' vocational areas of study that are dependent on their outcomes matching external conditions such as demands of the labour market, include the most popular BTEC areas of studies selected by students as part of their Options (e.g. Business, ICT, Sport, and Health and Social Care; see section 6.3 of chapter 6).

While regions and the processes of 'regionalisation' have received empirical attention (Stavrou, 2009; Coleman, 2012; Hewlett, 2013; Mukute, 2014), there is an ambiguity and lack of description for generics. Studies that did look at the structuring of curriculum knowledge (Bertram, 2012; Shay, 2013; Hewlett, 2013; Winberg et al., 2014; Johnson et al., 2015) did not place them at the centre of their analysis. Bernstein (2000, p. 55, 59) acknowledged their complexity and hinted at their misrecognition as pedagogised knowledge.

Originally constructed outside and independently of education, generics are produced by the functional analysis of an area of work or activity to be completed. They are based on a concept that Bernstein calls short-termism (2000, p. 59), underpinned by the need for students to continuously develop, update or replace skills, activities and areas of work in coping with the changing requirements of work and everyday life. Bernstein's insight on generics is that they have their structure in the concept of trainability, that is, on the ability of students to be taught and adapt to "continuous pedagogic reformations" as skills and areas of work are expected to undergo "continuous development, disappearance or replacement" (Bernstein, 2000, p. 59). Their re-location from

their base in manual practices to a 'school curriculum' institutionalises this concept of trainability as a pedagogic objective. This new principle of organising knowledge can be seen as the artificial separation of practice/training from a professional or occupational basis and the consequent construction of agents' identity in and through the markets and the materialities of consumption.

Having so far presented aspects of Bernstein's theory on curriculum codes, pedagogic models and categorisations, it would be misleading to think of his work in terms of curriculum typologies or as a sociological project that was concerned with unmasking social regularities by using concepts of ideal-types'. Bernstein's focus was on the differences within the organisation, selection, transmission and evaluation of pedagogic knowledge as a realisation of the distribution of power and the principles of social control. I further elaborate on his sociological project in chapter 4 in which I make explicit his influence on the theorisation of the study.

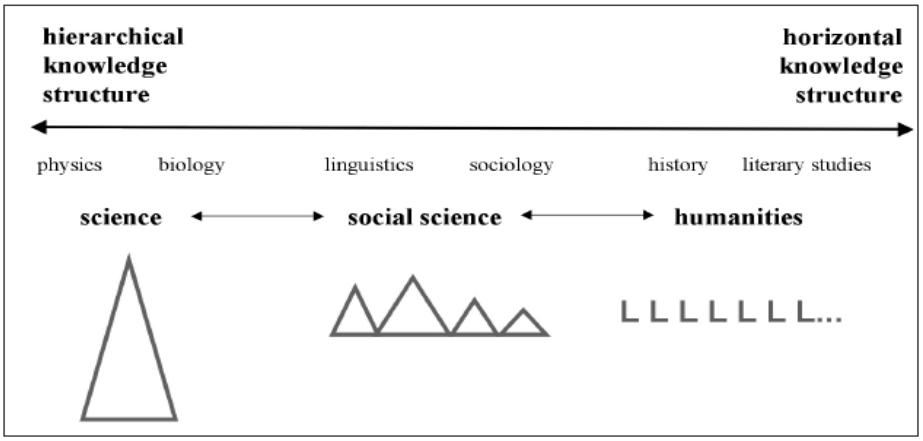
Overall, the work of Bernstein provides a framework for conceptualising and examining the social relations that structure a curriculum, the relations within knowledge itself and the relation of knowledge structures with the empirical world. The latter two issues have not been a major empirical concern in my research but they arose in my data and the comparative analysis of different instances of integrating Communication and Application of Number in the Welsh Baccalaureate curriculum. In the sub-section below, I briefly discuss some of these issues and Bernstein's relations within knowledge through the concepts of horizontal and vertical discourses, concepts upon which the social realist curriculum theory is also built.

3.2.2 Horizontal and Vertical Discourses

In his later work, Bernstein turned his attention to the internal structure of different forms of knowledge and made a distinction between horizontal and vertical discourses, in other words, between everyday (common sense) and specialised (disciplinary) forms of knowledge respectively (Bernstein, 1999; 2000, pp. 155–174).

The knowledge(s) and competences of horizontal discourse are embedded in specific practices and are "directed towards specific, immediate goals, highly relevant to the acquirer in the context of his/her life" (Bernstein, 2000, p. 157), for example writing a letter, reading a book, converting foreign currency or holding a discussion. Essential Skills can therefore be seen as re-contextualised (i.e. pedagogised) horizontal discourses. Their pedagogies entail acquiring a set of strategies which are local, segmentally organised and context-specific for maximising encounters with persons and habitats (Bernstein, 2000, p. 157). The emphasis of this segmental pedagogy is towards students acquiring a common competence rather than distinguishing between performances and grading these performances, a characteristic of generics that I discussed above. Vertical discourses, on the other hand, (see figure 3) "take the form of a coherent, explicit and systematically principled structure, hierarchically organised as in sciences or it takes the form of a series of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts as in the social sciences and humanities" (Bernstein, 2000, p. 157).

Figure 3. *Academic disciplines as Bernstein's vertical discourses (Taken from Martin et al., 2010, p. 438)*



In this light, Communication and Application of Number are re-contextualised segments of everyday knowledge. Since they have become 'curricularised' knowledge, we would expect them to be sequential and cumulative, with

specialised evaluative criteria that reflect the increasing complexity of each learning stage as it builds upon the previous ones. Hewlett's study (2013), however, shows that this is not the case when university courses get modularised, in order to make credits transferable, and when the underlying logic of curriculum integration is that of genericism with students working towards displaying undifferentiated (ungraded) common performances. In my analysis, and having set out to compare different instances of integrating Communication and Application of Number, we get a different picture of how the pacing and sequencing (in effect, their progression) of these two Essential Skills is determined by the pacing of the Optional or Core activity in which they are 'embedded' (see sub-section 7.3.1 of chapter 7 - approaches to integration).

Although knowledge progression (i.e. intra-discursive relations) was not a major empirical concern in my research and I did not focus on examining progression between Levels (i.e. from Level 2 to Level 3) or progression within a single Level, there are empirical indications that, despite their similarities, Communication and Application of Number may be structurally distinct. This raises the question of whether Essential Skills can still be considered codified knowledge, distinguishable from segmental everyday knowledge acquired at home and in local communities and in tune with Beck's observation that generics suppress "recognition of their own discursive base (i.e. they suppress awareness of the fact that they are themselves tacitly rooted in theory) notwithstanding their claims to being based on practice and on experience in the 'real world'" (2002, p. 624).

In any case, there are empirical indications (see chapters 7 and 8) that the visibility of the evaluation criteria of Communication and Application vary,[26] reflecting in this way the possibility of having different degrees of verticality as an indication of different 'grammars' (i.e. how a theory relates to the objects of empirical study). The link between visibility of evaluation criteria, verticality and grammaticality has been empirically uncovered by the studies of Luckett

[26]With the 'correct answer', 'use of formulas' and 'theoretical justifications' being perhaps the most obvious examples.

(2012) in comparing how knowledge claims are made and legitimated in two different university courses (Urban studies and Diversity studies) and in the study of Shalem and Slonimsky (2010) who examined how formative assessment criteria in a university professional education course can be based on abstraction and generalisation (Maton, 2009) in making assessment a part of learning strategies.

As I suggest in section 9.4 of chapter 9, the internal relations within Communication and Application of Number as well as their relations to the empirical world are potential areas for further research. For the purpose of this thesis, and not having set out to empirically address these concerns, the data I collected does not allow me to examine this aspect of comparing Communication and Application of Number in depth.

Bernstein's conceptualisation of the relations within knowledge(s) and their differing internal structuring(s) provides a pillar for the social realist curriculum theory as it renders knowledge an object of sociological study and brings to the forefront the importance of specialisation (or differentiation, as it was eventually termed in the social realist theory) between school (specialised) and everyday knowledge. Both theories also share a strong sentiment of social justice as they point out the persistence of educational inequalities and their link to the unequal distribution of 'valuable' (or more powerful) forms of knowledge. In a way, we could say that they share elements with critical pedagogy (Giroux, 1992) on the role of education, particularly at the levels of curriculum and classroom, in the reproduction of social inequalities.

Arguably, these three theoretical perspectives differ significantly in terms of accepting or rejecting views of reproducing the existing order and how 'valuable' forms of knowledge are to be acquired or accessed. Giroux's critical pedagogy, for example, rooted in critique, the pragmatics of experience and action, partly reflecting the naïve possibilitarianism (Whitty, 2012) of the 'new' sociology of education (NSOE), sees classrooms as sites of hope, resistance and transformation. Bernstein's cultural reproduction roots, on the other hand, see differential access to pedagogised knowledge in terms of tacitly acquired

recognition and realisation rules and students' embodied abilities. With his main concern being the underachievement of disadvantaged students and the link between social class and educational success, empirical research at the level of the classroom that uses a Bernsteinian theoretical framework (Morais et al., 1992; Morais and Neves, 2001; Bourne, 2004; Rose, 2004; Morais et al., 2004) stresses the importance of adopting visible pedagogies, through the explication of evaluative criteria and through differing degrees of control (according to the context and students) of different aspects of pedagogy (e.g. rate of knowledge acquisition and sequencing) to allow disadvantaged students to successfully acquire recognition and realisation rules of school knowledge as a vertical discourse. Finally, social realists seem to place greater emphasis on the structuring of the curriculum as a resource that all students need in order to access powerful knowledge and to "transcend the limits of individual experience to see beyond appearances to the nature of relations in the natural and social world" (Wheelahan, 2010, p. 2).

In the following section, I wish to present and discuss social realism as a broad school of thought in curriculum studies that emerged in the early 2000s. In the same section, I also introduce and discuss social realism's notion of powerful knowledge as a curriculum principle and conclude with questioning social realism's principles of social (curriculum) justice. I return to fully discuss these issues in sub-section 9.3.4 of chapter 9 and through the light of some of my empirical findings.

3.5 Social Realism and Powerful Knowledge

The 'death' of functionalism in sociology was marked by a constructivist re-definition of social reality and knowledge (Berger and Luckmann, 1966). Social realism is a broad school of thought in curriculum theory that can be seen as a reaction to this constructivist shift. It draws largely from the sociology of Bernstein and Toulmin's post-positivism (1953; 1961), or historical relativism as Suppe (1977) terms it. Social realism 'officially' emerged from Moore and Muller's (1999) attack on constructivist epistemologies in the sociology of

knowledge as they critiqued the reductionist and anti-epistemological stance underpinning the NSOE.

Ironically, it was Young (1971) who paved the road for the NSOE as he pointed sociology of education (and the curriculum) to phenomenological enquiry and to processes of reproducing social inequalities in addition to the more 'staple' sociological concerns of social stratification and mobility. In his response to Moore and Muller (1999), Young (2000) took on board criticisms of Schutz's phenomenology, pragmatism and the French deconstructionists and the effect their devaluing of knowledge has on education, grounding the intellectualist positioning of the evolving social realism to the realities of the curriculum. It was from this early exchange that the technical instrumentalist (Moore and Young, 2001) camp I mentioned in the previous section was established as one of the two competing traditions in curriculum theory that social realists seek to transcend (see table 3). A complete social realist account of knowledge was then put forward by Moore (2009). Beyond shared tenets, for example ontological commitments on the reality and causal powers of knowledge, social realism is a quite broad school of thought and notably fragmented to offer a unified theoretical or methodological approach for research.

Perhaps the most profound 'disagreement' among its members is the role of disciplinary subjects in the curriculum; this is an issue that divides the 'philosophical' camp from the 'sociological' camp of social realism, as exemplified in Muller (2014). As Muller explains, Morrow's (2009) notion of epistemological access implies students' induction "into a facility with the warrants of logical argument" (Muller, 2014, p. 263) that is not constrained by a disciplinary framework of meanings and that leaves little necessity for curriculum subjects as systematically structured pedagogic knowledge that draws from academic disciplines. By contrast, generic skills, and particularly skills such as thinking and critical skills, are, from a sociological point of view, "socially empty" (Bernstein, 2000, p. 59), leaving students unable to identify themselves with an academic community or a particular vocation.

These two camps of social realism have found ground for reconciliation by drawing from perspectives of analytical philosophy of education (Winch, 2010a; 2010b; 2013). However, the idea that students should learn their way around their disciplines in the process of discovering truths about its subject matter, or learn how this subject matter, its methods and principles fit into the wider intellectual landscape (Sellars, 1963, p. 2) dangerously moves the focus away from knowledge or the curriculum as social facts towards the individual as an intentional actor who can (also) affect the ordering of the world. A move towards accommodating a reflexive actor as well as cultural structures has been made by Priestley (2010; 2011a; 2011b), Priestley and Humes (2010) and Priestley et al. (2014), whose work of reviving curriculum theory and re-instating theoretical knowledge in the curriculum has not found a comfortable place within the 'mainstream' social realist school of thought.

We could claim that a hallmark of social realism is its view of knowledge (and the curriculum) as social facts and a view of specialised knowledge as an emergent property with causal powers, these being its ability to expand and integrate/generate new knowledge. In the process, producers of new knowledge are offered the potential to change the relationship between the material and the immaterial, the everyday mundane and the transcendental world (Bernstein, 2000, pp. 29–30). The main characteristics of powerful knowledge are sociality, emergence, irreducibility to the agents of its production and its ability to systematically expand and become a more stable and enduring form of knowledge than fluctuating individual experience.

Powerful Knowledge as a Curriculum Principle

Unorthodox as it may be, I would like to signal my conclusion in the middle of this section by writing that the curriculum principle of powerful knowledge has been equally influential (DfE, 2011, p. 11), nebulous, controversial and disliked (Scott, 2008, pp. 48–51; Catling and Martin, 2011; White, 2012; Beck, 2013; Zipin et al., 2015).

It was Wheelahan (2007) who introduced the notion of powerful knowledge to criticise competency-based vocational education and training that denies students access to theoretical knowledge and to the structuring principles of academic disciplines. The concept was then paired up with Young's concept of knowledge of the powerful (2008), making in this way an important distinction for curriculum theorists and researchers between the curriculum "as a system of social and power relations with a particular history" (Young, 2014b, online) and the curriculum as (potentially) representing powerful knowledge. The latter is seen as a "complex body of specialist knowledge" (Young, 2014b, online) that prompts students to provide explanations and alternative interpretations or to "imagine moral and aesthetic alternatives" (Young and Muller, 2013, p. 245) by accessing the gap between independent meanings and their specific material base. This is the gap that Bernstein (2000, pp. 29–30) sees acting as the site of alternative possibilities: the site of the unthinkable.

In their *Wales, Europe and the World: A Framework for 14- to 19-year-old learners in Wales* document, the Welsh government offers guidance on how the framework should be approached. Provision throughout years 14–19, they write, should be planned so that

> "learners can progress from the familiar to a more unfamiliar range of contexts outside their own personal experience. They should progress from the concrete, such as knowledge of their own locality or the study of particular artefacts, to more abstract concepts about the place and the influence of Wales in Europe and the wider world." (WAG, 2009, p. 12)

This passage highlights the Welsh government's ambition of creating a staged curriculum that will offer students 'the resources' to move beyond knowledge dependent on sensory, everyday experience towards establishing a relationship to the social world that is mediated by more abstract disciplinary concepts.

At the heart of this ambition (and social realism) is knowledge differentiation drawing from Bernstein's Durkheimian-inspired distinctions between everyday (profane/mundane) and specialised (sacred/esoteric) knowledge. This distinction is reflected in the conceptualisation of horizontal and vertical

discourses I discussed in the previous section. One of the main purposes of education according to social realists, therefore, is to provide all students with the opportunity to access universalistic meanings and go beyond their particular, taken-for-granted experiences as a way of seeing a natural and social world that was previously invisible to them. One way to achieve this is through a subject-based curriculum that affords access to disciplinary frameworks of meanings. The nature of disciplinary knowledge, however, is intrinsically esoteric and narcissistic, creating in this way inward-facing, self-sealing identities that remain true to the sacred (Beck and Young, 2005, p. 185). Access to it requires prolonged 'initiation', something that not all students will have had the privilege of. In his criticism of the notion of powerful knowledge, Beck (2013, p. 187) notes that one of the most challenging and enduring educational problems that faces us is to enable students from disadvantaged socio-economic backgrounds to make the links between their everyday experience and these "necessary remote disciplinary worlds".

An alternative 'take' on powerful knowledge is that provided by Maton's Legitimation Code Theory as cumulative knowledge building (Maton, 2013). Maton (2009; 2011; 2013; 2014a; 2014b; 2016) transcends Bernstein's dichotomy of context-dependent and context-independent meanings by introducing the concepts of semantic gravity and semantic density as the generative principles of different forms of specialised knowledge practices in the field of education. In this view, powerful knowledge equates to the 'bringing together' of different knowledges and their transformation through semantic waving and weaving, that is, through shifts of relative context-dependency (semantic gravity) and meaning condensation (semantic density). These concepts have been used empirically to differentiate between different kinds of assessment feedback given to student teachers (Shalem and Slonimsky, 2010), different university curricula (Shay, 2013), different notations in jazz performances (Martin, 2012), curriculum and pedagogic changes in environmental education (Tan, 2013), and different levels of understanding of thermodynamics (Georgiou, 2014).

Following on from the social realist relational view of different knowledge(s), we can assume that social realists would be fostering a relational conception of social justice that attempts to transcend both intrinsically worthy and relativistic/ conventionalist ways of linking justice to the 'common good'. This is an issue I discuss in more detail in sub-section 9.3.4 of chapter 9, in which I also conclude that in practice, it is extremely challenging, if not impossible, to reduce monopoly of access (e.g. providing access to powerful knowledge to everyone) not least because there are different kinds of powerful knowledge (i.e. Science Technology Engineering Mathematics - STEM subjects, Social Sciences, Arts, Humanities) (Young and Muller, 2013) alongside a deep-seated tradition of specialisation at the age of 16.

3.4 Linking Chapters 2, 3 and 4

Based on my discussions in chapters 2 and 3, we now have a full picture of the Welsh Baccalaureate as a qualification and curriculum innovation that attempts to bring together academic (general) and vocational education and to provide a common learning Core to all young people irrespective of their Optional studies and site of learning. In chapter 2, I located the Welsh Baccalaureate (and its development) within its wider socio-political context and discussed the engineering of divisions among qualifications and progression routes to Higher Education. Chapter 2 is complemented by my empirical findings in chapter 6, in which I discuss the 'bringing together' (mixing) of academic/general and vocational Optional qualifications under the overarching award of the Advanced Welsh Baccalaureate Diploma. In this chapter, chapter 3, I discussed persistent curricular content divisions and different organisations of curriculum knowledge and I presented Essential Skills as a generic mode of pedagogised knowledge. The compulsory integration of generics is one of the Welsh Baccalaureate's strategies in fulfilling its promise to provide a common learning Core to all students irrespective of their Optional programmes of study and site of learning. Through my findings and discussion in chapters 7 and 8, however, we see the limited extent to which this egalitarian promise is materialising. Before reaching those chapters, I wish to further elaborate on the key analytical

concepts of the study and present its theoretical and philosophical underpinnings. I do this in the following chapter.

Chapter 4. Theorising the Study

Contents pages

4. Theorising the Study

4.1 Chapter Overview

"Behind the research is an attempt to create a language which will permit the integration of macro and micro levels of analysis: the recovery of the macro from the micro in a context of potential change. The project could be said to be a continuous attempt to understand something about the rules, practices and agencies regulating the legitimate creation, distribution, reproduction and change of consciousness by principles of the communication through which a given distribution of power and dominating cultural categories are legitimated and reproduced. In short, the nature of symbolic control."

Bernstein (2003a, pp. 112–113)

My aim in this chapter is to present my theorisation of the Welsh Baccalaureate curriculum as a social structure comprising the normatively governed patterns of agents' actions that in turn organise their social relations. The theorisation of the integration of Essential Skills into the different components of the Welsh Baccalaureate was an ongoing process involving engagement with theoretical and research literature and analysis of my empirical data. In exemplifying parts of this process, I follow a chronological and narrative approach to explain how I selected elements and concepts of Bernstein's "broadly structuralist strands of thought" (Atkinson, 1995, pp. 83–83) in order to inform the theoretical frame of the study and by extension to set its philosophical underpinnings and ontological assumptions.

Following on from chapter 3, in which I introduced the key concepts of the study, in this chapter, I present a coherent account of the analytical concepts and elements of Bernstein's theory that I used for my empirical analysis. Inevitably, there is a small degree of overlap in some of the concepts (i.e. classification and framing) which is justifiable as in chapter 3, I used them to present aspects of the Welsh Baccalaureate and curriculum organisation, whereas in this chapter, I discuss them as concepts employed for systematically analysing empirical evidence.

4.2 Bernstein's Theory

One of the biggest challenges of my research was its theorisation, mainly because it involved making decisions about which aspects of it I would treat as theoretical and philosophical assumptions and which aspects would be open to re-theorisation. Archer (1995, p. 23) argues that the reciprocal regulation "obtains between ontology and methodology is one which obviously has to work in both directions", opening up in this way a realist research project of revising and modifying a social reality "which is independent of the prior commitments of any theorist about what exists". My ambitions for the study were far too modest to enter into any empirical work with such possibilities in mind. As a result, I treated many aspects of the study as 'given', stemming from Bernstein's theoretical perspectives that I crudely imported. This, as I explain throughout the chapter, had its own challenges, not only because it entailed understanding, appreciating and re-imagining these 'given' assumptions, but also because Bernstein's theory is an amalgamation of different perspectives.

Bernstein brings Durkheim's rationalism, which according to Giddens (1972, p. 43) is better seen as an attempt to transcend positivism and idealism, together with influences from the early interactionists and the primary position they attribute to meanings and language as a means of symbolically negotiating these meanings. Language is viewed as a system of rules and this system of rules is a reality that is logically independent. This, I believe, is Bernstein's realism, a realism that focuses on the temporal order of the possibility and conditions of cultural change through space.

In section 3.2 of chapter 3, I presented the Welsh Baccalaureate curriculum using the terms collection and integrated codes. The concept of code has been fundamental in Bernstein's structuralist sociological project. Codes (and subsequently modes - such as generics, singulars and regions as modes of pedagogised knowledge) refer to a "regulative principle which underlies various message systems, especially curriculum and pedagogy" (Atkinson, 1985, p. 136) denoting the way knowledge is classified and framed. As a message system, curriculum defines what counts as valid knowledge, pedagogy defines what counts as valid transmission, and evaluation defines what counts as a valid

realisation of the knowledge on the part of the taught (Bernstein, 1971, p. 47). When examined together, as is the case with my research, these three message systems constitute the structures and processes of specialised (re-contextualised disciplinary) knowledge, its transmission and practice.

It is not therefore just curriculum and pedagogy that are linked, or as Young (2008, p. 13) writes: "just as the sociology of knowledge is inseparable from the sociology of learning, so the study of the curriculum is inseparable from the study of learning and pedagogy"; assessment is also necessarily linked to curriculum and pedagogy and this is particularly the case for the assessment-led Essential Skills or any competency-based pedagogic approach that is guided by the principle of naturally occurring evidence (Jessup, 1991; 1995; WJEC, 2010b, p. 5). Assessment (as we see through my empirical chapters and particularly through chapter 8) is also the joining point between curriculum knowledge and qualifications (certification).

I found Bernstein's sociological project and writing equally as appealing and relevant to my research as I found it conceptually intimidating. While making an attempt to understand it and appreciate it, I was pressurised with pragmatic concerns of collecting, analysing and interpreting data in addressing my wider research aim, that is, to examine the extent to which the Welsh Baccalaureate brings together academic (general) and vocational education and provides a common learning Core to all students. I therefore started the theorisation of the study with the two main analytical concepts of Bernstein's theory (i.e. classification and framing) (1971) as I was studying and piecing together elements of his sociological project that were analytically valuable for the study.

4.2.1 Classification and Framing

The concepts of classification and framing operate at the structural and interactional levels of analysis respectively, with the former based on the rule of whether things should be kept apart or together and the latter on the rules of social and discursive order (Bernstein, 2000, pp. 11–13).

Classification

Bernstein's concept of classification refers to the degree to which boundaries between different categories are drawn and maintained, making these categories (e.g. curriculum subjects, areas of knowledge, pedagogic spaces) structurally distinct and differentiated (specialised). Classification therefore is about 'relations between' and any differentiation between categories that exist relationally:

> "The crucial space which creates the specialisation of the category – in this case the discourse – is not internal to that discourse but is the space between that discourse and another. In other words, A can only be A if it can effectively insulate itself from B. In this sense, there is no A if there is no relationship between A and something else. The meaning of A is only understandable in relation to other categories in the set; in fact to all the categories in the set. In other words, it is the insulation between the categories of discourse which maintains the principles of their social division of labour." (Bernstein, 2000, p. 6)

At a societal level, classification is about the social division of labour of physical resources and between mental and manual work. Any classification is social in nature, meaning that not only is it transmitted by society, but it is also created by society. In this view, the classification of any objects can be traced to 'modes' of social life and social organisation. At the micro level of curriculum, pedagogic practices also take place through these divisions of labour as reflected in the social organisation of students and teachers in various socio-cultural contexts (i.e. the six education sites of the study).

Pedagogic practices in this sense are theorised as rule-bound or normatively bound and are distinguished by their differing inner logic(s) with rules and conventions defining not only the content (what) to be transmitted but also the access they afford to different groups of students. In Bernstein's terms, different pedagogic practices act discriminately on who can successfully acquire the transmitted content. In my analysis, these groups emerged from the data and were classified based on students' ability (high- or lower-achieving students) and Optional programme of study (students following solely Sciences or Arts/Humanities) (see also sub-section 4.2.3 of this chapter).

Classification strengths vary from strong (C+) to weak (C-) based on the differing degrees of insulation between categories. Classification can also refer to relations within a category, and this is what Bernstein (2000, p. 99) refers to as internal (Ci) classification, for example the relation between written materials shared between Essential Skills and other curriculum components or between people in a classroom, that is, students completing the same or different Skill task(s) or an Essential Skill teacher/tutor with an *instructing* or *assessing* role. Any change in the strength of a classification translates into a change in the relations between the categories, the weakening of the specialisation of the categories and a potential loss of the category's identity.

In section 3.2 of chapter 3, I discussed how the Core curriculum of the Welsh Baccalaureate and its components are organised around themes drawing from the specialised (re-contextualised disciplinary) discursive basis of various school subjects. When the focus of these themes is on solving particular problems, for example students are asked to carry out a survey on peoples' contacts to establish social networks and the personal value of relationships, I refer to knowledge having been 'regionalised' (sub-section 3.2.1 of chapter 3) and facing outwards to the field of practice. In these instances, we see a weakening of the strength of the classification between the school subjects of Sociology, Psychology and Statistics and the diminishing of the space between them. On this, Bernstein (2000, p. 11) asks "in whose interest is the apartness of things, and in whose interest is the new togetherness and the new integration?"

Category relations in this sense are the relay for power relations, and inherent in any classification are relations of power: "The basic classificatory principle is created by the distribution of power constituting, reproducing, and legitimatising the social division of labour" (Bernstein, 2003a, p. 43). Through this prism, we have the Options and the Core as different pedagogic contexts; we have different categories of agents (i.e. teachers as *instructors* or *official* assessors); and different curriculum materials (i.e. an essay from an Option's subject used for Communication but marked using different *assessment criteria*) and all of these distinctions are seen as constituted through relations of power.

As Bernstein (2000, p. 5) writes, power relations "create boundaries, legitimize boundaries, reproduce boundaries, between different categories of groups, gender, class, race, different categories of discourse, different categories of agents. Thus, power relations always operate to produce dislocations, to produce punctuations in social space."

Any given order, however, is open to change and it is the 'relations within' each category that carry the potential of boundary changing. If in the social division of labour the content of each category is not significant, then what is of significance is the strength of the insulation between these categories. What is of importance within each division is the form of labour generated 'within' the category and this is expressed as relations of control by the concept of framing.

Framing

Bernstein's concept of framing is about 'relations within' boundaries. It refers to the way boundaries are realised through relations of social control. In other words, it is what supports, reproduces or changes boundaries. If classification establishes 'voice', then framing establishes the 'message' through the notion of 'who controls what' in a pedagogic interaction. It is the internal logic of the pedagogic practice. What distinguishes pedagogic practices from other practices in society is the transmission and acquisition of knowledge. Internal framing (Ci) in my analysis refers to the degree to which the transmitter of knowledge (WBQ co-ordinators and teachers/tutors) has control over certain elements of the curriculum, for example the selection of Skill tasks and their materials, the sequencing of what comes first and what comes second in terms of Skill development and instruction, the pacing of instruction and the rate of expected acquisition of Skills, and the evaluative criteria of performances (Bernstein, 2000, pp. 12–13).

Similar to the concept of classification, framing strengths vary from strong (F+) to weak (F-) based on the apparent control (Bernstein, 2000, p. 13) of different elements of pedagogy (i.e. selection, sequencing, pacing, criteria), the framing values of which can vary independently. Tyler (2012, p. 152) writes that "the

strength of framing is 'indexed' by the degree to which the transmitter of a message is free to regulate features of the communicative context". Although the transmitter is free to regulate 'how' pedagogic practices are realised, he/she may never be entirely free to put meanings together in any way he/she wishes. In order to understand this, we need to chase the concept of framing back to Goffman's frame analysis (1974) and compare it to the idea of situation for the symbolic interactionists. Gonos (1977) argues that if every situation is unique in symbolic interactionism, communicative acts take place in well-defined contexts (worlds) in frame analysis. Framing therefore operates at the level of the 'parole'. Whether 'parole' as a 'speech act' – the use of language ('langue' as an abstract signifying system constituted of rules and conventions where the concept of classification operates) – is a function of accordance or 'creative mischief' is a case of cultural reproduction or the potential of disruption and transformation.

Hoadley (2006) supports the conceptual value of framing as it fosters the potential for the re-drawing of boundaries and the unmaking of power. Dowling (1999, online), on the other hand, is critical of the assertions that at the same level of analysis, classification and framing can vary independently of each other:

> "Essentially the situation is as follows. Where that which is classified is the privileged content, or that which is to be transmitted, in a pedagogic situation, then the strength of framing of interactions must coincide with the strength of classification. Only where that which is classified is decoupled from this privileged content can classification and framing vary independently. An example of the latter would be, 'you can do anything you like so long as you do it in this room'. Strong classification/weak framing, yes, but only because they do not refer to each other."

Empirically, I found it challenging to distinguish between classification and framing, not least because through them Bernstein analytically distinguishes the structural and the interactional and then relates one to the other dialectically (Atkinson, 1985, pp. 135–145). Bernstein (2000, p. 5) himself acknowledges the empirical difficulties of working with these concepts, as they operate at different levels of analysis: "empirically, we shall find that they are embedded in

each other". A typical example from my data would be the distinction between everyday knowledge and specialised knowledge in the case of Communication. Teachers initially may allow students to bring in any written document they want (for example, an everyday or a simple document such as a CV or a newspaper article), in this way weakening the framing over selection and at the same time making Communication a less specialised subject. Once the framing is strengthened (by giving students a topic to discuss, a list of reading materials or a writing template), classification is also strengthened. With its own *assessment criteria*, Communication is also strongly classified from Media studies or English with teachers/tutors having strong control over the evaluative criteria (e.g. by providing common Literacy marking schemes or by emphasising the 100 per cent accuracy criteria for spelling, punctuation and paragraphing). These cases are equally examples of strong framing on material selection and evaluative criteria as well as strong classification between Communication and the component in which it is integrated (i.e. a writing task from an Optional subject) or between Communication and Literacy or Media studies.

As the study progressed, I employed further elements of Bernstein's sociological project. For example, I used elements from his theory of pedagogic practice that focuses on knowledge transmission and framing (sub-section 4.2.3 of this chapter) and this helped me to overcome the above empirical challenge and to draw attention to the interactional aspects of educational processes. A further concept that I employed, that of orientation to meaning, was drawn from Bernstein's code theory. It denotes "privileged and privileging referential relations" (Bernstein, 2003a, p. 43) and I use it to refer to the meanings that are prioritised (valued) in specific pedagogic contexts (e.g. Communication and Application of Number practices). The concept indicates the power these meanings (and those who set them) hold when viewed relationally to alternative ones (e.g. the privileging of specialised, re-contextualised disciplinary narratives in the speaking and listening part in *instructional forms* of Communication practice over the prioritisation of body language and timing in the *assessing forms*; see sub-section 8.2.1 of chapter 8).

This concept was analytically helpful in addressing the extent to which the Welsh Baccalaureate can provide a common learning Core to all students through the integration of Essential Skills. Referring to the transmission of relatively context-independent (specialised) or context-dependent (everyday) meanings, in my analysis, orientation to meaning is an important aspect associated with 'who' gets access to 'what' knowledge. This analytical concept also links to a particular aspect of the sequencing rules in Bernstein's theory of pedagogic practice (see sub-section 4.2.3 of this chapter). In visible pedagogies, there is usually a time interval between the acquisition of context-tied operations and the understanding of more context-independent principles and their application to new situations (Bernstein, 2003a, p. 75), with the first level of discourse coming in the earlier stages of pedagogies and preceding the more 'distant', context-independent meanings.

The concept of meaning orientation, paired with the concepts of classification and framing, forms part of my conceptual analytical framework (table 5) for the study. This framework was further operationalised as theoretically informed coding instruments for data analysis that helped me to systematically compare the integration of generics with different curriculum components of the Welsh Baccalaureate. The coding instruments (see appendices 3 and 4) were informed by the work of Morais and Neves (2001), Hoadley (2006) and Tsatsaroni et al. (2015).

In carrying out my analysis and interpretation, I gave analytical priority to relationships of control, then the boundaries within which these relations operate, to *the power of certification* (see chapter 8) that underlies the whole process of integrating Essential Skills and by extension the power of Higher Education institutions to influence upper-secondary curricula (see chapter 6). Delamont (1989, p. 193) attributes the analytical strength of Bernstein's theory to these 'staged' analytical prioritisations when examining any social phenomenon.

Table 5. *Main analytical concepts examining the integration of generics into the curriculum*

Classification	Relations between curriculum components	Insulation – strength of boundary between Essential Skills and the Core or Optional Programmes of study in which they are integrated **(interdisciplinary relations)**
		Insulation – strength of boundary between specialised (re-contextualised disciplinary) and everyday knowledge **(interdiscursive relations)**
		Insulation – strength of boundary within each curriculum knowledge structure – **(intradiscursive relations)**
Classification	Relations between materials, topics, communication and numerical tasks	Insulation – strength of boundary between pedagogic and everyday ('life' – work) materials and tasks
Classification	Relations between agents' 'practice spaces' – roles	Insulation – strength of boundary between teachers/tutors as official assessors and teachers/tutors as instructors
Framing	Discursive rules	The degree of control teachers/students have on the selection of communication materials/topics/numerical tasks
		The degree of control teachers/assessors have on the sequencing of content (sequencing of tasks, sequencing of instruction/assessment)
		The degree of control teachers/assessors have on pacing (expected rate of acquisition)
		The extent to which teachers/assessors make explicit the evaluative criteria of what counts as a valid display (realisation) of knowledge (i.e. students' performance)
Orientation to meaning	Privileged – privileging referential relations	Modes of knowledge organisation i.e. introverted or extroverted meanings By extension (in examining pedagogic practices) Types of formation of individual identity i.e. introjected or projected

As naïve as it may sound, during the first round of data analysis, I felt overwhelmed and disappointed when I realised that interviewees would not be

speaking using terms such as knowledge differentiation or access and that no structures would be empirically visible as I had imagined them. These would have to be modelled and conceptualised through the accounts of practices the interviewees were giving me. In my analysis, I did not attempt to explain any generative principles or to build such a representative model, but as the study progressed, I appreciated the complexity of Bernstein's pedagogic device and its level of abstraction.

Bernstein's pedagogic device is a representative model built to reflect invisible conditions and the grammar of pedagogic discourse. If the concept of code or mode refers to the structuring principles of different knowledge organisation and pedagogic practices, then the pedagogic device refers to the processes by which these structuring principles are produced, reproduced and challenged (changed). Despite the fact that in my analysis I was not concerned with the generation of code modalities, I found the pedagogic device useful in further understanding Bernstein's sociological project and for allowing me to incorporate the concept of the field and the idea that in the field of knowledge reproduction, it is evaluative rules that mediate access to different types of knowledge(s).

4.2.2 The Pedagogic Device

If I was to describe Bernstein's sociological project in a few sentences, I would say that he was concerned with how knowledge, as a symbolic resource in a class-based society, gets produced, regulated and distributed differentially across different social groups. The pedagogic device is at the centre of his theory as he models a set of interrelated and hierarchically arranged rules (see table 6) through which different classes of knowledge in society (intellectual, practical, expressive, official or local) are converted into pedagogic discourse, that is, how they become re-contextualised curriculum knowledge and how this knowledge is taught and acquired in the field of reproduction (i.e. in the classroom) always in reference to structurally determined relations of power. As the regulator of pedagogic discourse, the pedagogic device ultimately controls 'who' gets access to 'what' knowledge and the shaping of their identity and consciousness.

Atkinson (1985, p. 173) writes:

> "at the heart of the "pedagogic device" is the coding of power whereby the 'thinkable' is discriminated and demarcated, in a fashion which corresponds to the function of 'classification'. In modern, complex societies the contrast between the 'sacred' and the 'profane' is formerly paralleled by the classificatory principles emanating from the higher reaches of the education system. The pedagogic device is a mechanism for the distribution of the 'thinkable' among different social groups, for the identification of what may be thought simultaneously implies who may think it. Social order is thus equivalent to the cosmological order of legitimate categories of consciousness."

Table 6. *The arena of the pedagogic device. (Adapted from Maton and Muller, 2007, p.18)*

Field of Practice	Form of Regulation	Symbolic Structure	Main Types	Typical Sites
Production	Distributive rules	Knowledge structure	Hierarchical/horizontal knowledge structures	Research publications, conferences, laboratories
Re-contextualisation	Re-contextualising rules	Curriculum	Collection/integrated codes Singular regions, generic modes of pedagogised knowledge	Curriculum and policy documents, textbooks
Reproduction	Evaluative rules	Pedagogy and evaluation	Visible/invisible pedagogic codes	Classrooms, assessments

Bernstein's pedagogic discourse is a re-contextualising principle by which other discourses are selected and come into relations with each other. He writes: "Pedagogic discourse is constructed by a re-contextualising principle which selectively appropriates, relocates, refocuses and relates other discourses to constitute its own order. In this sense, pedagogic discourse can never be identified with any of the discourses it has recontextualised" (Bernstein, 2000, p. 33). Following on from this, all curriculum components have been

transformed from a real discourse (e.g. physics or carpentry) into an imaginary discourse (e.g. school physics or school woodwork). This pedagogic discourse regulates the form and content of curricular knowledge by "selecting and creating specialised pedagogic subjects through its contexts and contents" (Bernstein, 2000, p. 31).

The focus of the pedagogic device therefore is not on different kinds of knowledge and their structuring, but rather on knowledge transformation and its differential distribution and access (the latter in terms of tacitly acquired recognition and realisation rules at the level of individual students). As I mentioned in section 3.2 of chapter 3, social realist notions of powerful knowledge and horizontal and vertical knowledge structures (Bernstein, 1999) describe knowledge structures in the field of knowledge production (e.g. universities, research centres, arts sites) rather than the field of re-contextualisation (curriculum knowledge).

A social realist empirical project has been to study the relationship between knowledge structures in the field of production (i.e. as an academic discipline) and re-contextualisation (i.e. as a curriculum subject) (Luckett, 2009; 2012; Kinchin, 2011; Kelly-Laubscher and Luckett, 2016) or students' engagement with re-contextualised disciplinary knowledge (Baldwin, 2010; Coleman, 2012; Afdal and Nerland, 2014; Wadouh et al., 2014). This project places at the heart of theorisation and empirical work the question of whether the structure of knowledge imposes limitations on the structure of re-contextualised knowledge (curriculum knowledge). This question, as I mentioned in sub-section 3.2.2 of chapter 3, was not the focus of the study. Through my comparative analysis, however, we get indications that Communication and Application of Number may be structurally different.

For the study, I used the concept of the field to theorise how agents (or groups of agents), with their practising ideologies, are defined by their positioning within the reproduction field and how the integrated curriculum, as a social

structure, is practised. These agents have different roles and functions, as I discuss in chapter 8, and I theorised their practice and actions as an activation of structure. During data analysis, I contemplated employing secondary analytical concepts from social realist theoretical projects. One of those was Maton's languages of legitimation (2000; 2006; 2007; 2014b) which acknowledge that agents' practices are indicative of 'what matters' in the field, 'what counts' as success and what should be used as a measure of achieving success. His theory allows researchers to examine knowledge practices in the fields of production, re-contextualisation and reproduction within a single framework. In doing so, Maton analytically distinguishes between knowers and knowledge, claiming that for every knowledge structure there is also a knower structure. He then considers whether pedagogic practices are differentiated on the basis of principles emanating from the knowledge structure, the knower structure, neither or both (Maton, 2007, p. 92).

Starting from Snow's (1961) idea of the clash between the two intellectual cultures (Humanities and Science), Maton claims that it is not only knowledge structures that can be hierarchical or horizontal, but knower structures can be arranged hierarchically or horizontally. Humanities, for example, are characterised by a hierarchical knower structure, "a systematically principled and hierarchical organisation of knowers based on the image of an ideal knower which develops through the integration of new knowers at lower levels and across an expanding range of different (innate and/or social) dispositions" (Maton, 2007, p. 91). Through this theoretical prism, Science is considered to be inherently 'more democratic' with a flattened, horizontal knower structure: "a series of strongly bounded knowers, each with its own specialized modes of being and acting, with non-comparable habituses or embodied dispositions based on different biological and/or social backgrounds and histories" (Maton, 2007, p. 92).

In empirically examining whether agents and discourses are differentiated on the basis of principles emanating from the knowledge structure, knower structure, neither or both, the two components of intellectual and educational fields (knowledge and knowers) are brought together as two continua giving

rise to four legitimation codes. This framework has been used to establish that Music GCSE has an elitist orientation, which means that students have to display both musical knowledge and dispositions (Lamont and Maton, 2008; 2010), that Chinese university students in Australia are predisposed to a knowledge code that comes into conflict with the knower-oriented educational practices they are encountering (Chen et al., 2011), and that the way technology is integrated into English and Mathematics classrooms depends on teachers' and students' views of the former as a knower code emphasising dispositions and gazes and the latter as a knowledge code emphasising possession of knowledge, skills, procedures and techniques (Howard and Maton, 2011).

By treating knowledge as one component of the pedagogic field, these studies analytically separate the epistemic and social relations of knowledge. By focusing on both, distinctions such as practical, technical, everyday or theoretical knowledge are masked and so are the different forms powerful knowledge can take (i.e. STEM, Social Sciences, Arts and Humanities). My empirical observation of Maton's knower and knowledge codes is that they are "too crude" (Luckett, 2012, p. 23), especially when compared with Bernstein's competence and performance models (Bernstein, 2000, pp. 41–51) based on different degrees of classification and framing of their six different features (see sub-section 3.2.1 of chapter 3). To demonstrate the difficulty I had with Maton's codes, I give some interview excerpts in which I could not establish whether differentiation is based on principles emanating from the knowledge structure, knower structure, neither or both.

> *"When someone takes up a Key Skill or an Essential Skill, there is a little bit of confusion and question of why have I got to do this if I've got a GCSE in Maths? The problem is when they come in, as I'm sure you'll know, we do a skills check on them [diagnostic assessment] and although we have students who turn up with certificates that say, 'Yes I got a D or C or a B', what we find is that* ***their actual application of these skills*** *is not so good. Then what you find is that from that point onwards* ***[after receiving instruction]****, they tend to engage pretty well [with Application of Number at Level 2].* ***The type of student*** *that engages particularly well are the types of students who didn't do particularly well at these subjects in school for whatever reasons. What we find is the* ***turnaround in those students*** *is quite dramatic and drastic so by the end of the year, they tend to do*

*quite **well in their assessment** and they have a different belief in their **numerical skills, attitude and confidence."***

Interviewer:
"Okay. So what would you say that BTEC students learn as part of the Communication and Application…"

*"I think what they learn more so than necessarily on the vocational programme, when you look at Comms or Application, **you're looking at the real skills of communications or applications** where when, for instance, somebody submits a vocational essay, they're being marked **more on the context of it rather than the skills.** So what they get out of it, Essential Skills, well Key Skills, is that **ability to look at their work again** and hopefully, by the end of the year, **become better writers**. Because the **criteria for Communication and Application** is very, very strict. For Communication, for example, **you're not allowed any errors**."*

From the above quotes, it appears that both Communication and Application of Number practices are differentiated based on principles emanating from both the knowledge and knower structure (i.e. having an elitist orientation), but this could equally be a case of the empirical challenge to distinguish between knowledge structures and knower structures.

With one of my research objectives being to explore the concept of generics and consequently the knowledge basis and organisation of Communication and Application of Number, I found Bernstein's theoretical insights on the re-contextualisation field to be of greater value. He writes that the particular field has a crucial function in creating the fundamental autonomy of education from the market (Bernstein, 2000, p. 33), and he distinguishes between an official re-contextualising field (ORF) and a pedagogic re-contextualising field (PRF). The ORF is created and dominated by the state and its agents, people in the Department of Education, in LEAs, inspectorates, and other people/groups of people not specialising in pedagogic discourse but with an interest and an ability to influence both the state and pedagogic practices. The PRF consists of pedagogues, university departments of education, specialised journals, examining boards, research foundations, etc. When examining which discourses get appropriated to become curriculum knowledge, it is important to take into account the dominant ideology of the ORF. This is exemplified by my findings in

chapter 6 in which we see the ideology of the market expressed as skills and vocational preparation together with the ideals of a standardised universal provision of education (Core) and individual choice (Options). Although I do not theorise or empirically examine the relationship between the PRF and the ORF, these theoretical insights are useful in appreciating the distinctiveness of generics in comparison to all of the other curriculum components in which they are integrated.

As generic modes of pedagogised knowledge, Communication and Application of Number were originally constructed outside the PRF. They are therefore based on a different curriculum principle than the components in which they are integrated. Being in effect an 'assessment strategy', they are guided by the principle of naturally occurring evidence, a principle drawing from manual training methods. Inevitably, issues of assessment and knowledge evaluation emerged from my data-driven codes together with issues of alternating criteria for evaluating Communication and Application of Number performances (see chapter 8).

Ultimately, and in Bernstein's theory, it is evaluative rules that regulate all pedagogic practices and the essence of pedagogy is continuous evaluation. As he writes, evaluation is "what the device is about. Evaluation condenses the meaning of the whole device. We are now in a position where we can derive the whole purpose of the device. The purpose of the device is to provide a symbolic ruler for consciousness" (Bernstein, 2000, p. 36). In chapter 9, I briefly discuss issues of identity and the commitment to the materialities of (generic knowledge) consumption (i.e. certification). In that discussion, I also draw elements from Bernstein's theory of pedagogic practice which I discuss in the next and final sub-section of this chapter.

4.2.3 Pedagogic Practices

I have so far presented elements of Bernstein's sociological project relating to the organisation of knowledge in the curriculum (using the concept of classification), the transmission and acquisition of knowledge through pedagogy (using the concept of framing), and processes of knowledge re-contextualisation

(i.e. the making of curriculum knowledge) and processes of reproduction (i.e. the making of classroom knowledge) through the pedagogic device. Adding to his theory of curriculum, pedagogy and the distribution of official knowledge, Bernstein (2003a, pp. 63–93) developed his theory of pedagogic practice and how it is shaped by power relations and social relations.

With his main focus on the transmission of knowledge, Bernstein starts by making the distinction between a pedagogic practice as a cultural relay and a pedagogic practice "in terms of what the practice relays – in other words, pedagogic practice as a social form and as a specific content" (Bernstein, 2003a, p. 63). His three rules (i.e. hierarchical, sequencing, and criterial – see table 7) are the framing of any pedagogic practice, that is, the inner logic of the educational transmission as a cultural relay. This 'how' is prior to the content to be transmitted, that is, the 'what' of the pedagogy, and acts selectively on who (or rather on which groups of students) can successfully acquire the knowledge transmitted.

In the study, there are four distinct 'classes' (social groups) of students differentiated by their ability (i.e. normally paced, higher-achieving students or remediating, lower-achieving students) and by differing Optional programmes of study (i.e. students following solely Science or Humanities-based studies). These distinctions emerged clearly from interviewees' accounts during my preliminary analysis of the data and this was one of the reasons that prompted me to select elements of Bernstein's sociological project as his theoretical insights were sensitive to class distinctions and linking different pedagogic practices to distinct distribution(s) of knowledge and unequal learning outcomes.

A second reason for choosing this element of Bernstein's sociological project was that interviewees gave me lengthy accounts of how Communication and Application of Number are taught. Although these were secondary accounts of classroom practices, rather than direct observations on interactions, the interview data contained a wealth of information on the relationship between WBQ co-ordinators, teachers and students on the pacing of learning and on knowledge evaluation. The focus of Bernstein's theory of pedagogic practice is

on knowledge transmission and how this is affected by social relationships. It therefore suited my analytical 'needs' in terms of examining the extent to which a common learning Core is provided to all students.

Bernstein applies his analysis of the inner logic of pedagogic practices as a cultural relay to the conflicting features of traditional (visible) and progressive (invisible) forms of practice, the latter being the 'voice discourses' (Moore and Muller, 1999; 2010) criticised by social realists (see section 3.5 of chapter 3). As Moore (2013, p. 174) writes, the difference between visible and invisible pedagogies is not pedagogy itself. It is not between more or less pedagogy in the formal sense of traditional education, but it is about the visibility of the internal rules of the practice (see table 7). The difference between these two forms of pedagogy maps onto the performance and competence models of re-contextualised knowledge (i.e. curriculum models) that I described in sub-section 3.2.1 of chapter 3.

In visible pedagogies, students are differentiated by their performance based on "external, publicly available, criteria that are grounded in explicit bodies of knowledge (subjects) organised as specifically sequenced and paced syllabuses (curriculum)" (Moore, 2013, p. 181). In invisible pedagogies, the "external is held to be the externalisation of the internal of the child. The external is the outward expression of the child-in-itself, an actualisation of competence" (Moore, 2013, p. 181). As Bernstein (2003a, p. 71) writes:

> "Invisible pedagogies are less concerned to produce explicit stratifying differences between acquirers because they are apparently less interested in matching the acquirer's text against an external common standard. Their focus is not upon a 'gradable' performance of the acquirer but upon procedures internal to the acquirer (cognitive, linguistic, affective, motivational) as a consequence of which a text is created and experienced. These procedures of acquisition are considered to be shared by all acquirers, although their realization in texts will create differences between acquirers."

In my analysis, I consider this internal procedure or ability to be trainability (Bernstein, 2000, p. 59), which is what generics have their deep structure on.

Table 7. *Secondary analytical concepts examining Communication and Application of Number practices – the rules of pedagogic practice*

<table>
<tr><td rowspan="5">Visible Pedagogy (VP)

Emphasis placed on transmission – on the performance of students, the text they produce, and evaluation of the text produced

Invisible Pedagogy (IP)

Emphasis placed on acquisition – on the competences of students and on the common shared procedures for creating the text they produce</td><td rowspan="2">Hierarchical Rules – Regulative Rules

Establishing the conditions for social order, manner and character. The interactional relationship between the transmitter of knowledge (teacher) and the acquirer (student)</td><td>(VP) Explicit hierarchical rules – the power relations are clear and the hierarchy is explicitly defined</td></tr>
<tr><td>(IP) Implicit hierarchical rules – the power relations between transmitter and acquirer are masked or hidden</td></tr>
<tr><td rowspan="2">Sequencing Rules – Discursive (Instructional) Rules

Establishing knowledge progression (sequencing) of what comes ‘first’ and what ‘after’ by setting the expected rate of acquisition

Regulating the economy of transmission – the meeting point between the material, discursive and social basis

Defining the acquisition of context-tied operations and the understanding of context-independent meanings and principles</td><td>(VP) Explicit sequencing and pacing rules through staged curricula, in behavioural rules, in rules of punishment and rewards, and in the temporal dislocations of how/when transmitters and acquirers should proceed</td></tr>
<tr><td>(IP) Implicit sequencing and pacing rules that are known only to the transmitter. As a result, the student cannot be aware of his or her temporal project. The student lives only the present and is not aware of the past or the future</td></tr>
<tr><td rowspan="2">Criterial Rules – Discursive (Instructional) Rules

Defining what counts as legitimate or illegitimate communication, social relation or position</td><td>(VP) Explicit criterial rules of what is expected by the student. Transmitters will make available the rules of legitimate communication, social relation or position to acquirers</td></tr>
<tr><td>(IP) Implicit criterial rules of what is expected by the student. Acquirers are free to create their unique criteria for evaluation with transmitters becoming facilitators</td></tr>
</table>

My research objective to explore the concept of generics materialised by examining the integration of Communication and Application of Number in terms of merging them with curriculum segments of different knowledge organisation (*levels of integration* theme, sub-sections 7.3.2 and 7.3.3 of chapter 7) and in terms of how these two Essential Skills are practised. My decision to use different elements of Bernstein’s theory that complemented each other

inevitably complicated data analysis and interpretation, but also helped me in providing detailed analytical descriptions. Behind this decision was also my intention to make a 'clearer' distinction between Essential Skills practice(s) as a specialised pedagogic practice and the classification of curriculum categories (see table 6) when I was empirically challenged to distinguish between structural and interactional levels (see sub-section 4.2.1 of this chapter) of the integrated curriculum as a social structure.

4.3 Linking Chapters 4 and 5

The excitement provoked in the 1970s and 1980s by theories of cultural reproduction and the debates surrounding them may have run its course. Nevertheless, it was the concept of cultural reproduction that pointed me to tripartism and the education 'tracks' that have been operating since the mid-1800s as well as to the durability of social structures. It also pointed me to the potential for change, or interruption, although this was not something that I set out to examine in my research. However, I use the word 'interruption' in this passage to highlight one of the differences between two cultural reproduction theorists who studied the relationship between education and social inequality: Bourdieu (1973) and Bernstein (1999; 2000; 2003a; 2003b). While the former saw the function of education being the reproduction of dominant class culture in maintaining the dominant class' advantageous position and exercise of power, the latter's theory departs from the view that education is a relay for power relations external to itself.

As Bernstein writes:

> "Think of hi-fi (…) When the tuner is activated what is heard is a function of the system carrying the signal: the system carrying the signal has already regulated the signal. What of pedagogic communication? We know what it relays, but what is the relay? We know what it carries but what is the structure that allows, enables it to be carried? This is very similar to a distinction between language and speech." (2003a, p. 169)

Bernstein focuses on the structuring of educational knowledge(s) and practice(s) as an 'official discourse', and his theory provides a set of powerful

concepts for examining similarities and variations in the way Communication and Application of Number, as exemplary 'species' of genericism, are integrated with different components of the Welsh Baccalaureate curriculum. In my analysis, this is examined as relations of power (expressed as classification) and forms of interaction (expressed as framing) across six distinctly different education sites. As I point out in chapters 2 and 6, the integration of Core/Key/Essential Skills to upper-secondary programmes of study has been a gradual process throughout the last 40 years in the UK. It has also been a notably challenging process in terms of Skills gaining wide acceptance and value, particularly for students on the academic (general) track. By drawing insights from Bernstein's sociological project and combining them with the comparative methodology and analytical strategy that I detail in the following chapter, I am able to provide a theoretically informed analysis of the challenge of integrating Essential Skills and the limited extent to which the policy promise of the Welsh Baccalaureate to provide a common learning Core to all students is materialising.

Chapter 5. Methodology and Methods

Contents pages

5. Methodology and Methods

5.1 Chapter Overview

"It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories [...]."

Doyle (1891, p. 3)

As an inexperienced researcher carrying out independent research for the first time, I believe this chapter is one of the most important in the whole thesis. It is therefore not a coincidence that it sits in the middle of my thesis, bringing together the scope of my research, my theorisation of Essential Skills integration into the Welsh Baccalaureate curriculum, and the accomplishment of the empirical parts of the study. My aim in this chapter is to present how the study unfolded and the practical and methodological restrictions and opportunities that shaped its course. In fulfilling this aim, I justify and evaluate my methodological choices, I give detailed descriptions of the six education sites that I accessed and a full account of the data collection and analysis approaches and methods that I followed. In this chapter, I also make apparent how practicalities such as access to participants and data and analytical considerations prompted me to carry out the study in two distinct but interrelated parts. Both of these parts contribute towards meeting my wider research aim of examining the extent to which the Welsh Baccalaureate brings together academic (general) and vocational education and provides a common learning Core to all students irrespective of their Optional choices and site of learning. Figure 4, which spreads over the next two pages, is a graphic representation of the course of the study and it summarises the descriptive content of this chapter.

Figure 4. *The course of the study.*

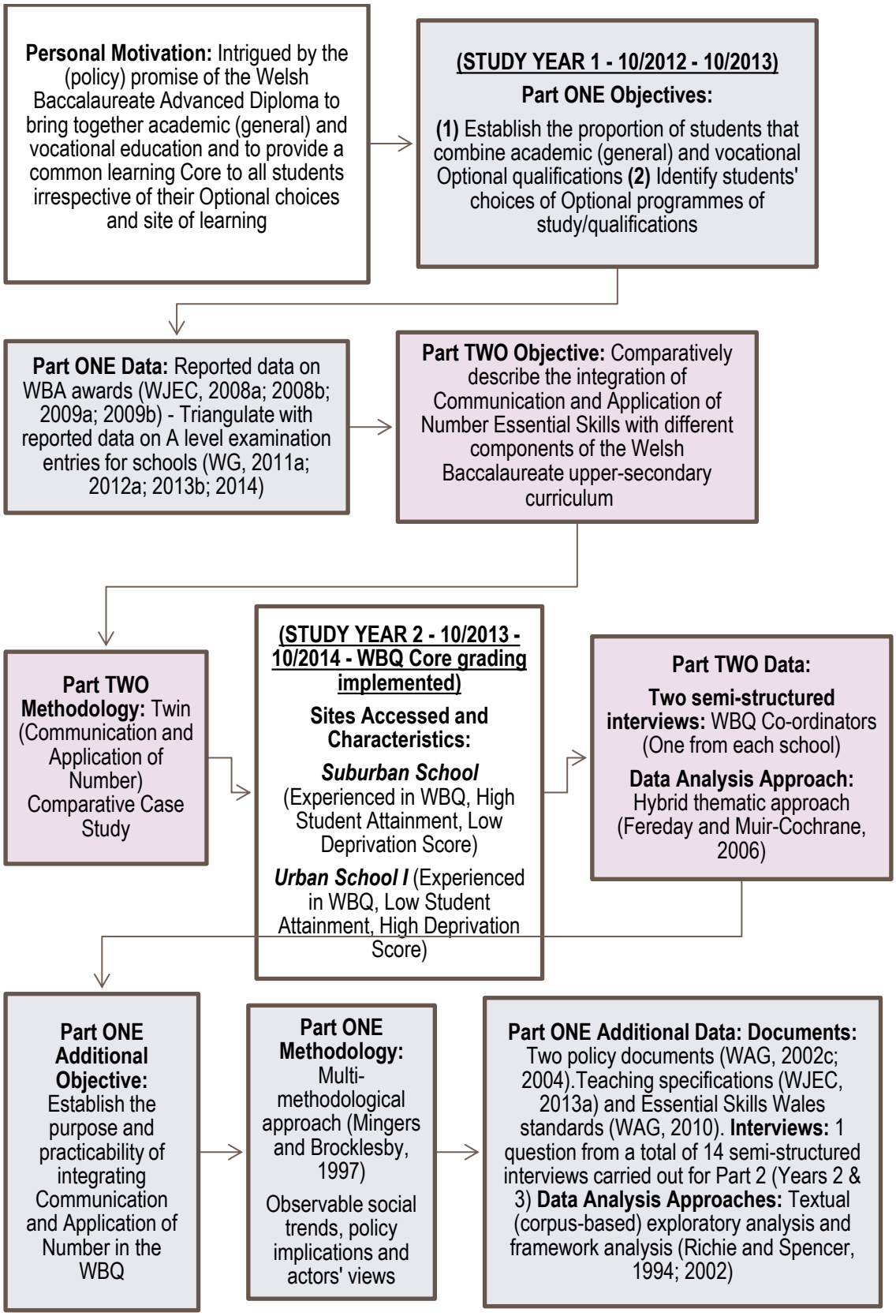
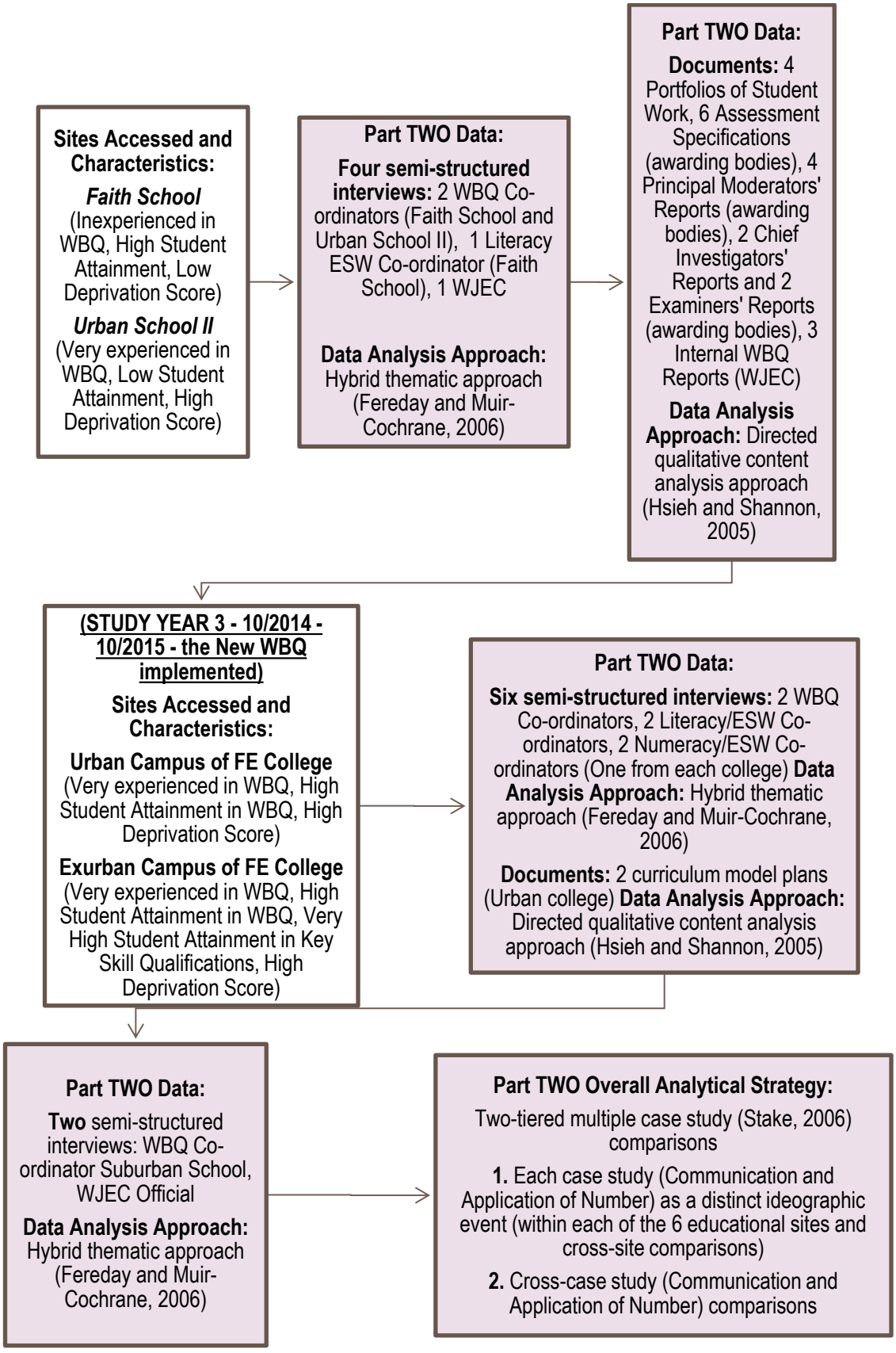


Figure 4 *(cont.)*



5.2 Part 1 of the Study: Objectives and Methodology

Contrary to the experience of many of my fellow PhD students, my research did not naturally grow out of previous studies in sociology, independent reading or upper-secondary teaching experience in Wales. Seidman (2006, p. 43) notes that in such cases, inexperienced researchers can see the work involved as a requirement and a hurdle to overcome, denying themselves the pleasures and opportunities that come from doing research. This certainly held true for me in the first part of the study during which I had to establish a focus for my research, to review a wide range of literature and to gain an understanding of the upper-secondary education system in Wales.

My original intention in this part of the study was to describe *who* the Welsh Baccalaureate students are, *what* their Optional choices are and *how* these choices have been changing since the introduction of the qualification. I envisaged classifying students according to socio-demographic (age, sex, neighbourhood economic deprivation status, language of instruction) and educational characteristics (type of institution: college/school; previous study and attainment) with the possibility of examining the likelihood of different students following different Optional qualifications. This intention never materialised and despite early agreements with the WJEC, I was not able to get access to raw data from the organisation. Although the WJEC co-funded the study, and one of my points of contact there was particularly helpful to me, I never managed to establish a fruitful relationship with key gatekeepers. To this date, I am uncertain whether limited access to raw data was due to a lack of the type of data I required for the study or an unwillingness of the organisation to share it with me.

The three research objectives of this part of the study were to:

1. Establish the proportion of students that combine academic (general) and vocational qualifications as part of their Optional studies

2. Examine how Essential and Wider Skills are portrayed in official pedagogic documents of the Welsh 14–19 education context

3. Examine how key agents involved in curriculum development and practice perceive the purpose and practicability of integrating Communication and Application of Number in the Welsh Baccalaureate.

I focused exclusively on these two Essential Skills, motivated by historical, theoretical and practical considerations. First of all, these are the two Skills that can be considered part of the 'staple' provision and proposals since the FEU (1979) *A Basis for Choice* report, through to the Curriculum 2000 Key Skills (QCA, 1999) and to the establishment of Essential Skills (WAG, 2010). Secondly, and with curricular intentions for Essential Skills to be both "ends in themselves for setting up and working out problems and as transferable skills called upon in more general contexts" (WJEC, 2013b, p. 5), I decided to choose two distinct 'species' of genericism that resemble disciplinary subjects (i.e. English/English Literature and Mathematics). Finally, in order to follow a multi-layered analytical strategy, I decided to limit data to two case studies and avoid making the study unnecessarily complex to carry out and report.

In meeting the diverse research objectives of part 1, and by drawing mainly from the tradition of empiricism, I followed a multi-methodological approach (Mingers and Brocklesby, 1997) that combined an examination of observable social trends, policy implications and agents' perceptions. This multi-methodological approach allowed me to capture many contextual aspects of the integration of Essential Skills into the upper-secondary curriculum as well as to examine the extent to which the Welsh Baccalaureate is bringing together academic (general) and vocational qualifications under its overarching Diploma.

5.2.1 Data Collection Methods

In establishing students' choice of Optional qualifications, I collected data that was already reported by the WJEC (WJEC, 2008a; 2008b; 2009a; 2009b). With the data suggesting that students may be switching from academic (general) to vocational qualifications, I triangulated this finding with statistics reported by the Welsh government (WG, 2011; 2013b; 2014) on A level examination entries for schools. Overall, it has been difficult to establish any clear patterns and make interpretations as there were discrepancies with the data reported by the WJEC. Furthermore, this data only covered the third (2005–2007), fourth (2006–2008) and fifth (2007–2009) examination cycles. Nonetheless, I draw some useful conclusions from this part of the analysis in relation to the role of qualifications, the repositioning of academic (general) and vocational qualifications, and the resilience of traditional A level subjects.

In examining how Essential and Wider Key Skills are portrayed in official pedagogic documents relevant to the upper-secondary curriculum, I obtained the WJEC Teaching Specification document for the Welsh Baccalaureate Advanced Diploma (WJEC, 2013a) and the Essential Skills Wales standards document (WAG, 2010) published by the Welsh government's Department for Children, Education, Lifelong Learning and Skills (DCELLS). I also collected two key policy documents, *Learning country: Learning pathways 14–19* consultation paper (WAG, 2002b) and *Learning pathways 14–19: Guidance* (WAG, 2004), that I used for an exploratory, inductive, corpus-based analysis.

Finally, in gaining an understanding of what the purpose of Communication and Application of Number in the upper-secondary curriculum is, I carried out 14 semi-structured interviews (table 8) with a WJEC official, WBQ Co-ordinators and Literacy/Numeracy/ESW Co-ordinators at different schools and colleges. I initially carried out the first two interviews at the very early stages of the second part of the study. As I was still experimenting with my interviewing techniques and questions, I found that the data I collected through these two interviews was more suitable to be analysed as a complementary segment of the first part of the study. I then went on to include the following question in my remaining 12 interviews: "What is the purpose of Communication and

Application of Number in the upper-secondary curriculum of the Welsh Baccalaureate?"

My approach to interviewing can be described as top-down (Pawson, 1996; Smith and Elger, 2012, p. 12), meaning that although I recognised the expertise of interviewees and the fact they had privileged access to practices, motives and understandings, I played an influential role in framing their thinking and the accounts they offered me through my semi-structured interview schedule and theoretically informed conceptions of the research topic. I discuss my interviewing approach in more detail in sub-section 5.4.1 of this chapter.

Table 8. *Interviews carried out*

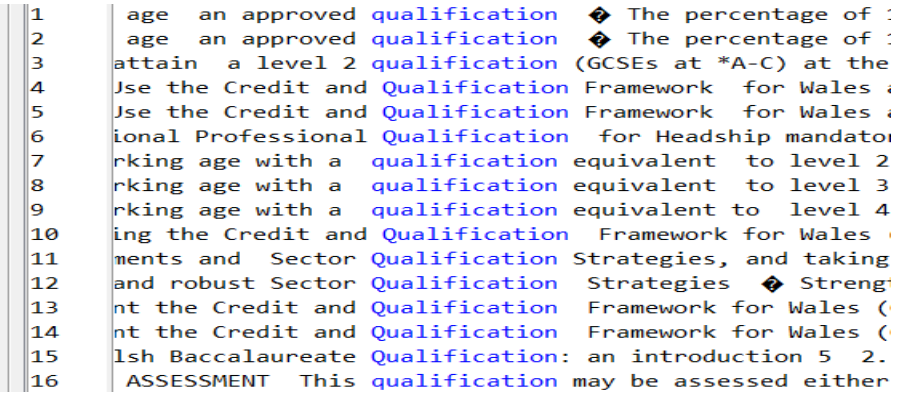
#	Participant's Role	Education Site	Duration (minutes)
1	WJEC official	WJEC	~40'
2	WBQ co-ordinator	Suburban school	~52'
3	WBQ co-ordinator	Suburban school	~48'
4	WBQ co-ordinator	Faith school	~70'
5	WBQ co-ordinator	Urban school I	~83'
6	WBQ co-ordinator	Urban school II	~85'
7	WBQ co-ordinator	Urban campus of college I	~71'
8	WBQ co-ordinator	Exurban campus of college II	~90'
9	Literacy co-ordinator	Faith school	~85'
10	ESW co-ordinator	Urban campus of college I	~72'
11	ESW co-ordinator	Exurban campus of college II	~84'
12	AoN/Numeracy co-ordinator	Urban campus of college I	~65'
13	AoN/Numeracy co-ordinator	Exurban campus of college II	~75'
14	WJEC Official	WJEC	~80'

5.2.2 Data Analysis Methods

After composing a corpus of 30,324 words based on the two policy documents and a corpus of 10,537 based on the teaching specifications, I ran a concordance (using AntConc version 3.3.5w) to see which were the most frequently used words in these documents (excluding articles, prepositions, connectors and auxiliary verbs) and their collocations (i.e. their tendency to co-occur with other lexical items in the same sentence). This analytical work was in line with Stubbs (2001, p. 24) and I also examined the main collocations of a list of key words for the study (i.e. academic, vocational, qualification*, knowledge, curriculum).

This type of analysis helped me see which words were over-represented or under-represented in the text, and by using the KWIC (Key Word In Context) feature of the concordance, I was able to see particular key words ('nodes') in word sequences (see figure 5). My objective during this basic textual analysis was to explore the relations between different curriculum elements and the development of interpretative frames about these elements as 'universal provisions' for education. The basic assumption guiding this type of analysis was that "the meaning of a word is fully reflected in its contextual relations" (Cruse, 1986, p. 16) and that once I established semantic relatedness and meaning in one context (e.g. the policy document), the meaning can be abstracted and compared to a different one (e.g. the teaching specification) and eventually in the accounts the interviewees offered me.

Figure 5. *KWIC view of 'qualification' in Learning Pathways 14–19: Guidance (WAG, 2002b)*



I then analysed the teaching specification document, the Essential Skills guidelines and the interview data using framework analysis (Richie and Spencer, 1994; 2002). This approach was originally designed for carrying out applied policy research and I found it suitable for dealing with contextual and diagnostic research issues (Richie and Spencer, 2002, p. 307) (see table 9). Research in this part of the study was therefore driven by the need to collect specific information rather than theoretical concerns.

Table 9. *Contextual and diagnostic research interests (Adapted from Richie and Spencer, 2002, p. 307)*

Category	Objectives	Research Question
Contextual	Identify the form and nature of what exists	What elements operate within a system? What are the dimensions of attitudes or perceptions that are held?
Diagnostic	Examining the reasons for, or causes of, what exists	What factors underlie particular attitudes or perceptions? Why are actions taken or not taken?

Overall, framework analysis allowed me to maintain a systematic approach to the analysis and interpretation of different types of data (documents and interviews) while still retaining the flexibility to identify data-driven issues that helped me sharpen the focus of the second part of the study. It also allowed me to complete the analysis of the interview data for this part of the study at different stages of the research project and to eventually interpret findings within a single conceptual framework. In my framework analysis, I followed five steps:

1. Familiarisation with the data – transcribing. By reading and re-reading the data, I was able to gain an overview of what participants were 'telling' me in relation to the predetermined questions. In a sense, this was my entry point to the research. Considering that my involvement as a researcher/interviewer can

be encapsulated in Pawson's notion of teaching interviewees "the overall conceptual structure of the investigation to the subject" (1996, p. 305), this was an important stage of the analysis as my first opportunity to read interviewees' accounts. For the documents, this stage involved reading the whole document, annotating it and re-reading parts that I found of relevance based on the initial lexical analysis.

2. Identifying a thematic framework. This stage involved identifying and amalgamating issues that emerged from the data (e.g. how Essential Skills are used to 'boost' grades to apply to specific university courses) and a priori issues I had identified through my engagement with the literature (e.g. from the distinction between different types of knowledge, and from the problem of early specialisation in post-16 education). From this process, I created 'labels' that I then assigned to sections of the data.

3. Indexing. Stages 2 and 3 were interconnected through the process in which I assigned labels to small sections of the data (sentences or short paragraphs) with the assistance of NVivo software. For the documents, this stage involved annotating passages using different coloured markers. One of the challenges while indexing interview data was interpreting participants' intended meaning, especially if I found the wording unusual. For example, in the following passage, the WBQ co-ordinator of a college explains how tutors are not keen on teaching Essential Skills. This is linked to teachers' view of Skills as remediation for past education 'failings' and to time constraints. ESW co-ordinators can help tutors 'embed' (integrate) Skills in their vocational programmes.

> *"I think it [Essential Skills] puts an added pressure on subjects, because it's obviously what we have to do now. Not only have you got to teach your subject, you have now got to teach Literacy and Numeracy on top […] Maybe if you put our* ***groundwork*** *into Literacy at the beginning, it does make them* ***better students*** *for your subject later on. People who* ***put the graft in*** *at the beginning to really try and promote Literacy and Communication, do ultimately, they are better."*

In this passage, I did not know what the interviewee meant by "groundwork" and "put the graft in". Lacking first-hand contextual knowledge, I often relied on knowledge I obtained through my engagement with literature and through interviewing other participants, as well as contextual clues from other parts of the interview. For example, I initially interpreted "groundwork" and "put the graft in" as linked to a type of instruction and did not understand what was meant by "better students". Later in the interview/transcript, the interviewee made clear what "putting the graft in" was linked to: allocating time and staff to help with 'signposting' opportunities and materials to teach Communication:

> *"It is a matter of allocating **time** and **resources** to it. Although it is a pain, perhaps it is a necessity. The commitment to teaching the basics needs to take priority and people who do promote it, they do create **better students** when it comes to being **assessed** and put[ting] together the portfolio [...]. Once they understand that they are not alone in the task and that there is help in aiding them [with] how to present a lesson plan, schemes of work, understand how to embed it, they will work on it."*

In the second part of the study and after having interviewed a number of WBQ co-ordinators who acknowledged the assessment-led approach to integrating Essential Skills, it became clearer that the interviewee was also referring to a further issue: the dual roles of tutors as *instructors* and *assessors* and the privileging of the 'basics' of capitalisation, punctuation, paragraphing and spelling. I believe that my discussion of the dual role of tutors in chapter 8 makes my indexing example more meaningful.

4. Charting. During this stage, I reduced, summarised and ordered all data by assigning them to the 'labels' of the thematic framework I developed in steps 2 and 3. It was during this process that I identified the categories/themes to which each chunk of text related. (See appendix 5 for 'charting' the *instrumentality* theme.) For the documents, I assigned handwritten and colour-coded labels to the manuscripts.

5. Interpretation. This was the final stage of synthesising all themes and identifying clear links with issues I had already identified in the literature. This interpretation is part of the argument I build in chapter 6.

Overall, the first part of the study was a necessary stage of the research process that helped me gain an understanding of upper-secondary education in Wales, develop my research interests, sharpen the focus of the study and provide a contextualising basis for interpreting the findings of the second part, a part that was delayed as I encountered problems with accessing sites, participants and data.

5.3 Access to Data – My Role as a Researcher

Gaining access to research sites and participants proved to be a slow and frustrating process. The first step towards gaining access was completing a research ethics application in which I explained how I would be following the Ethical Guidelines set out by the British Educational Research Association (BERA) (2011) and how I would be dealing with issues regarding confidentiality, informed consent, recruitment, potential risks and data storage/handling. Appendix 6 is a summary of how I approached such ethical considerations in my research and the text in the appendix is based on the information I provided in my application. The School of Social Sciences Research Ethics Committee at Cardiff University reviewed my ethics application and issued a favourable opinion on 29th October 2013. Obtaining a favourable opinion from the Committee was a prior condition to approaching head teachers and individual interviewees and asking them to participate in the study.

A factor that complicated and delayed access to sites and participants was the comparative twin case study design of the second part of the study and my decision to access a range of education sites that themselves acted as maximum variation cases (Flyvbjerg, 2006) for the 'within-case' analysis. With the intention of obtaining information "about the significance of various circumstances for case process and outcome" (Flyvbjerg, 2006, p. 230), I aimed to access education sites that varied considerably on the following dimensions:

the type of site (school/college), the number of years they had been offering the Welsh Baccalaureate and the make-up of the institution's student population (attainment and eligibility for free meals as a sign of socio-economic standing).

Having obtained a list of all schools from the Welsh government website (http://gov.wales/statistics-and-research/address-list-of-schools/?lang=en), I singled out secondary sixth form schools and searched online for each one of them to see whether they were offering the Welsh Baccalaureate. I then obtained Estyn[27] reports for each school and grouped them into categories based on the dimensions I described above. Having chosen one or two schools from each group in each of my four 'contact rounds', I started sending out invitation letters and consent forms (see appendix 7) via post and email to the secretaries of head teachers. In almost all cases, I had to follow up with a phone call prompting them for an answer. Very often, I had to resend invitation letters and consent forms.

Not having any established professional contacts to facilitate access to sites, and given the busy schedules of head teachers and WBQ co-ordinators, the suggestions I found in the literature (Feldman et al., 2004; Seidman, 2006; Wanat, 2008) about building and fostering relationships with gatekeepers and research participants or advice on making personal visits to the sites prior to gaining access seemed unrealistic. I acknowledged the possibility of researchers gaining an 'insider' status through their involvement and I appreciated that researchers' roles and identities may not be static and fixed on the 'insider–outsider' poles of a dichotomy (Merton, 1972; Merriam et al., 2001; Dwyer and Buckle, 2009). However, I often caught myself being hesitant to call education sites (particularly for a second time) and my willingness to initiate and maintain contact with gatekeepers was dampened after a few rejections and unreturned phone calls.

Gaining access to colleges via their Directors/Chief Executives was particularly difficult and I eventually contacted programme managers and WBQ co-

[27] The education and training inspectorate for Wales.

ordinators directly. Although I have previously taught in adult and Further Education, I found it difficult to strike up and maintain rapport with the college staff I interviewed. For a start, many things had changed since I had last walked into a classroom and my outdated knowledge prevented me from starting conversations out of fear that I would appear ignorant or out of touch. Secondly, interviewees' demanding schedules and/or an unwillingness to share further information meant that some of my emails and requests for follow-up interviews and curriculum documentation were ignored or politely declined. This discouraged me from making further contact attempts and requests.

One of the positive aspects of being an 'outsider' who was not (currently or in the past) affiliated with a teaching or inspecting organisation was that interviewees were often happy to open up and share information that they wouldn't have otherwise shared. The following three interview excerpts exemplify this:

> *"I do think that that is a shame. I don't know if I should say that, but I will, students often [...]" (WBQ co-ordinator – school)*

> *"The other issue that worries me is that [...] is to do with blooming [name of person – department]. I think a lot of the reasons why things don't work is [...]" (WBQ co-ordinator - college)*

> *"In mapping them [Skills] I was very supported by [name], and quite well supported by [name], which were the [roles], but there didn't seem to be this impetus to work in partnership with the [department] [name]; [name] wanted me to do all the work and then she/he just put her/his name on the bottom, basically, and said it was all her/his work [...]." (WBQ co-ordinator - college)*

Gaining permission to access an education site did not always guarantee access to data. Wanat (2008) discusses the crucial distinction between gaining approval and access from gatekeepers and gaining the co-operation of participants. In my case, although all of the participants showed great interest in the study and were willing to share their views with me, there were interview

cancellations due to ill health (from both parties), and due to participants' demanding workloads, forthcoming inspections and other official events, as well as significant interruptions in communication during half-term, Christmas, Easter and summer holiday breaks.

In a period of ten months, I managed to gain access to interview data from six education sites that epitomised broader categories of cases (table 10). This enabled me to capture different "circumstances and conditions of an everyday or a commonplace situation" (Yin, 2003, p. 41), in my case instances of integrating Communication and Application of Number into the curriculum. In the comparative twin case study design of the second part of the study, each school case study can be seen to "represent a typical 'project' among many different projects and the lesson learned from these cases are assumed to be informative about the experiences of the average person or institution" (Yin, 2003, p. 41).

Table 10. *Education sites accessed and their characteristics*

	Experience Offering the WBQ	Student Attainment **	School Performance***	Eligibility for Free Meals
Suburban school	Experienced (6+ years*)	High (75%+)	Higher than Average	7%
Faith school	Introduced it recently (3+ years*)	High (65%+)	Higher than Average	6%
Urban school I	Experienced (6+ years*)	Low (<30%)	Lower than Average	37%
Urban school II	Very Experienced (9+ years*)	Low (<40%)	Lower than Average	37%
Urban Campus College I	Very Experienced (12+ years*)		High Rates of WBQ Completion	50% of all students from areas of high deprivation
Exurban Campus College II	Very Experienced (9+ years*)		High Rates of WBQ Completion - Very High Rates of Key Skill Qualification Completion	50% of all students from areas of high deprivation

** in 2014*
*** based on lower-secondary threshold including GCSEs in English/Welsh, Maths, 2012/13*
**** based on upper-secondary threshold in the most recent inspection reports by Estyn – local and national averages*

Suburban school. This is an 11–18 comprehensive school located in the suburbs of one of the largest cities in southern Wales. Students come from affluent surrounding areas with a minimal percentage of them (less than 7 per cent when compared to the Welsh national average of 17.4 per cent) being eligible for free meals. Student attainment is very high and the school has a large proportion of pupils that are above average in comparison to other schools in the same family.[28] The majority of students have English as their first language and around 35 per cent of students come from minority ethnic backgrounds.

Faith school. This is an 11–18 faith comprehensive school located in the suburbs of one of the largest cities in southern Wales. Students come from affluent surrounding areas with a minimal percentage of them (less than 6 per cent when compared to the Welsh national average of 17.4 per cent) being eligible for free meals. Student attainment is high and the school has a large proportion of pupils that are above average in comparison to other schools in the same family. The majority of students have English as their first language and around 10 per cent of students come from minority ethnic backgrounds. The school introduced the Welsh Baccalaureate (at sixth form) very recently and it is therefore considered the least experienced WBQ centre in the study.

Urban school I. This is an 11–18 comprehensive school located on the outskirts of an urban area in one of the largest cities in southern Wales. Students come from the wider urban area and more than a quarter of them live in the city's most deprived wards. Almost two fifths (37 per cent) of them are eligible for free meals and this is more than double the Welsh national average. Nearly 80 per cent of students have English as an additional language and around 75 per cent of students come from minority ethnic backgrounds. The school has a very high turnover rate of student population (over a quarter of its population) and a very high proportion of newcomers are functionally illiterate when they start school (around 30 per cent of students have low competency in English). The performance of the school in the sixth form is significantly lower than Welsh and local authority averages.

[28] Family groupings as defined by Estyn.

Urban school II. This is an 11–18 community-based comprehensive school located in the urban area of one of the largest cities in southern Wales. Students come from economically disadvantaged urban areas and around 37 per cent of them are eligible for free meals, which is more than double the Welsh national average. More than half of them (68 per cent) have English as an additional language. This school is considered the most experienced WBQ centre in the study.

Urban campus of college I. This is a large multi-campus Further Education college that offers academic (general), vocational, professional and Higher Education courses to students aged 14+. It is located in southern Wales and its spread-out campuses attract students from cities, towns and wider rural areas. About half of the students live in wards with a high index of deprivation and around 16 per cent of students speak Welsh at home. All students take a Literacy and Numeracy test prior to enrolment with half of them requiring additional support with these two Skills.

Exurban campus of college II. This is a large multi-campus Further Education college that offers academic (general), vocational, professional and Higher Education qualifications to students aged 14+. It is located in southern Wales and its spread-out campuses attract students from cities, towns and wider rural areas. About half of the students live in wards with a high index of deprivation and around 10 per cent of students speak Welsh at home. The college is considered to have extensive experience in the organisation, planning and teaching of the Welsh Baccalaureate. Recent Estyn reports highlight the very good progress and rates of achievement Welsh Baccalaureate students make in relation to Essential Skills.

5.4 Part 2 of the Study: Objectives and Methodology

I carried out the second part of the study in the later stages of my research project as its theorisation and analysis relied on intense engagement with

theoretical literature which I found particularly challenging given that my academic background was not in sociology.

My research objectives in this part of the study were to:

> 1) Explore Bernstein's (2000, pp. 51–53) concept of generics through the empirical endeavour I describe in objective 2
>
> 2) Describe instances of integrating Communication and Application of Number with different components (Options – Core) of the Welsh Baccalaureate curriculum and by focusing on the organisation of knowledge in the curriculum, its orientation in terms of introverted or extroverted meanings, and its transmission through pedagogic practices.

In meeting the research objective of this part of the study, I adopted a comparative twin case study methodology. In general, the umbrella term 'case study' can be used for research situations where each case, or each instance, is the focus of interest in its own right (Adelman et al., 1980, p. 48; Bryman, 2008, p. 53). Yin (2003, p. 1) writes that a case study is a strong research strategy when seeking to address research questions of 'how', for example how Communication and Application of Number are integrated with different curriculum components and how WBQ/ESW co-ordinators perceive their role of main curriculum and teaching agents. Case studies can enable researchers to focus on "understanding the dynamics present within single settings" (Eisenhardt, 1989, p. 534), and the particular research design helped me to examine and compare different instances of integration in an in-depth and flexible manner by allowing me to iterate the research process between theorisation and data collection and analysis (Verschuren, 2003).

My comparative methodology meant that I also followed an analytical strategy of multiple comparisons within (based on the six education sites) and across these two cases studies. This strategy initially resembled what May (1993, p. 157) calls a "discovering convergences and deviations" type of comparative study. My initial expectation of this analytical strategy was that it would reduce complexity as my objective was to describe patterns (structures) rather than

identify causes. As the study progressed and 'differentiation' moved away from variables such as type of education site and type of curriculum component, I realised that any analysis inevitably involved an element of theoretical appraisal and generalisation as I was called to make decisions on which (similar or different) features I would foreground for each stage of the analysis. The comparisons I made therefore resembled an iteration of "universalising" (Tilly, 1984, p. 82) which instances of Essential Skills integration seemed to follow the same pattern and differentiating between instances of integration that followed what I considered to be a systematic variation.

5.4.1 Data Collection Methods

If gaining physical access to education sites was challenging, gaining access to varying incidents of Essential Skill integration was equally demanding. I first came across the idea of systematically maximising access to varying incidents of a phenomenon at a seminar by Martin Bauer during which he made a distinction between sampling in quantitative data collection and corpus construction (Bauer and Aarts, 2000) in collecting qualitative data. While a sampling frame can be determined in advance when carrying out a survey, qualitative phenomena and access to them are unknowable to the researcher. A corpus construction approach to data collection helped me to systematically select and structure documents and interview excerpts, maximising variation of incidences and facilitating analytical comparisons.

Borrowing from linguistics, a corpus is "a finite collection of materials, which is determined in advance by the analyst, with (inevitable) arbitrariness" (Barthes, 1967, p. 96 cited in Bauer and Aarts, 2000, p. 23). The corpus construction pproach in selecting and organising qualitative data can be summarised in the following rules:

- follow a cyclical and inductive process of selecting materials; analyse them and select again
- prioritise a variety of representations over anchoring them in existing categories of people
- maximise variety by extending the range of social strata and function variety (Bauer and Aarts, 2000, p. 29–33).

In the process, I also adhered to two of Barthes' (1967) cited in Bauer and Aarts (2000, pp. 31–34) principles of corpus construction:

Homogeneity – Keep one type of 'substance' in each corpus and avoid mixing documents. Interview excerpts, portfolios of students' work, Essential Skills standards and guidelines, assessment moderators' reports, etc. were therefore treated as distinct corpora.

Synchronicity – This was applied only to interview excerpts as I aimed, and managed, to complete my data collection and analysis within one 'natural cycle', that is, one WBQ examination cycle for the cohort of students starting in September 2013. As I explained in section 2.4 of chapter 2, a number of changes were made to the structure of the Welsh Baccalaureate including the grading of the Core Certificate which first took effect for the student cohort I examined. This change, however, did not affect the teaching and learning of Essential Skills as these continued to be integrated as standalone, ungraded qualifications assessed by a portfolio of evidence. The new Welsh Baccalaureate Advanced which saw changes to the way Essential Skills are integrated and assessed took place in September 2015. By that time, I had completed my data collection and the largest part of its analysis, and the cohort of students that I examined had just completed their two years of studies and had graduated.

For the documentary analysis, I inevitably mixed materials from different cross-sections of the timeline, but I paid particular attention to the dates published and tried to keep them chronologically arranged. In any case, my aim in the study, and having theorised it by drawing largely from a structuralist-informed framework, was not to address change over time or conditions of change.

A set of semi-structured interviews was my main method for generating qualitative data in this part of the study. In total, I carried out 14 interviews (see table 8) with key agents involved in curriculum development and pedagogic practices. Given practical limitations of accessing sites and data, I found face-to-face interviews an effective and quick way to gather appropriate information.

Semi-structured interviews also gave me the advantage of adopting a flexible, structured and systematic approach to data collection (Robson, 2002) consistent with my comparative research design and methodology.

The interview schedule (see appendix 2) gave a certain structure to all interviews, and during each interview, I made notes on what participants said. Often, I probed the interviewees to elaborate further on certain points or link them to their previous comments, if I judged this would be a fruitful approach to eliciting more information. During the interviews, I made use of different questions (Kvale, 1996) including introducing, follow-up, probing, specifying, direct/indirect and structuring questions, depending on what my exact purpose was at given moments in the interview. In appendix 2, I also give some examples of additional questions that I asked in the flow of conversation.

Having previously worked with Cooperative Development (Edge, 2002; 2004; 2006), an approach to professional development for teachers based on Rogerian principles of client-centred counselling, I was able to adopt a non-judgemental attitude during the interviews and I facilitated participants to share their views without asking leading or suggestive questions. However, the purpose of questioning in Cooperative Development and my interviews was different, and consequently I ended up taking the leading part and directing the flow of conversation throughout my interviews.

As I have already mentioned in the methodology of the first part of the study, my interviewing approach was theory-driven. Although I recognised the active role interviewees played in "addressing a range of aspects of experiences and subjectivity" (Smith and Elger, 2012, p. 12), I had the prominent role in conceptually structuring the investigation, thus making "the subject matter of the interview the researcher's theory, rather than the informant's thoughts and deeds" (Smith and Elger, 2012, p. 12).

In addition to the semi-structured interviews, I also collected the following documents:

- Four portfolios of student work: two for Level 3 Communication (one considered by the interviewee, a WBQ Co-ordinator, as an excellent sample of work by a skilful student and one as a good sample by a less skilful student) and two for Application of Number (one at Level 2 and one at Level 3)
- Four assessment specifications by two awarding bodies (WJEC and OCR): two for Level 2 Communication and two for Level 2 Application of Number.
- Two assessment specifications by two awarding bodies (WJEC and OCR): both for Level 3 Application of Number
- The *Key Skills Qualifications Standards and Guidance* document by the Qualifications and Curriculum Authority (QCA, 2004)
- The *Essential Skills Wales Standards* document (2010) by the Welsh government (WAG, 2010)
- One curriculum model plan from the urban campus of college I on integrating Level 3 Application of Number to BTEC courses
- One curriculum model plan from the urban campus of college I on integrating Level 3 Communication to BTEC courses
- Two WJEC principal moderators' reports (May 2014): one for Communication and one for Application of Number (all Levels) (WJEC, 2014a; 2014b)
- Two OCR principal moderators' reports (2012): one for Communication and one for Application of Number (all Levels) (OCR, 2012a; 2012b)
- Two OCR chief investigators' reports (2013): one for Communication (OCR, 2013a) and one for Application of Number (all Levels)
- Two OCR examiners' Reports for Communication (all Levels) (OCR, 2014; 2015)
- One OCR recording document for Communication (OCR, 2013b)
- Three internal WJEC reports (WJEC, 2010a; 2010b; 2010c) based on surveys and consultations with teaching and WBQ co-ordinating staff that the organisation carried out in 2008 and 2009. These were internal confidential documents, not intended for the public domain, and I was

asked to limit the direct quotes taken from these reports.

5.3.3 Data Analysis Methods

In analysing the interview transcripts, I followed a hybrid thematic approach (Fereday and Muir-Cochrane, 2006) and incorporated both data-driven and deductive a priori codes in a similar fashion I described in sub-section 5.2.2 as part of identifying a thematic framework. Appendices 3 and 4 are coding instruments derived from the analytical concepts of framing, classification and orientation to meaning (see also table 7, section 4.2 of chapter 4) and operationalised to capture empirical accounts of knowledge organisation and pedagogic practices.

The three steps I followed in my analysis were as follows:

1. Familiarisation with the data – transcribing. This stage helped me familiarise myself with the data. I paid minimal attention to the structure of participants' talk or to the intonation of their voice or pauses. Opting for such a tidy and straightforward transcript was partly a pragmatic decision to help me cope with the task of the analysis and partly a decision informed by my methodology as I judged that I would not need the kinds of meanings captured through a detailed transcription, which might have been more useful if I had carried out conversation analysis (Mazeland, 2004). Hammersley (2010) argues that transcribing decisions reflect contingent assumptions about who we are, what we know and what we believe the best way of describing and explaining the social world is. As such, data is always theory-/assumption-driven. My initial theorisation of the study meant that even before I began data collection, I had already developed some expectations about the codes that would 'crop up'. As I read and re-read the transcripts, I made notes of initial thoughts relating to coding and revisited these at different stages of the coding process.

2. Coding – using NVivo. Without doubt, coding started from the interview schedule and my selection and framing of questions during the interviews. During this analytical step, my aim was to categorise and manage the data. To achieve this, I assigned labels that reflected what I thought different chunks of

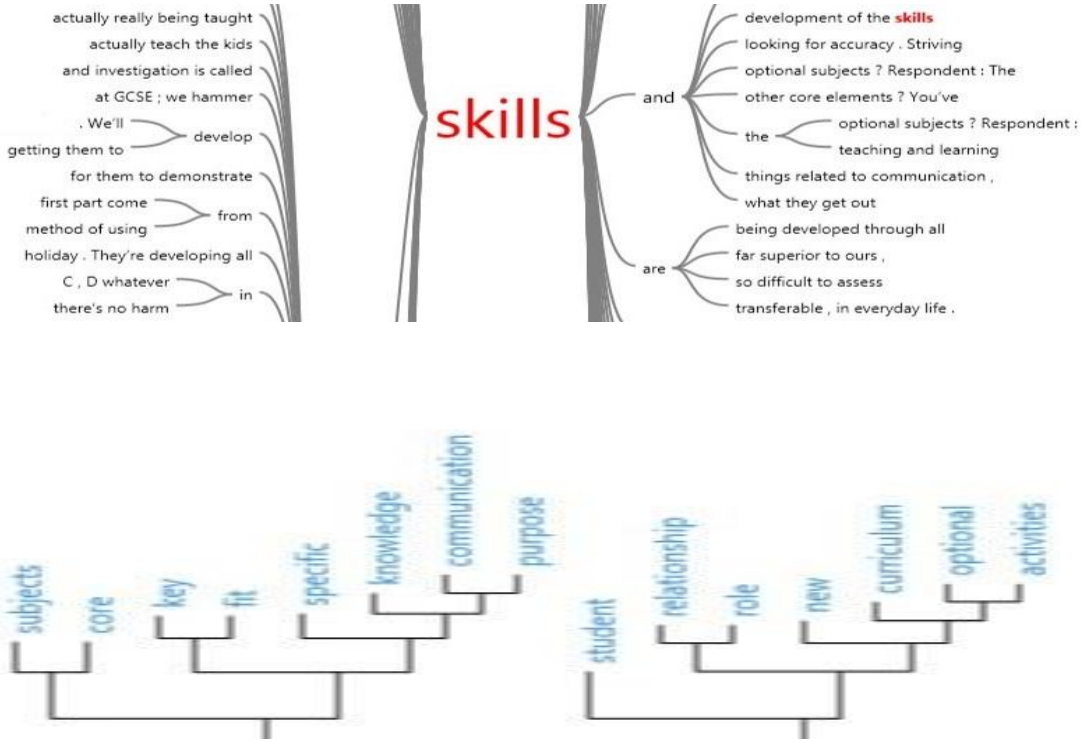
data (sentences or a short paragraph of four to five sentences) were 'telling' me. I used four types of codes: Demographic (e.g. type of education site - school/college, professional role of interviewee - WBQ co-ordinator/Literacy co-ordinator/WJEC official), Factual (e.g. Level of study, requirements for obtaining award), Descriptive (e.g. providing theoretical instructions, purpose of the Skill tasks completed), and Interpretive (100 per cent assessment regime, regulatory monitoring, commitment to subject, conditions of pedagogic discourse, resisting change, etc.). These codes acted as "shorthand devices to label, separate, compile and organise data" (Charmaz, 1983 cited in Eaves, 2001, p. 658) and helped me sort out and store the data in an organised manner so that I could later easily retrieve and read.

During this process, I faced similar challenges to the ones I described in sub-section 5.2.2 as part of the indexing stage of framework analysis. When interpreting participants' intended meaning, especially when I found their expressions ambiguous or I encountered unusual words, I appreciated how beneficial it would be to return to them and ask for clarification. Ravitch and Mittenfelner Carl (2016) write that researchers can enhance their analytical rigour by asking participants to validate transcripts and/or findings, an option that I offered to interviewees but which none of them took up. The extent to which validation of findings in this manner can enhance rigour is debatable and even in 'positivist' disciplines such as Medicine and Allied Health, which are particularly concerned with the validity and reliability of research, participant validation is not always encouraged (Kitto et al., 2008). This is justified by appealing to issues relating to individual participant's interests (Sandelowski, 1993) or the 'impossibility' of individual participants validating synthesis of many accounts (Morse, 1998). In the case of my top-down, theory-driven approach to interviewing (Pawson, 1996; Smith and Elger, 2012, p. 12), validation of transcripts may not have meaningfully contributed to my analysis.

As I tried to maintain the initial complexity of the data, I resisted the initial temptation when coding to be too tidy and quickly reduce the data into codes and categories. Relying on data-driven codes helped me capture important

contextual elements that I had missed out in my initial theorisation and in the first part of the study (e.g. teachers as assessors, assessment regime, professional judgement). Appendix 8 is the final coding framework (data-driven codes) that I applied to code all interview transcripts. Overall, I followed an iterative process of data collection, analysis and re-theorisation and I coded and interpreted data concurrently. Once I judged that I had no more new labels to add to the data, I started sorting codes into broad categories. This process involved grouping codes together, merging them and/or altering them. For this process, I relied on NVivo software to help me assign multiple codes to chunks of texts. I also used the software to create data-driven codes by exploring word frequencies and their connections (see figure 6) and to set up 'classification tables' using parameters such as type of education site, type of programme (Options or Core), type of integration (embedded or add-on), and type of curriculum component (A level or BTEC). These helped me to make the within-case and cross-case comparisons with ease.

Figure 6. *Word query: tree view of 'Skills' and cluster analysis – interview transcript.*



3. Analysis and findings. This stage was guided by my research objectives and an analytical strategy that resembles Stake's (2006) notion of a "two-tiered multiple-case study" research design, examining each case study as a distinct ideographic event first (within each of the six education sites) and then moving to a cross-case analysis (Communication and Application of Number). The final stage of the analysis was based on what Ziebland and McPherson (2006) call an OSOP (One Sheet Of Paper) method during which I wrote the 'story' behind each of the two interrelated themes that emerged from the analysis: 1. *Levels of integration* and 2. *The power of certification*. To develop the OSOP, I printed my NVivo Coding Reports and read through each section of the data. The OSOP was in effect a visual representation of my interpretation of what was going on in the data. Having written the final summary (as One Sheet Of Paper), I was then faced with the challenge of unfolding this interpretation in the empirical chapters. Useful as it may have been for summarising the analysis, the OSOP method created an intimidating challenge when 'unpacking' the analysis as many of the details were missing. At times, I had to resort to notes to fill in memory gaps, but at other times I had to revisit parts of the analysis.

An aspect of data analysis that I found particularly challenging was analysing documents (curriculum documents and schemes of work, students' work and assessment criteria). I analysed these concurrently with the interview data and used them as a method of complementing (or triangulating) interview data. I treated documents as a distinct 'level' of reality (Atkinson and Coffey, 2004), text entities in their own right written with a particular purpose in mind. I analysed each document separately using a directed qualitative content analysis approach (Hsieh and Shannon, 2005). In this approach, I used some of the pre-existing codes from the coding framework (see appendices 3, 4 and 8) to code all content/text passages. Any text that was not categorised under this initial coding scheme was assigned a new code. These 'leftover' chunks of text were then organised into categories with names of categories deriving directly from the 'leftover' data (for example, draft correction, student explanation). I found that it was mainly these 'data-driven' categories that allowed for further (new) insights to emerge.

5.5 Linking Chapters 4, 5 and 6

This chapter sits at the centre of my thesis and it is where I fuse my motivations for my research and its aim, the methodology of my research and how I accomplished its empirical parts. Throughout the study, my fellow PhD students placed great importance on the role of the concluding chapter. This is not a point that I disagree with, but if chapter 9 presents what my thesis is, then chapter 5 presents how it came to be. How the intriguing policy promises of the Welsh Baccalaureate to bring together academic (general) and vocational education and to provide a common learning Core to all young people became an empirical attempt to describe the extent to which students mix different Optional qualifications and a comparative description of how two exemplary 'species' of genericism are integrated into different components of the upper-secondary Welsh Baccalaureate curriculum across four schools and two colleges. For the second part of the study, which forms the largest part of this thesis, I selected elements and concepts of Bernstein's "broadly structuralist strands of thought" (Atkinson, 1995, p. 83) and placed them within a comparative methodology and analytical strategy. Consequently, I decided to adopt a data collection approach that systematically maximised access to varying incidents of Essential Skill integration across my two case studies (Communication and Application of Number). Borrowing from linguistics, Bauer and Aarts' (2000) "corpus construction" approach enhanced my search for similarities and differences of how these two Essential Skills are integrated and allowed me to focus on and maximise the variation in curricular integration and pedagogic practices rather than focus on variables that were predetermined (e.g. age/gender of teachers, co-ordinators and students, or previous attainment of students and their social class). Inevitably, variation emerged from the data as I sought to identify different patterns of agents' practices and this is evident throughout my findings and discussion in chapters 7 and 8. Before reaching these two chapters, I wish to begin contextualising the second part of the study. I do this empirically in the following chapter.

Chapter 6. Contextualising the Study

Contents pages

6. Contextualising the Study

6.1 Chapter Overview

"The curriculum of a school or university may be operated with a principle of options, which encourages the individual to choose some activity […] but this choice is between a range of activities that are thought to be worth passing on. Science, mathematics, history, art, cooking and carpentry feature on the curriculum, not bingo, bridge and billiards. Presumably there must be some reason for this apart from their utilitarian or vocational value."

Peters (2015, p. 144)

Although I do not share Peters' intention to question and establish the value of studying certain curriculum subjects or the intrinsic worth of pursuing certain kinds of knowledge, in this chapter I aim to describe students' choices of Optional qualifications as part of the Welsh Baccalaureate Advanced Diploma. The most popular ones are A level Science, Mathematics, History, Art and 'credible' BTEC vocational qualifications, although not in cooking and carpentry for students in 2015. Despite policy rhetoric of student 'choice' and 'flexibility' and individual learning pathways, students' choices of Optional qualifications reflect the power Higher Education institutions have to influence upper-secondary education. In this light, 'pick and mix' approaches to Optional qualifications and study units still have some way to go before they establish themselves at this highly competitive stage of education. When examined as an attempt to change the relationship between academic (general) and vocational qualifications, the overarching Welsh Baccalaureate Advanced Diploma seems more likely to prompt a shift towards vocational qualifications that are already widely accepted by Higher Education institutions. Although the overarching Diploma can mask to a certain extent the status differences between its Optional components, divisions between 'powerful' and less 'powerful' qualifications and divisions between traditional subjects – established professional areas – and new, 'volatile' vocational areas of study (Young and Muller, 2014) are likely to persist.

6.2 Vocationalisation and Assessment

In chapter 2, I discussed the economic instrumentalist rhetoric that underpins the inclusion of generic skills in secondary education. An exploratory text (concordance) analysis of two key policy documents, *Learning Country: Learning Pathways 14–19' consultation paper* (WAG, 2002b) and *Learning Pathways 14–19: Guidance* (WAG, 2004), reveals that the policy-level vision of secondary education in Wales is also woven around words such as 'employment', 'skills' and 'economy'.

In table 11, I present a list of the nine most frequent words (excluding articles, prepositions, connectors and auxiliary verbs) and the number of concordance hits and major word collocations for a list of key words relevant to the study. From this table, we can see that the two policy documents give considerable weight to qualifications, vocational education, skills and employment/work. In comparison, words such as academic (general) education, curriculum and knowledge are less frequent. I took these findings as an indication that 14–19 education policy strategies are part of the wider lifelong learning policy objective that brings together notions of economic productivity and trainability (Bernstein, 2000, p. 59). What this means for the Welsh Baccalaureate upper-secondary curriculum is that 'employability', labour market needs and workplace 'relevance' seem to be the main knowledge re-contextualisation principles.

However, and as we will see in the empirical chapters of the second part of the study, interviewees do not particularly emphasise the role of Essential Skills as preparation for work. They place more emphasis on preparing students for progression onto further study, and the tasks that students complete as part of Communication can be considered to be more 'academic' (i.e. essay writing, extended reading, discussing topics such as abortion and capital punishment from a disciplinary, theoretical perspective) rather than work-related.

Table 11. *Selective summary of concordance analysis: A 67,156-word corpus based on two key 14–19 education policy documents (WAG, 2002b; 2004)*

	Word	***Frequency Ranking***	***Times Appearing***
Most Frequent Words ***(excluding articles, prepositions, connectors, auxiliary verbs)***	Learning	1	675
	Wales	2	256
	Support	3	249
	Education	4	223
	Learners	5	222
	Young	6	197
	People	7	193
Total Corpus 67,156	Work	8	177
	Skills	9	169

Key Words for the Study	***Times Appearing***	***Most Frequent Collocations***
Education	223	with – Higher 56
		with – In (in education) 13 and with – Compulsory 13
		with – Skills 9
Skill* (skill, skills, skills-base)	181	
Opportunit*	114	with – Learning 14
		with – Equal 10
Qualification*	84	with – Framework – 13
		with – Approved – 12
Teach*	82	
Access*	79	
Coach (Learning Coach)	70	
Employment	67	
Curricul*	36	with – National 7
		with – Requirements 5
		with – Cymreig 3 and with – School 3
Choice	30	with – Flexibility 17
Flexib*	37	
Knowledge	25	with – Skills 10
Know*	27	with – Understanding 6
		with – Local 3
		with – Transfer 2
Lifelong learning	24	
Vocational	26	
Econom*	26	
Academic	4	with – Vocational (Learning) 2
		with – Talent 1
General (Education)	2	

Considering that the ambition of the 14–19 Learning Pathways strategy is to offer each student the opportunity to choose and follow an individual learning path, it comes as no surprise that the policy vision of secondary education in Wales is also woven around words and ideals of 'flexibility' and 'choice'. This suggests that the Welsh model of a 14–19 education system, similar to the Scottish one, may place greater emphasis on individual choice rather than common entitlements (Raffe et al., 1998a). Again, this links to progression onto further study (Higher Education) and the need to safeguard students' interests by making available preparatory routes based on A level qualifications or the more applied BTECs. Both of these qualifications, as we will see in the following section, continue to be the ones that the majority of the Welsh Baccalaureate Advanced Diploma students follow as part of their Options. It therefore seems that the ideals of 'flexibility' and 'choice' contradict the fact that students' Optional choices have been following a more or less uniform pattern (see section 6.2 of this chapter).

I followed the same exploratory corpus-based analysis with the WJEC (2013a) teaching specification document for the Welsh Baccalaureate Advanced Diploma. In table 12, I present a list of the five most frequent words (excluding articles, prepositions, connectors and auxiliary verbs) and the number of concordance hits and major word collocations for a list of key words for the study. Similar to the policy documents above, teaching specifications are also woven around words of 'opportunity' and 'skills' with the word 'vocational' appearing twice as many times as the word 'academic'. 'Skill*' is the second most frequent word, appearing 117 times, while the word 'opportunit*' appears 38 times, that is, 16 times more than the word 'knowledge', raising of course the question, 'Opportunity to do what in an educational context?' A textual analysis based on collocations showed that these opportunities are mainly linked to the development of Key Skills, to work-related learning and studying socio-economic, political and cultural aspects of Wales.

Table 12. *Selective summary of a concordance analysis: A 10,537-word corpus based on the teaching specifications for the Welsh Baccalaureate Advanced Diploma (WJEC, 2013a).*

	Word	***Frequency Ranking***	***Times Appearing***
Most Frequent Words ***(excluding articles, prepositions, connectors, auxiliary verbs)***	Candidate*	1	208
	Skills	2	116
	Welsh	3	112
	Baccalaureate	4	92
	Wales	5	91
Total corpus 10,537			

Key Words for the Study	***Times Appearing***	***Most Frequent Collocations***
Skill* (skill, skills, skills-base)	117	
Qualification*	61	with – Baccalaureate 19
		with – Skills 6
Learning	59	
Assess*	48	
Opportunit*	38	
Develop	36	
Progres*	28	
Teach*	27	
Tutor*	22	with – Personal 9
Knowledge	22	with – Understanding 8
Evidence	18	
Curricul*	16	with – Wider 3
		with – Core 3
Vocational	6	
Academic – (General – collocating with Education)	3 (1)	

The Welsh Baccalaureate Advanced Diploma is clearly favouring a more 'applied' and skill-based curriculum for its Core component. As an overarching qualification, it supports the Welsh government's plan to provide students with the opportunity to 'mix and match' vocational, academic and occupational qualifications and experience (WAG, 2002b, p. 8), which is a common 'linking' feature (Spours and Young, 1996; Raffe et al., 1997; 1998a; 1998b; Spours et al., 2000). Other plans include to make vocational elements of study widely available to all students (WAG, 2002b, p. 15) and to see a more attractive vocational education route when compared to the academic (general) one (NAW, 2001, p. 10, p. 32; WAG, 2006c). One of the mechanisms to achieve the

latter, without the insertion of a general education element based on subjects such as English and Mathematics, is the integration of Essential Skills and their accreditation. Consequently, this places emphasis on assessment and assessment criteria. While I return to discuss the role of Essential Skills in the Welsh Baccalaureate as substitutes for general education, in section 6.4 of this chapter, here I wish to point out the emphasis given to the assessment and accreditation of Essential Skills. This is an important parameter in the discussion of where Communication and Application of Number can be placed

Although the WJEC (2013a) document is a teaching specification document, the word 'assess*' appears three times more (i.e. 48 times) than the word 'curriculum' (16). Out of the 33 instances of Essential Skills in the text (3 of those in titles), 22 of those are linked to assessment. When the word is examined in context, assessment refers to *generating evidence* and *administrative arrangements* (including quality assurance and certification). Given that the Welsh Baccalaureate Diploma and its Core Certificate is administered and awarded by the WJEC, it comes as no surprise to see that the document pays very little attention to the Optional programmes in comparison to the Core programme and Certificate.

In the documents I examined, assessment is linked to the need of the Core programme to provide opportunities for developing Essential and Wider Key Skills and for acting as a basis for generating evidence for their assessment. Assessment is also linked to progression in the literal sense of moving from one stage of education (students' Levels of study) to the next stage (i.e. Higher Education) or to employment. In practice, this is evident in students' choices of Optional qualifications and their instrumental value as currency for Higher Education entry, as I discuss in the following section.

6.3 Optional Choices

Without having access to raw data, it has been impossible to establish a pattern of students' choices of Optional qualifications under the overarching Welsh Baccalaureate Advanced Diploma. Based on the reported WJEC figures (WJEC, 2008b, p. 10; 2009b, p. 13), I assembled table 13a based on student cohorts completing in 2004, 2005, 2006 and 2007. From the table, we can see that their Optional choices have an academic (general) education orientation with the majority of students (around four fifths of them) completing A level qualifications.

Table 13a. *Students' Optional qualifications and site of learning – the Welsh Baccalaureate Advanced Diploma (cohorts completing in 2004, 2005, 2006 and 2007).*

Optional Pathway	As a proportion of all students completing the WBQ in 2004		As a proportion of all students completing the WBQ in 2005		As a proportion of all students completing the WBQ in 2006		As a proportion of all students completing the WBQ in 2007	
Academic General (A level)	n/a		85% (75%*)		71% (59%*)		73% (63%*)	
Vocational	n/a		15% (5%*)		29% (17%*)		27% (17%*)	
Mixed	9%		10%		12%		10%	
▪	**Site of learning offering the qualification**		**Site of learning offering the qualification**		**Site of learning offering the qualification**		**Site of learning offering the qualification**	
▪	**College**	**School**	**College**	**School**	**College**	**School**	**College**	**School**
Academic General (A level)	n/a	n/a	33%	66%	36%	64%	30%	70%
Vocational	n/a	n/a	92%	8%	84%	16%	85%	15%
Combined	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

**Based on suggestions from a WJEC official for correcting the figures and accounting for the combined pathway proportions.*

Before returning to discuss the figures in this table in more detail, it is worth looking closer at these choices to see that traditional academic subjects dominate the Optional part of the curriculum. The three most popular A level subjects in the cohorts completing in 2007, 2008 and 2009 (table 13b) were English, History and Mathematics. These are exemplary singulars (Bernstein, 2000, p. 52) that Higher Education institutions hold in high esteem. Competitive universities will often refer to these as 'preferred' subjects (LSE, 2016) for

preparing their students to successfully attend and complete Higher Education studies. Computing (but not ICT) also seems to be a legitimate 'regionalised' area of study by drawing its knowledge base mainly from the discipline of Mathematics. Similarly, a guide published by the Russell Group[29] on students' upper-secondary subject and qualification choices gives a list of eight 'facilitating' subjects (i.e. Mathematics/Further Mathematics, English Literature, Physics, Biology, Chemistry, Geography, History and Classical/Modern Languages) that can "open doors to more degrees and more professions than others" (Russell Group, 2015, p. 1). As they continue writing, this is not "about 'hard' or 'soft' subjects, but the right ones" (Russell Group, 2015, p.1).

Table 13b. *The most popular A level subjects of students following academic (general) education Options as part of the Welsh Baccalaureate Advanced Diploma (cohorts completing in 2007, 2008 and 2009)*

Subject	2007	2008	2009
English (including Language and Literature)	16.0% (1st)	14.1% (1st)	11.0% (1st)
History	8.9% (2nd)	11.5% (2nd)	9.3% (2nd)
Mathematics	7.0% (3rd)	8.8% (3rd)	8.8% (3rd)
Geography	6.8% (4th)	7.4% (4th)	6.7% (5th)
Computing/ICT	5.8% (5th)	4.6% (5th)	7.3% (4th)
Biology	5.6% (6th)	4.3% (6th)	7.3% (4th)
Chemistry	4.4% (7th)	4.0% (7th)	6.3% (6th)

One of the challenges during the first part of the study was not only accessing raw data, but also accessing published WJEC data that was reliable. It is possible therefore that one of the reasons that the organisation was reluctant to share its raw data with me was this absence of reliability. By looking at table 13a, there is a discrepancy in the WJEC figures concerning students that combined academic (general) education and vocational qualifications. It is not clear how the WJEC initially calculated these percentages in their reports (WJEC, 2008b, p. 10;

[29] The Russell Group is a group of 24 research-intensive universities that are highly competitive. Many of these universities are considered to be among the best universities in the world in terms of facilities, research and academic performance and achievement.

2009b, p. 13) as it seems that the percentage of students who combined qualifications had already been calculated either in the academic (general) Optional pathway or in the vocational one. I had an informal discussion with a WJEC official who suggested that the first two rows (academic/general education – vocational pathways) account for the total number of students (100 per cent) who were awarded the Welsh Baccalaureate Advanced Diploma, while the third row (combined) should be seen as a percentage to be subtracted from each pathway.

If the WJEC official's claim is correct, and by taking the figures in table 13a at face value, then it seems that there is a shift towards vocational qualifications, masked by the overarching Welsh Baccalaureate Advanced Diploma. Table 13a shows the percentage of students following academic (general), vocational and combined qualifications as well as the institution that offered the programme of study/award. The twofold increase in the number of vocational qualifications offered by schools seems to be linked to the shift in students' Optional choices from academic (general) to vocational qualifications.

I made one attempt to triangulate the figures reported by the WJEC by examining the number of registrations for A level examinations. Statistical releases provided by the Welsh government (WG, 2011; 2012a; 2013b; 2014) that report A level attainment show a falling number of A level examination entries from schools. In table 14 and figure 7, I present the number of school students aged 17 at the beginning of the school years 2010/11, 2011/12, 2012/13 and 2013/14 and the number of A level examination entries for schools. In table 14, I also present the changes in these figures as a percentage by taking the number of the previous year as the baseline for the change.

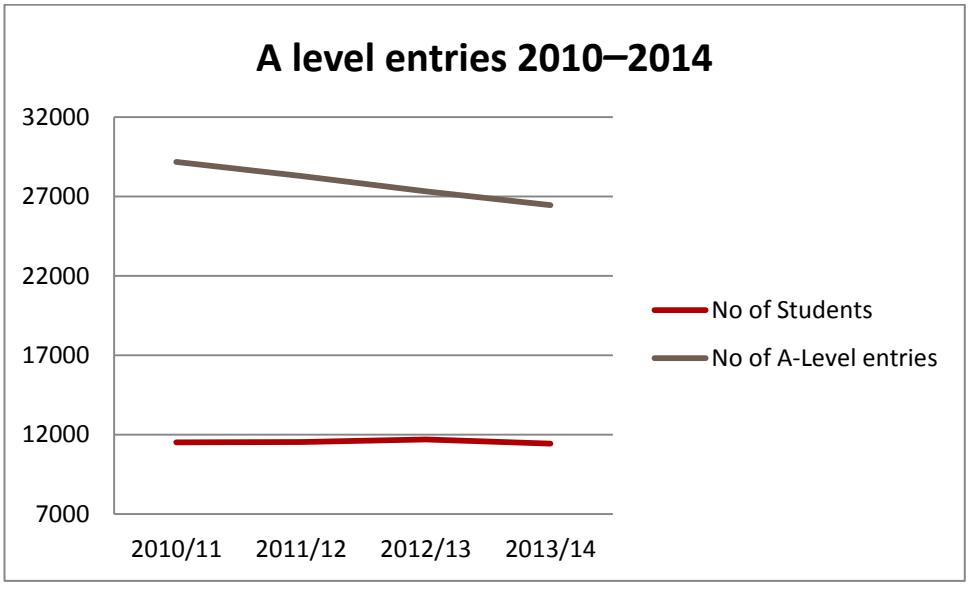
In relation to these figures, I wish to point out that the figures reported by the Welsh government do not single out A level registration and attainment completed as part of the Welsh Baccalaureate Advanced Diploma. Furthermore, in these figures, A level double awards count as two entries, so the reduction in the number of A level entries could be related to students dropping double awards. Finally, with schools being cautious in the number of students they register for A level examinations, often driven by a fear on non-completion and

drop-out, and with these figures showing registrations rather than awards, there may be an alternative explanation for this steady (3.2–3.5 per cent) decrease in A level examination entries. It is also worth noting that the figures reported for the academic and vocational pathways of the Welsh Baccalaureate Advanced Diploma (table 13a) and the figures of A level entries (table 14) refer to different time periods.

Table 14. *Number of school students aged 17 at the start of each year – number of A level entries and respective annual changes (years 2010–2015)*

Year	No. of school students aged 17 at the start of the year	Change in no. of students aged 17 at the start of the year	Total no. of A level entries (schools only)	Change in no. of A level entries (schools only)
2010/11	13,615		29,179	
2012/13	13,632	+0.15%	28,276	-3.2%
2013/14	13,365	+0.23%	27,314	-3.5%
2014/15	13,102	-2%	26,461	-3.2%

Figure 7. *Number of school students aged 17 at the start of each year – number of A level entries (schools) (years 2010–2014)*



If such a shift is indeed taking place under the Welsh Baccalaureate Advanced Diploma, then it may indicate a strategic move on the part of institutions and lower-achieving students to get a positional advantage by utilising this overarching award, which is accredited with the equivalent of an A grade A level, to progress onto Higher Education (Taylor et al., 2013a). This interpretation is further supported by looking at students' choices of vocational qualifications.

The majority of students (around 80 per cent) on the vocational Optional pathway of the Welsh Baccalaureate Advanced Diploma in the cohorts completing in 2006 and 2007 followed BTEC Diplomas and Certificates (table 15). These are highly regarded qualifications (Wolf, 2011) and are the second most widely studied qualification, after A levels, among UK university applicants aged 18 (UCAS, 2016, p. 32).

Table 15. *Type of vocational qualification taken by students following vocational Options as part of the Welsh Baccalaureate Advanced Diploma (cohorts completing in 2006 and 2007)*

Vocational qualification taken	As a proportion of all students completing vocational qualifications in 2006	As a proportion of all students completing vocational qualifications in 2007
BTEC National Diploma	49%	54%
BTEC National Certificate	31%	32%
Other Level 3 EDEXCEL (e.g. Principal Learning)	12%	9%
Other Awards	8%	5%

When looking at Welsh Baccalaureate Advanced Diploma students' BTEC subject area choices (table 16), we see that the three most popular ones are Business, Computing and Sport. These can all be considered newer regions, namely 'volatile' vocational areas of study (Young and Muller, 2014), dependent on their outcomes matching external conditions such as labour market demands. This contrasts with students' choices of academic qualifications in

table 13b based on traditional subjects such as English, Mathematics and History. However, a number of interviewees pointed out that students on BTEC courses are increasingly taking an additional A level as part of the Welsh Baccalaureate or at times they may return to complete an A level programme of study as an additional qualification.

Table 16. *The most popular vocational areas for students following vocational Options as part of the Welsh Baccalaureate Advanced Diploma (cohorts completing in 2007, 2008 and 2009)*

Vocational Area	2007	2008	2009
Computing/ICT	16% (3rd)	22% (2nd)	16% (1st)
Business	28% (2nd)	23% (1st)	14% (2nd)
Sport	29% (1st)	13% (3rd)	11% (3rd)
Public Services	7.0% (4th)	9.0% (5th)	10% (4th)
Health and Social Care	-	3.0% (5th)	11% (5th)
Construction	6.0% (5th)	10% (4th)	8.0% (6th)

UCAS note (2016, p. 33) that applications on the basis of combined A levels and BTECs are becoming more common. The application rate for mixed qualifications has been increasing every year in the period 2010–2016 (with the exception of 2012 when the rate remained the same) so that in 2016, the rate for the group of students combining academic (general) education and vocational qualifications had increased almost three times from 2010. In the context of the Welsh Baccalaureate Advanced Diploma, the percentage of students in the cohorts completing in 2005, 2006, 2007 and 2008 who combined academic and vocational qualifications is relatively low (between 9 and 12 per cent). The WJEC reported similar figures for the Intermediate Welsh Baccalaureate Diploma (Level 2) that showed the percentage of students in the cohorts completing in 2006, 2007, 2008 and 2009 who combined academic and vocational qualifications to be between 10 and 12 per cent. (WJEC, 2008a; 2009a).

During the semi-structured interviews I held, it became clear that only a limited number of schools offer vocational qualifications and programmes of study in collaboration with local colleges. For the purpose of the study, I could not establish the extent and the type of collaboration that is taking place. In understanding the limited extent of this collaboration, we need to take into account the organisational and structural arrangements that exist within education systems (Hodgson and Spours, 2006; Nuffield Review of 14–19 Education and Training, 2007). The structure and organisation of schools and colleges (funding, administrative structure, and speciality teaching) have traditionally been subject-based and qualification-led, and therefore the introduction of combined academic and vocational programmes of study/qualifications could be seen as a threat to the legitimacy (Meyer and Rowan, 1977; 1983) and resources (Pfeffer and Salancik, 2003) of educational institutions.

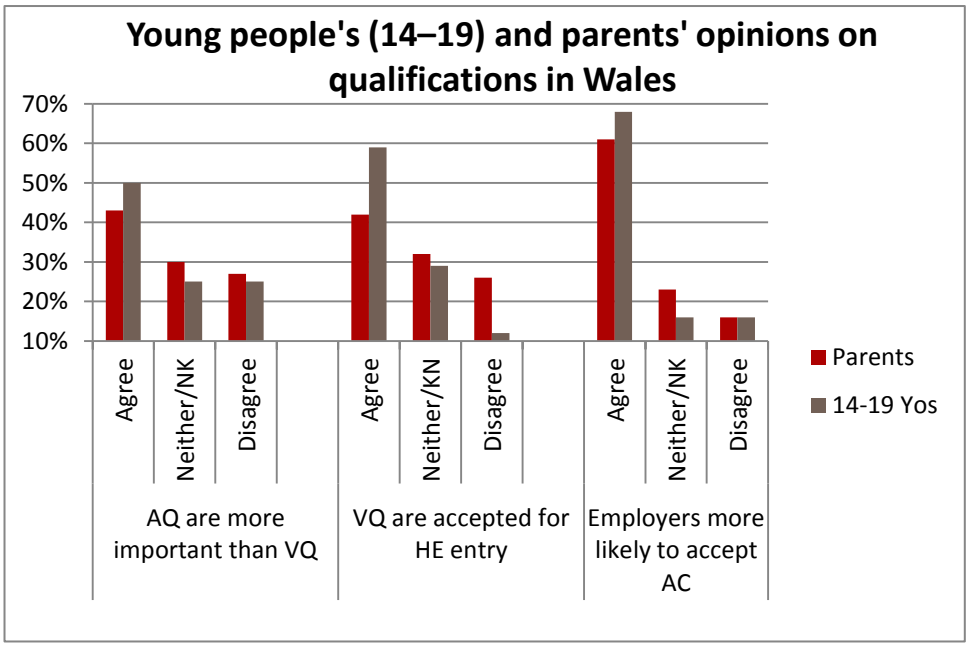
Early appraisals of the 14–19 Learning Pathways initiative and the collaboration between schools with sixth forms and Further Education colleges (Estyn, 2006a; 2006b) suggest that students may not have many opportunities to combine academic (general) education and vocational qualifications. Since these appraisals, and since the WJEC figures I relied on were published (WJEC, 2008a; 2008b; 2009a; 2009b), the Welsh government introduced a legislative measure (Welsh Measure of the National Assembly for Wales, 2009a; 2009b) and statutory guidance (WAG, 2009) stipulating the minimum number of programmes of study/qualifications students should be offered at a local level as well as collaboration arrangements between institutions. This is undeniably another indication of the attempt to *vocationalise* secondary education in line with the 14–19 Learning Pathways vision and the suggestion that "the balanced criteria for an approved learning pathway should include at least one choice from a range of vocational options" (WAG, 2002b, p. 12).

Overall, and for the purpose of this part of the study, it is difficult to make clear interpretations of the reported figures and draw solid conclusions on an actual shift in students' choices of qualifications. If the switching from academic (A

level) to vocational (BTEC) qualifications can be established by further research, then it will accord with existing findings from a number of studies carried out in other OECD countries and reported in Raffe (2002) which show that "unifying measures, especially those based on 'pathways engineering', can encourage higher participation in vocational education and discourage the drift towards academic programmes" (Raffe, 2002, p. 8). It will also accord with findings in the Taylor et al. (2013a) study who suggest that the perceived and actual benefits of completing the Welsh Baccalaureate Advanced Diploma are predominantly instrumental and associated with access to Higher Education, particularly for prospective students of less selective universities and students with lower prior attainment (GCSEs).

Until recently, both the opinions of Welsh young people (14–19) and the opinions of parents on the importance of academic and vocational qualifications and their acceptance for Higher Education were noticeably divided as neither group gave unanimously favourable or unfavourable answers (figure 8). In a survey of 1,000 14-to 19-year-olds and 756 parents of 14- to 19-year-olds carried out by GfK NOP Social Research (WAG, 2008), we see young people in Wales being more convinced than parents of the acceptance of vocational qualifications for Higher Education (HE) entry, but they also place more importance on academic qualifications.

Figure 8. *Opinions of Welsh young people (14–19) and parents of young people on Academic Qualifications (AQ) and Vocational Qualifications (VQ) (Based on WAG, 2008, p. 17)*



It is exactly this ambiguity of the first question, 'important for what?', that points to contextual idiosyncrasies in the UK Higher Education system: the variability of entrance requirements according to each institution; the variable acceptance of the Welsh Baccalaureate Advanced Diploma within and across Higher Education institutions (Greatbatch et al., 2006; Hayden and Thompson, 2006c; 2006d; 2006f; Taylor et al., 2013a); and the existence of highly competitive institutions and courses. In this light, any nationwide shift towards vocational qualification is likely to deepen the existing divide between the 'academically inclined' and the 'rest'. At present, it looks like the former will continue to be associated with the three A levels in traditional subjects.

Three A levels are the 'standard requirement' for UK-based university applicants aged 18 (UCAS, 2013a; 2013b; 2014; 2015; 2016). From the reported data that I assembled, there are concerns regarding students of the Welsh Baccalaureate Advanced Diploma being excluded from the 'Three A level' club. Table 17 shows that nearly half of all students on the academic (general) education Optional pathway in the cohorts completing in 2006 and 2007

followed two A level qualifications and only a very small fraction of them followed four.

Table 17. *Number of A level qualifications taken by students following academic (general) education Options as part of the Welsh Baccalaureate Advanced Diploma (cohorts completing in 2006 and 2007)*

Number of A level qualifications taken	As a proportion of all students completing A level qualifications in 2006	As a proportion of all students completing A level qualifications in 2007
1	24.4%	21.0%
2	44.9%	46.0%
3	28.8%	31.0%
4	1.9%	2.0%

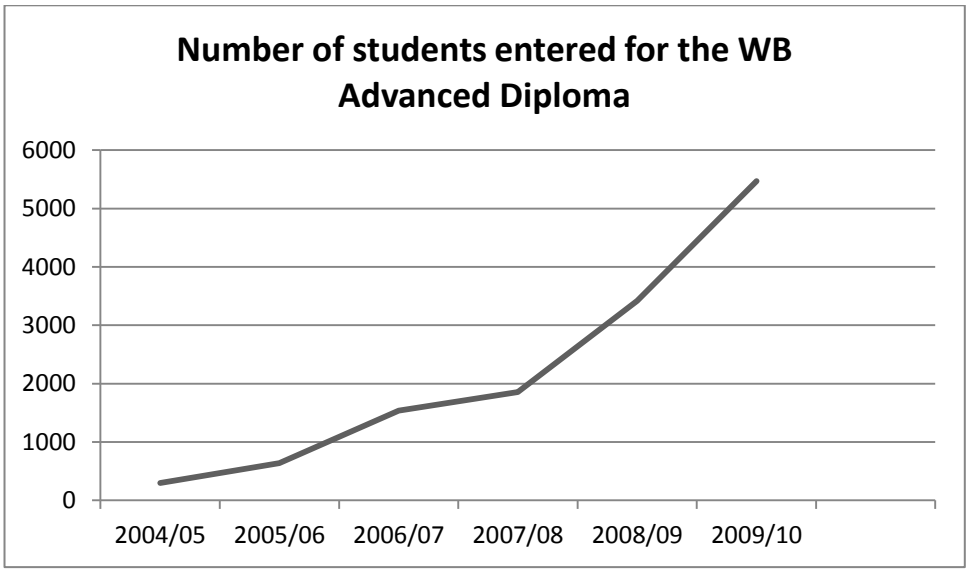
The demands placed on Welsh Baccalaureate students by the addition of the Core programme means that fewer students will be able to complete more than two A levels. Arguably, the figures in table 13a and table 16 give us a very limited picture on this, and since they have been reported, the take-up of the Welsh Baccalaureate Advanced Diploma has been promoted systematically by the Welsh government. This means that more schools, many of them attracting a higher-achieving student population able to cope with the demands of three A levels plus the Core, are now offering the qualification. It is possible therefore that the number of students who take three or four A levels in addition to the Core has increased. In any case, the specifications for both the Welsh Baccalaureate Advanced Diploma and the new Welsh Baccalaureate Advanced make clear that students should draw credits from no more than three Level 3 supporting qualifications, depriving the majority of them of the opportunity to study for four A levels. This, and as I discuss in sub-section 9.3.1 of chapter 9, may be one of the ways in which the particular qualification disadvantages Welsh students.

As I mentioned in sub-section 1.2.1 of chapter 1, since the roll-out of the Welsh Baccalaureate pilots, the government has been systematically working towards the universal adoption of this qualification and curriculum framework.

Consequently, and based on the figures the WJEC reported (WJEC, 2009b; 2010d; 2010e), we see that the number of students on the Welsh Baccalaureate Advanced Diploma has increased significantly, from 299 in 2005 to 5,407 in 2010 (figure 9). In order to comprehend this number, we only need to look back at table 14 and consider that the average number of school students aged 17 in any given year is 13,428 and that in 2013/14, there were 48,620 students registered for full-time Further Education courses (+16 ages) across all Further Education providers in Wales (Welsh Stats, 2015).

The target of having at least 25 per cent of 16- to 19-year-olds completing the Welsh Baccalaureate by 2010 (NAW, 2001, p. 63) may not have been achieved but, by the time of the study, we see a significant increase in the number of schools and colleges that offer it; from a total of 31 during its pilot scheme to a number in the range of 111 to 240 in 2013.

Figure 9. *Number of students entered (registered) for the Welsh Baccalaureate Advanced Diploma in October of each year (years 2004–2010)*



UCAS (2009, p. 8) reported that 101 schools and colleges were offering the Advanced Diploma in September 2008 with 168 offering the Welsh Baccalaureate at all levels in 2009. Taylor et al. (2013a, p. 23) reported 76 education sites in 2007/08 to over 240 in 2011/12 and the WJEC (WJEC, 2010d,

p. 6) reported 88 schools, 19 colleges and 4 work-based training providers in 2010.

Both the internal and external evaluators noted the significant differences between schools and colleges that adopted the Welsh Baccalaureate in terms of curriculum organisation and teaching and learning practices. Given that its adoption was not considered an isolated curriculum innovation in most of the pilot centres and that schools and colleges adapted the Welsh Baccalaureate in ways that it became compatible "in intent and practice with the inherent culture of the school or college, driving or complementing parallel teaching and learning developments" (Hayden and Thompson, 2006h, p. 21), there will inevitably be significant variation in pedagogic practices across the country. This makes the fulfilment of the policy promise to provide a common learning Core to all students irrespective of their Optional studies and site of learning a significant challenge and a worthy empirical pursuit. As I further discuss in chapters 7 and 8, the compulsory integration of Essential Skills Wales with all programmes of Optional study plays an important but very limited role towards fulfilling this promise. In the following section, I wish to discuss the curricular principles of Essential Skills Wales and their knowledge base in manual practices.

6.4 Essential Skills in the Welsh Baccalaureate Advanced Diploma

One characteristic of the evolution of Skills (from Basic to Core to Key Skills and to Essential Skills Wales) is the debate about which Skills are to be considered primary or secondary (Kelly, 2001, pp. 26–29). By the time of the study, a general consensus had already been reached, seeing three Essential Skills (Communication, Application of Number and ICT) and three Wider Key Skills (Working with Others, Problem Solving, and Improving Own Learning and Performance) as part of the compulsory Welsh Baccalaureate Core[30].

[30] In the new Welsh Baccalaureate Advanced there are three Essential Skills (Literacy, Numeracy and Digital Literacy) and the four Employability Skills (Planning and Organisation, Creativity and Innovation, Critical Thinking and Problem Solving, and Personal Effectiveness). These however will be integrated and assessed in a different form to the one I described and analysed in the thesis. See sub-section 9.3.3 of chapter 9 for a discussion of my findings in the face of the changes implemented from September 2015.

Essential Skills Wales were introduced in 2010 from the merging of the 'Dearing' (Dearing, 1996) predecessors: Key Skills (Communication, Application of Number, ICT) with Adult Basic Skills (Literacy, Numeracy, ICT). From 2003 to 2010, awarding bodies, schools and colleges used a set of Key Skills standards and specifications developed in collaboration by three regulators: the Qualifications and Curriculum Authority (QCA, 1999; 2004),[31] the Qualifications, Curriculum and Assessment Authority for Wales (ACCAC)[32] and the Council for the Curriculum, Examinations and Assessment (CCEA).[33]

After 2010, Essential Skills Wales standards and specifications were developed by the Welsh government's Department for Children, Education, Lifelong Learning and Skills (DCELLS), although this responsibility will now pass on to the newly formed Qualifications Wales. The responsibility for the development of assessment criteria, materials and assessment guidance documents has always been with awarding bodies.[34] In this sense, the influence of the government with its *vocationalising* vision and promotion of a skill-based education that I discussed in the first section of this chapter runs through assessment criteria, since any description for a curriculum, knowledge and teacher input is absent in Key Skills (QCA, 1999; 2004) and Essential Skills Wales (WAG, 2010) standards and specifications documents.

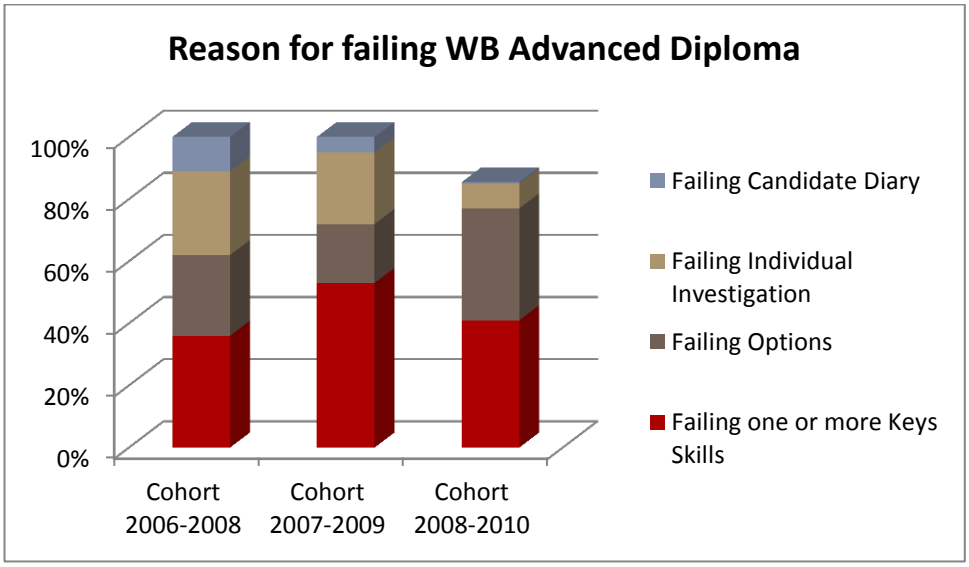
The idea of formally assessing and accrediting Skills dates back to 1989 and the Education Secretary Kenneth Baker (Richardson, 2002). His vision was that Skills would be assigned levels of study and credits, allowing them to be used as part of a single qualification framework[35] that would facilitate the transfer of credits between vocational and academic (general) programmes of study. Eventually, and as a reflection of problems stemming from their assessment,

[31] In 2010, its responsibilities were transferred to the Office of Qualifications and Examinations Regulation (Ofqual), a government department that regulates qualifications, examinations and assessments in England and vocational qualifications in Northern Ireland.
[32] The Awdurdod Cymwysterau Cwricwlwm ac Asesu Cymru (ACCAC) – Qualifications, Curriculum and Assessment Authority for Wales merged in 2006 with the Welsh government's Department for Children, Education, Lifelong Learning and Skills (DCELLS).
[33] A non-governmental public body in the Department of Education in Northern Ireland.
[34] At the time of the study, there were five awarding bodies that offered Essential Skills Qualifications: WJEC, OCR, City and Guilds, Pearson and Agored Cymru.
[35] See footnote 18.

Key Skills became separate standalone qualifications and their credit points were separated from the main award they were built into, for example GNVQs back in the 1990s. In the case of Essential Skills and Wider Key Skills in the Welsh Baccalaureate, these standalone qualifications are part of the accreditation for the Core Certificate but they also seem to give rise to similar concerns regarding assessment.

As we can see from figure 10, which I assembled based on the data reported by the WJEC (2008b; 2009b; 2010d), the proportion of students who fail to attain the Welsh Baccalaureate Advanced Diploma as a result of not completing their Essential and Wider Key Skills qualifications is between 36 and 54 per cent for the cohorts reported. The same apples to students of the Intermediate Diploma, with the proportion of such students being 54 and 41 per cent for the cohorts reported (i.e. completing in 2008 and 2009 respectively) (WJEC, 2009a, p. 7).

Figure 10. *Reason for failing to achieve the Welsh Baccalaureate Advance Diploma (cohorts 2006/08, 2007/09 and 2008/10)*



During the semi-structured interviews I had with WBQ co-ordinators, it became clear that in the earlier cohorts, there had been a number of administrative problems with schools and colleges entering students for Essential and Wider Key Skills qualifications and submitting the results to the WJEC by the required dates and this is reflected in the data in figure 10. On some occasions, students

who received university offers based on their predicted A level grades would choose not to pursue the Core Certificate and its Key Skills component and prioritise their A level Options to maximise their chances of achieving or exceeding their predicted grades. Prioritising Optional programmes of study was an issue raised by Greatbatch et al. (2006) during the external evaluation of the pilots and by Taylor et al. (2013a).

When Essential and Wider Key Skills are assessed by a portfolio of evidence, the legacy of Baker's vision and the search for credibility via assessment (Hodgson and Spours, 2002) leave teachers and students with the burden of collecting paperwork to evidence Key Skills development. Problematic aspects of the assessment-led approach to Key Skill integration have been identified by evaluation-focused research (Hodgson and Spours, 2002; Unwin et al., 2000). Similar points have also been made by the internal and external evaluators of the Welsh Baccalaureate pilots (Greatbatch et al., 2006; Hayden and Thompson, 2006c; 2006d; 2006f;) and the 14–19 Qualifications Review (WG, 2012b). The issue of assessment and assessment criteria in the integration of Essential Skills Wales are points I return to discuss in chapter 9 based on my empirical findings and a Bernsteinian theoretical perspective. Before reaching chapter 9 and the two empirical chapters that precede it, it is essential that I present the parallels between Skills and National Vocational Qualifications (NVQs) as I will be drawing on these observations for the remainder of the study.

As part of their Options, students of the Welsh Baccalaureate Advanced Diploma can complete programmes of study leading to Level 3 NVQs. Based on the figures reported by the WJEC (2008b, p. 10; 2009b, p. 13), we can see that the proportion of students choosing to complete occupationally oriented qualifications is less than 10 per cent for the cohorts reported. NVQs were introduced in the late 1980s as work-focused awards with the aim to "certify existing occupational knowledge and skills" (Hansen and Vignoles, 2005, p. 21). They are therefore a context-tied 'assessment strategy' rather than a curriculum component that requires specific teacher input or a detailed programme of study. As a matter of fact, employers that offer NVQ awards are judged solely on the quality of their assessment (Pearson plc., 2011).

To a large extent, this is also the case for Essential Skills as they aspire to imitate the NVQs' natural approach to the development of certain competences (Jessup, 1991; 1995), their assessment principle of naturally occurring evidence (WJEC, 2010b, p. 5) and the assumption that students can progress at their own pace "based on readily available opportunities rather than on the basis of covering specific course content" (Bates, 1997, p. 10). These deceptive aspirations and assumptions, as I demonstrate in chapters 7 and 8, contribute to the challenge of integrating generics into a pedagogic-focused curriculum and fulfilling their universalist purposes (sub-section 7.2.3 of chapter 7). They also give rise to a peculiar feature of Essential Skills that leaves both students and teachers/tutors with no control over the rate of knowledge acquisition and the pacing of Skills.

This is exemplified by the process known as 'mapping and tracking' (or 'signposting'[36]) of Essential Skills. During this process, Skill progression (and evidencing) is paced and sequenced based on the pacing of the main programme in which Skill tasks are 'embedded' (see sub-section 7.3.1 of chapter 7). According to the internal evaluators, "the initial attempts at operating this approach [signposting] were not infrequently limited in their success, especially for level three courses" (Hayden and Thompson, 2006h, p. 3). This limited success can be attributed to a number of reasons, including the realisation that at this level of study, Essential and Wider Key Skills "benefited from dedicated lessons or time for acquisition of target techniques with integrated elements mainly providing opportunity to practice and develop the learnt skills" (Hayden and Thompson, 2006a, p. 6). As it stands, the curriculum time devoted to Essential and Wider Key Skills is minimal (see table 18) and, as I discuss in chapter 9, this has an impact on the extent to which their integration can fulfil their universalist purposes.

In addition to their grounding in a utilitarian discourse that tunes education to the needs of the market, Essential Skills (WAG, 2010) and their immediate predecessors, Key Skills (QCA, 2004), share distinct characteristics with NVQs

[36] Identifying and marking opportunities for developing and evidencing Essential Skills as they occur or can occur in the syllabi of Optional or Core components.

(Ofqual, 2011; ILM, 2012) and to a certain extent with programmes of study leading to the GNVQ and CPVE awards that I mentioned in chapter 2 and section 3.2 of chapter 3. They are 'technicised' competency-based programmes of study meaning that they centre on observed student performances and that they fragment or lack a theoretical knowledge basis. The latter aspect has been criticised heavily from a pedagogic perspective (Bryson et al., 1990; Hyland, 1991; 1994; 1996; Wheelahan, 2007; 2010; Tsatsaroni and Evans, 2014).

Table 18. *Welsh Baccalaureate Advanced Diploma completion requirements. (Adapted from WJEC, 2013, p. 10)*

Compulsory Core	**Components**		**Guided Learning Hours**	**Additional Learning Time**		**Credit Values**
Wales, Europe and the World	Eight Key Issues		60	20		8
	Language Module		20			2
Personal and Social Education	Four Elements		30	40		10
	Community Participation		30			
Work-Related Education	Working with an Employer		30	40		10
	Team Enterprise		30			
Individual Investigation			20	30		5
TOTAL			**220**	**130**	**350**	**35**
Six Key Skills (at least three at Level 3 and three at Level 2) **(At least one of the * must be at Level 3)**	* Communication, * Application of Number, * ICT, Working with Others, Problem Solving, Improving own Learning		To be integrated with Core and/or Optional programmes			
Tutoring/Mentoring	One-to-one interviews		6			
OPTIONAL courses	**Level 3 Threshold[37]**	**Guided Learning Hours**	**Other Option**			**Credit Values**
A Maximum of			Level 3 Principal			

[37] Each upper-secondary qualification has been assigned a Level 3 Threshold contribution figure. In this scoring system, two A levels (and equivalent qualifications – equivalent in terms of 'size' and 'level of challenge' as defined in the CQFW – see footnotes 16 and 18) contribute 100% to the Level 3 threshold. In calculating point scores per entry, an A level has a size of 1, an AS a size of 0.5 and a BTEC National Diploma a size of 3 (equivalent size of three A levels).

three Qualifications at Level 3			Learning and Extended Project Qualification		
TOTAL	**100%**	***720***			**108**

The fragmentation (or absence) of a theoretical knowledge base for Essential Skills and NVQs, as well as their curriculum and assessment principles, can be traced back to the classic competency model. This dates back to 1870 and the task analysis methods of Victor Della-Vos who adapted Pavlov's conditioning theory as a basis for designing manual training (Field, 2001, p. 109). Competency-based models are characterised by the functional analysis of occupational roles and their wider purpose. These are then 'converted' into functional tasks with the behavioural aspects of these tasks usually described as outcomes or objectives (McAshan, 1979; Friedlander, 1996).

Functional analysis, however, and the breaking down of an occupational role is used to build up the profile of a specific vocation rather than a qualification or a performance, which is the case of Essential Skills. The starting point of a functional analysis is the key purpose of the occupation itself. In the case of Communication and Application of Number, we see that the breaking up of these Skills not only fails to reflect a coherent profile of a specific occupation or practice, but that their key purpose is also contested and multifaceted, as I discuss in sub-section 7.2.3 of the following chapter.

6.5 Linking Chapters 6 and 7

Peculiarly, this is the only chapter of my thesis where its conclusion resembles the structure of an overview section in that I use it to state my aims and its contents rather than present a synthesis and interpretation of my findings (something that I did in the overview section of this chapter!). This is mainly because the empirical content of this chapter draws from the very early stages of the study, during which I was concerned with addressing contextual and diagnostic (Richie and Spencer, 2002, p. 307) research concerns and sharpening the focus of the study into what eventually became an exploration of Bernstein's concept of generics. I therefore aimed for this chapter to serve a number of

functions based on the empirical evidence and literature I had at hand: to establish aspects of the Welsh Baccalaureate that are worthy of empirical investigation, such as the challenge of integrating Essential Skills; to highlight crucial features of Essential Skills and their integration; and to also examine the Welsh Baccalaureate Advanced Diploma as an upper-secondary qualification.

Through my empirical work at this stage of the study, and my discussion in this chapter, I address the limited extent and the manner in which the Welsh Baccalaureate Advanced Diploma brings together academic (general) and vocational qualifications and I draw attention to the possibility of a shift towards vocational qualifications under this overarching award. The potential to change the relationship and the hierarchical ordering of these two poles of education does not mean that the deeply ingrained divisions reflected in the Optional qualifications and programmes of study will disappear. Equally, and as I discuss in the next chapter, the purpose of Essential Skills in the upper-secondary curriculum will most likely continue to be contested and their value as qualifications questioned.

An almost unintended consequence of my empirical work during the early stages of my research was to foreground the role of the Welsh Baccalaureate as preparation for Higher Education and to make an analytic distinction between curriculum and qualifications. In this sense, chapter 6 seeds the question of whether in practice it is possible to distinguish between the two main different 'goods' of education (i.e. certification and knowledge) and whether their distribution can be based on distinct principles. This is an issue that has implications for the social realist school of curriculum theory and its social (curriculum) justice basis, and I discuss it in sub-section 9.3.4 of my concluding chapter. In the light of that discussion, and as I exemplify in the next two empirical chapters, assessment seems to be the joining point between curriculum knowledge and qualifications (certification).

In moving forward with my thesis, and on to chapter 7, there are a number of important contextual elements to take into account:

- the persisting early specialisation associated with Optional programmes of study which means that there are (at least) two distinct 'classes' of students: those who follow solely Mathematics and Science-based or Humanities-based subjects
- the resemblance of Essential Skills to NVQs in terms of their knowledge basis in manual practices and their aspirations of a natural approach to the development and evidencing of competences
- the controversial process of 'mapping and tracking' (or 'signposting') Essential Skills onto Optional or Core components, that as we will see creates a peculiar pedagogic situation in which control over the rate of knowledge acquisition rests neither with students nor teachers/tutors, but with ESW and WBQ co-ordinators
- the persistence of attaching accreditation to Essential Skills and offering them as a separate suite of qualifications
- the centralised control that runs through the evaluative (assessment) criteria features of Essential Skills and
- the little curriculum time allocated to the teaching and learning of Essential Skills

Chapter 7. The Complexity of Essential Skills

Contents

7. The Complexity of Essential Skills

7.1 Chapter Overview

"This may be a really bizarre example, but this week we have been looking at proofreading […] and I have been saying about 'We rely on Word documents in order to identify errors, but the computer doesn't necessarily identify all errors for us, particularly with the use of homophones'. They say to me: 'What are you talking about homophones for? That's about people who are gay'. [laughter] I said, 'Well, no. Break the words down […] and the difference with "hetero" […] and they are like: "what about the 'phone' part?" […] oh, right, yeah, that's what it means' […] And they covered it even at school, so they know things really. "

Interview excerpt, ESW co-ordinator – College II

I found the particular interview excerpt both amusing and indicative of my intention to examine the integration of Essential Skills with different components of the Welsh Baccalaureate by focusing on the organisation of knowledge in the curriculum, its orientation in terms of introverted or extroverted meanings and its transmission through pedagogic practices. For my analysis and discussion in this chapter, I draw findings from the first part of the study (i.e. agents' perceptions of the purpose and practicability of integrating Essential Skills in the curriculum and the portrayal of Essential Skills in official curriculum documents) and from the second part, in which I comparatively describe different instances of integration across four schools and two colleges. I organise my analysis around one of the main themes that emerged from the analysis of the data in the second part (i.e. *levels of integration*) and a sub-theme (i.e. *Contextual relevance*) of the larger *power of certification* theme. Through my discussion, we begin to see that the extent to which the Welsh Baccalaureate can provide a common learning Core to all students, by the integration of Communication and Application of Number into its curriculum, is very limited. We also see some of the similarities and differences between these two 'species' of genericism, exemplifying their complexity and their idiosyncrasies in terms of their multifaceted purpose and pacing (sequencing) features. These features, as I discuss further in sub-section 9.3.3 of chapter 9, pose specific limitations for

their integration with other curriculum components and for fulfilling their universalist purposes.

7.2 Skilled Performances

In section 6.4 of chapter 6, I discussed the parallels between Essential Skills and NVQs in terms of their competency-based principles as distinct modes of pedagogised knowledge. These principles are expressed as a focus on 'real life' performances and the notion of naturally occurring evidence that guides their assessment. I start this section by presenting specific tasks students are expected to complete as part of Communication and Application of Number and this will provide a basis for further presenting and discussing the integration of these two Essential Skills.

I drew and synthesised what I call *standards of performance* based on information from the following: WAG standards document (2010); the WJEC Essential Skills Wales/Wider Key Skills Handbook for Centres 2013/2014 (2013c); WJEC student logbooks and assessor record forms; OCR unit summaries, activity planning; various assessment sheets I collected, and the interview data. These *standards of performance* are the competences students are required to demonstrate through the completion of certain tasks. These performances are undifferentiated (ungraded), partly reflecting the transferability of the generic knowledge underpinning performances as well as the shared competences and common procedures all students bring to the pedagogic context (i.e. their trainability).

7.2.1 Communication

Communication is comprised of three parts:

C.1) Writing

C.2) Reading

C.3) Speaking and Listening

For Communication at Level 3, which is the Level nearly all students complete as part of the Welsh Baccalaureate Advanced Diploma (WJEC, 2010a, p. 10), students have to do the following:

Writing – Part C.1: Write two documents of different types (e.g. informative, persuasive, instructional, story/narrative) in different formats (e.g. leaflet, memo, essay, report, letter). One of the documents needs to be at least 1,000 words long and complex in that it contains sentences with different conjunctions (although, but, because, etc.) that appropriately show the different relations between the independent and dependent clauses and as the writer intended. They also need to contain specialist vocabulary relating to a specialised topic (usually a topic from the Optional or Core programmes of study) and the documents needs to develop a clear line of reasoning with multiple strands. Students need to use at least one image (or a plan, graph, diagram, etc.) to convey information about their writing. In assessing performances (see appendix 10 for learning outcomes/assessment criteria), the style and format of writing needs to be appropriate to the purpose and the audience and students are required to take into account the context and complexity of the subject matter.

Reading – Part C.2: Read and synthesise information about a single topic from two documents of different types that contain unknown vocabulary and complex lines of reasoning. Both documents have to be at least 1,000 words long and complex in that they address abstract or controversial issues, contain specialist and unfamiliar vocabulary (usually from topics of the Optional or Core programmes of study) and a structure that makes the multiple strands of its argument 'complicated' to follow. One of the documents must contain an image (or a plan, graph, diagram, etc.) and students need to refer to it in demonstrating how it aids their understanding of the text. In assessing performances (see appendix 10 for learning outcomes/assessment criteria), emphasis is placed on reading comprehension, working with textual patterns, inferring the meaning of the text and the writer's intention and purpose.

Speaking and Listening – Part C.3: Understand and respond to spoken language by taking part in two formal discussions on familiar and/or unfamiliar topics and by giving a formal presentation of eight minutes. Familiar topics for

the discussion are usually taken from the Core programmes of study while unfamiliar topics (unfamiliar to the audience) that are used in the presentations are usually taken from the Optional programmes of study or are based on students' personal interests. In assessing performances (see appendix 10 for learning outcomes/assessment criteria), students need to prepare notes for the discussions and presentations that explain their topics and they are assessed. They are also assessed on their ability to verbally communicate and respond to factual information, feelings, opinions and explanations/ instructions. Emphasis is given to how students answer questions, encourage contributions from others, take into account other people's feelings and opinions and negotiate these while working towards common understanding and agreement.

All three parts of Communication are generally integrated into writing, reading and speaking and listening tasks from Optional or Core programmes across all six sites of the study. One Literacy co-ordinator comments: *"The advantage is everything you do is Communication but the kids don't realise it"* (Literacy co-ordinator – faith school). One limitation of this approach to integration (i.e. 'embedded' – see sub-section 7.3.1 of this chapter) is that there may not be adequate classroom time for explicit teaching and instruction. This is something all 12 interviewees commented on and the following quote is indicative of this:

> *"They write an A level essay in English and then they do the Comms, and yes, they know everything that there is to know in terms of, 'You don't start your sentence with "but"', or, sentence structure – but when they come to do the Communication, it's like there is no time to reinforce all these."* (ESW co-ordinator – college I)

With the sequencing rules explicit only to the transmitter (assessor) of knowledge, students may not always be aware of what the expected performance is supposed to be (Bernstein, 2003a, p. 67). In remediating instances of integration, we see teachers weakening the frame of selection by allowing weaker students to select their reading and writing materials and going through a process of 'trial and error', followed by explicit instruction. The six WBQ co-ordinators who mentioned this practice believe that this facilitates

knowledge transmission and acquisition of different writing styles and audiences (see sub-section 8.2.1 of chapter 8).

The danger of keeping sequencing rules implicit is the same for Application of Number. When different calculations (tasks) are being integrated into wider vocational activities (i.e. they are 'embedded'), then the Skill can be considered an 'assessment strategy' that accommodates the principle of naturally occurring evidence (Jessup, 1991; WJEC, 2010b) based on *assessment criteria* (see chapter 8) rather than pedagogic practices transmitting knowledge that are based on *instruction* and explication of the sequencing rules. The case of Application of Number differs from that of Communication in many respects, as I explain in the following sub-section, and consequently we see distinct pedagogic practices across all education sites of the study with only selected segments of their student population tackling this Skill at the upper-secondary level (Level 3).

7.2.2 Application of Number

Application of Number also has three parts:

N.1) Understanding Numerical Data

N.2) Carrying Out Calculations

N.3) Interpreting Results and Presenting Findings

Unlike Communication, these parts are interrelated and students are therefore required to complete tasks (or more complex activities[38] in the case of Level 3 Application of Number) that bring together at least two out of the three parts. In practice, however, unless all three parts are brought together into a single numerical problem, the calculations are performed by rote. For example, in order to calculate efficiently using whole numbers, fractions, decimals and percentages (N.2), a student would need to read and understand numbers

[38] An activity includes a series of interconnected tasks and is more complex in terms of planning and sequencing tasks of smaller 'purposes' towards the achievement of a larger goal. Tasks may also be complex in that the results of one task can affect the accomplishment of another.

presented in different ways" (N.1) and understand what the results of the calculations mean in the context of the problem or tasks (N.3).

The majority of students tend to follow Level 2 Application of Number with about a third of them following this Skill at Level 3 (WJEC, 2010a, p. 10). For both Levels students have to do the following:

Understanding Numerical Data – Part N.1: Identify different numerical problems that afford different calculations (as listed in **N.2**), plan how to solve them and collect appropriate data. One difference between the two Levels is that at Level 2, students are only required to play an active role in identifying these problems (working with a teacher/tutor in this process) and describe these problems rather than analyse them in relation to the methods and calculations they used. At Level 2, a common practice is to give students numerical problems in the form of an assignment brief which they follow.

Carrying Out Calculations – Part N.2: Carry out calculations to do with

a. amounts or sizes
b. scales or proportion
c. handling statistics
d. using formulae

Some differences between the two Levels is that at Level 3, students need to work with very small and large numbers using scientific calculators; draw more complex scaling diagrams (representing complex shapes rather than rectangular and cuboids); calculate missing angles in triangles; collect and analyse data from larger data sets (over 50 observations) using advanced statistical tests (e.g. Spearman's Rho), and carry out calculations using powers, roots, compound measures (e.g. conversions per standard units) and algebraic formulae that involve multiple stages of calculations and equations that would require them to simplify 'nested' parentheses {… […(x) …] …}.

Interpreting Results and Presenting Findings – Part N.3: Present the results of the calculations using graphs, diagrams and tables. Interpret these results in relation to the problem(s) and the purpose of carrying out the calculations and

appraise calculations and methods. One difference between the two Levels is that at Level 3, students are required to make comparisons between trends in the results from their statistical analysis; create graphs and diagrams using disciplinary conventions; describe and justify the methods of presentation (i.e. choice of graphs), and draw conclusions based on the findings by taking into account statistical error.

One of the differences between Communication and Application of Number is the visibility of the latter's evaluation (assessment) criteria and the extent to which the criteria for each of these Skills require abstraction and generalisation (Maton, 2009). When assessed in their performance, students are asked to verify calculations (e.g. by using 'reverse calculations', estimations, different formulae and conversion tables) and provide justifications for the methods they used by drawing on specialised (re-contextualised disciplinary) knowledge (e.g. Mathematics or Statistics). It does not come as a surprise therefore to see only a minority of students completing Application of Number at Level 3, which is the upper-secondary level.

7.2.3 Comparisons

The voluntary nature of Level of study in Essential Skills is reflected in official pedagogic documents (WAG, 2010; WJEC, 2013c) through the theme of *flexibility*. The theme is built on notions of individual learning pathways, students' trajectories based on their needs and aspirations, and a view of students as co-producers of pedagogy. Through this theme, accessibility and relevance in teaching and learning Essential Skills translates into a non-compulsory horizontal integration, that is, a non-compulsory integration at the same Level of study as the Optional programmes. As expressed by the Welsh government, "it should not be assumed that candidates have to achieve these skills at the same level as their main learning or training programme" (WAG, 2010, p. 4). The theme of *flexibility*, linked to the theme of *universalism* with its ungraded performances and common competences, resembles the policy undertones of 'personalisation' with its masking of power differentials (Fielding, 2004; 2006).

Table 19 shows that in 2008, only 31 per cent of students would be entered for Application of Number at an upper-secondary level (Level 3). This is in line with findings reported by Hodgson et al. (2001) and Hodgson and Spours (2002) from research carried out as part of the 'Broadening the Advanced Level Curriculum' research project that examined the implementation of the Curriculum 2000 reforms in England. They found poor assessment outcomes associated with Application of Number at Level 3 and as a result, a reluctance of schools and colleges to enter students for the Level 3 qualification.

Table 19. *Targeted Level of each Skill entered by students in 2008 or indicated that they will be entering in 2009/2010. (Adapted from WJEC, 2010a, p. 10)*

Essential Skills Wales	Foundation Diploma – Level 1	Intermediate Diploma – Level 2	Advanced Diploma – Level 3
Communication	**Level 1** = 91	**Level 1** = 10%	**Level 1** = -
	Level 2 = 9%	**Level 2** = 81%	**Level 2** = 9%
	Level 3 = -	**Level 3**= 9%	**Level 3**= 91%
Application of Number	**Level 1** = 91%	**Level 1** = 26%	**Level 1** = 1%
	Level 2 = 9%	**Level 2** = 72%	**Level 2** = 68%
	Level 3 = -	**Level 3** = 2%	**Level 3**= 31%

This is the first indication of the limited extent to which the Welsh Baccalaureate provides a common learning Core to all students through the integration of Application of Number into its curriculum. The following quotes from two WBQ co-ordinators show that Application of Number at Level 3 is usually taken by students who follow Options that are Science-based and programmes with a significant Mathematics component.

> *"We're only using it with the current A2 Maths students [...] I've delivered [AoN Level 3] once or twice but I'm not 100 per cent au fait with it [...] standard deviation, polygons, and all the requirements of that. I'm more suited to Level 2. So we'll get some Maths specialists in and deliver that through standalone session days – three days, boom, boom, boom."* (WBQ co-ordinator – urban school I)

"*No, certainly at this level [Level 3] it is not for everyone. I've got [BTEC] Engineering lads, they're doing a Mechanical Engineering unit – Maths for Engineers, right? […] and it's all about algebra, data handling, trigonometry. So I'm using that unit, the tutors have adapted a couple of class activities so they can evidence Application of Number through that unit for me […] but it wouldn't work for the average student or tutor."* (WBQ co-ordinator – college II)

Application of Number at Level 3 is unique as being the only Skill that can fulfil a 'complementary' purpose, that is, procedural and operational everyday knowledge *"feeds back to the Options"* (Numeracy co-ordinator – college II) at the same Level of study (see also sub-section 8.2.2 of chapter 8). This is a point made by more than half of the interviewees, two of which also commented on the instrumental role of Level 3 Application of Number in helping students boost their performance (grades) in their Optional subjects. This is exemplified in the following quote:

"Again, Level 3 Application is the one that we're using in order to be able to gain the higher grades for some of the students [those on AS or A level Maths/Sciences]." (WBQ co-ordinator – suburban school)

The WBQ co-ordinator of one of the suburban schools also remarked on the instrumental benefit of Application of Number at Level 3, making a further link between curriculum knowledge and certification through assessment:

"There is a whole area where they develop those Skills first, which are then useful for them when they're doing their subject, so you don't get, then, the other Heads of Department saying, 'Well, what has the Welsh Bacc. ever done for us?' 'Well, okay, you've taught them how to apply the Maths' […] 'they improved their grades' but it's always got to be this idea that you're not pulling the cart before the horse; you're not obsessed with assessment. There is far too much obsession with measuring everything and not knowing the value of learning something." (WBQ co-ordinator – faith school)

Having pointed out some of the similarities and differences between Communication and Application of Number and the distinctiveness of Level 3

Application of Number in terms of it being the only Skill fulfilling a 'complementary' purpose, I wish to continue this section by discussing the multifaceted purpose of these two Essential Skills. This discussion will provide the basis for my claims and conclusion in sub-sections 9.3.2 and 9.3.3 of chapter 9 that the features behind the complexity and misrecognition of generics may jeopardise the opportunities for meeting their pedagogic universalist purposes.

Based on a thematic framework analysis (Richie and Spencer, 1994) of the data I collected through interviews with key pedagogic agents in the first part of the study, the purpose of Essential Skills can be broadly grouped into two categories – instrumental and universalist – without implying that these categories (or their sub-categories) are mutually exclusive. Instrumental views link Communication and Application of Number to preparation for employment and Higher Education studies and to a lesser extent, as only two interviewees emphasised this aspect, to preparation for 'life' (i.e. life skills). Universalist views link these two Essential Skills to remediation for previous education 'failings', to complementing Optional programmes of study and to making up for the early specialisation at the age of 16. Overall, this finding resonates with some of the findings of Bolton and Hyland's study on teachers' perceptions of Key Skills (2003). Having interviewed teachers of Advanced Level GNVQ courses in Business across seven colleges of Further Education in eastern England, Bolton and Hyland found that teachers viewed Key Skills in five different ways: as remediation for what schools failed to teach; as vocational preparation linked to the skills that employers seek; as appropriate workplace attitudes; as study skills for effective learning; and as 'general' preparation for adult 'life', work and progression to the next stage of education.

When interviewees saw Communication and Application of Number in terms of 'feeding back' to the Optional programme of study, with the exception of Application of Number at Level 3, they referred to lower-achieving students who feel more comfortable with Skill lessons while acquiring operational and procedural knowledge of curriculum subjects such as Maths or English. This is a point raised by all 12 interviewees and is exemplified in the following two quotes from two WBQ co-ordinators:

> *"It's a case of pointing out the learning. […] Look, actually guys, we're doing Maths and the topic that we're looking at is maybe ratios or maybe area. So it's more of a subtle kind of introduction to Maths. So it works quite well."* (Numeracy co-ordinator – college II)

> "*I would say what they gain more than anything else is the confidence […] for the extended writing […] Some average [student] can end up quite good. Probably get the best [results] out of the weak that goes to average."* (WBQ co-ordinator – urban school II)

On this, Bernstein (2000, p. 169) writes that using segments of re-contextualised horizontal discourse can facilitate access to the operational and procedural level of a subject and this kind of knowledge is usually distributed to the less 'able' groups of students. Empirical research using Bernstein's theoretical insights suggests that invisible pedagogies that blur the boundary between school and everyday knowledge can induct lower-achieving students into vertical discourses (Bourne, 2003; 2004). Harrison et al. (2015) also found that skill-based programmes of study (CoPE) are associated with improved attainment of general education qualifications (GCSEs), particularly for lower-achieving students and students from disadvantaged backgrounds, and that such programmes of study help boost motivation, confidence and self-esteem.

Two of the universalist views of Essential Skills are particularly interesting; one of these views was expressed by all interviewees working in schools and the WJEC official and one emerged as a theme from the document analysis. All of the interviewees who work in schools, as well as the WJEC official, perceived Communication and Application of Number as offering some compensation for the early specialisation at the age of 16 for students following A level subjects. The following two quotes demonstrate this point:

> *"I think it's perhaps to make up some of the deficiencies perhaps in some ways in students' options choices […] and then obviously it supports the Humanities side with the Numeracy base."* (Literacy co-ordinator – faith school)

> *"One of the aims is to provide a broad and balanced education and to complement optional subjects […] and I think the opportunities for extended writing, through the Investigation and the writing done in Communication, was not there before the Welsh Bac […] I remember going to a guy in physics and saying, 'Oh, we don't have to do another one [writing piece] do we?'"* (WJEC official)

In this view, even high-achieving students need to complement their programme of studies and the WBQ co-ordinator of a school makes an indicative comment that reflects the view of all 12 interviewees:

> *"With regards to the scientists, they do need to develop their written communication skills; there are fewer opportunities to do the extended writing […] and that's a shortcoming there."* (WBQ co-ordinator – faith school)

However, and as I summarise in sub-section 9.3.3 of chapter 9, this universal ambition conflicts not only with practical realities such as the minimal curriculum space allocated for Essential Skills, but also with the predominantly *assessing forms* of Communication and Application of Number practices guided mainly by the purpose of certification (see chapter 8).

In returning to how the theme of *flexibility* links to *universalism* and its masking of power differentials (Fielding, 2004; 2006), the second interesting universal view of Essential Skills emerged from the analysis of the documents. The Welsh government's Essential Skills specifications document states: "Key Skills and Basic Skills qualifications have been central to our skills' agenda in Wales in meeting the policy aim of ensuring that everyone masters the skills needed in education, work and life in general" (WAG, 2010, p. 2). Similarly, in their teaching specification document, the WJEC portrays Essential Skills as the skills that everyone needs "from students and junior staff through to middle and senior managers … in all aspects of education, training, work and life in general" (WJEC, 2010, p. 2). This *universalism*, expressed as undifferentiated (ungraded) common performances, is in effect an expression of the curricular aim of Essential Skills to be transferable and links to Bernstein's observation that generic modes of pedagogised knowledge are complex: "They share the fundamental features of all other competence modes, that is, 'similar to' relations" (2000, p. 55).

This commonality, which masks variations in the levels of students' 'skilfulness' and assumes that all students irrespective of their social circumstances and background can acquire these transferable skills to the same standard, is at the root of the complexity of generics and is deceptive for two reasons. Firstly, and from an epistemological point of view, it negates one important feature of practical knowledge that Winch (2010b) terms the "degree problem".[39] This is a problem intellectualists are faced with when attributing importance only to propositional (know that) knowledge, thus making practical knowledge a cognitive operation rather than an intuitively motivated action.

Secondly, and by resembling an invisible pedagogy, it encourages teachers/tutors to create appropriate contextual conditions for students to develop and demonstrate appropriate performances. In other words, and to use Bernstein's insights (2003a, p. 71), it suggests that there is the possibility of ameliorating the pedagogic context to accommodate students' internal commonalities (i.e. a shared trainability) so that students will not be compared and judged based on their differences. This is what I empirically demonstrate in the following section and in parts of chapter 8 in which we see teachers'/tutors' and WBQ co-ordinators' efforts to arrange the pedagogic context in ways that create opportunities for students to develop realisations of their internal shared trainability. This is reflected in the *Material - Topic - Problem level of integration* (see sub-section 7.3.2 of this chapter).

7.3 Integrating Essential Skills

In this section, I present and discuss how Communication and Application of Number are integrated with different components of the Welsh Baccalaureate curriculum. It is through this discussion that we see the limited extent to which the Welsh Baccalaureate provides a common learning Core to all students, through the integration of Essential Skills. I start this section by giving a typology of integration approaches, which is particularly useful for accounting

[39] This is the claim that someone cannot have knowledge of a fact (e.g. knowing that 100 °C is the boiling point of water at standard atmospheric pressure) in degrees, while practical knowledge can be demonstrated in degrees, that is, someone can be more or less skilful at an activity, knowing how to complete it more skilfully (or more diligently, carefully, etc.) than someone else.

for timetabling and administrative constraints. This typology provides a general basis for understanding how Communication and Application of Number are integrated into the Welsh Baccalaureate curriculum.

7.3.1 Approaches: Embedded, Combined, Standalone

A typical example of a 'standalone' approach to integration is the Holiday Hunter and Decorating a Room projects that the schools in the study use to integrate Application of Number. These projects are given a distinct timetabled slot during which students are instructed and assessed on performing all of the calculations I listed in sub-section 7.2.2. For the Holiday Hunter project, for example, students have to plan a holiday and complete tasks that include reading and drawing scales (e.g. maps and floor plans); estimating, calculating and converting various units (e.g. temperature, currency) using metric/imperial systems with and without a calculator; working with amounts of currency paid as deposits (proportions) and converting them from/into fractions, decimals and percentages.

The colleges in the study also use this kind of approach to integrate Application of Number and they tend to tailor the numerical project to students' Optional programmes. The ESW co-ordinator of a college explains how they use such a project with Drama A level and BTEC programmes of study.

> *"How they have embedded it is to give it a bit of a theatrical slant, so the Application of Number project they are doing is based on theatres around South Wales. They have to do work on how many theatres are there, what are their seating capacities, what genres are the most popular, what are ticket sales like relative to costs, so keeping that theatre open, that kind of thing […] They then draw conclusions on what their customer base is. It is kind of sold as, 'You need to have an awareness of what is happening in theatre in Wales.' But actually, it is Maths."* (ESW co-ordinator, college I)

Regardless of the thematic distinctiveness of the Drama project, it remains a 'standalone' approach in that its numerical problems are not part of a wider

activity of the component in which they are integrated, and the purpose of the calculations is 'artificially' created (see discussion of the 'embedded' approach below and also sub-section 8.2.2 of chapter 8 for 'artificiality').

In the case of Communication, 'standalone' approaches are used to integrate the presentation task of the speaking and listening part. For this part, students will pick a topic that is unfamiliar to the audience and that it is not drawn from the taught components of the Core and the task of presenting it is not part of a wider Optional or Core activity. Similarly, students may choose to read 'independent' materials for the purpose of developing and demonstrating reading skills for the C2 part of Communication. However, it is more common to integrate Communication using a 'combined' or an 'embedded' approach. This means that the reading and writing materials are transferred from other curriculum components to be used for Communication and that the purpose of the reading/writing task falls within a wider Options or Core activity.

According to all 12 interviewees, a desirable characteristic of the 'embedded' approach is *"that the central skills of Application and Communication naturally fall out of the subject"* (ESW co-ordinator – college II), making Communication and Application of Number *"more meaningful"* (Literacy co-ordinator – faith school), *"more purposeful"* (WBQ co-ordinator – college I), and *"relevant to their other studies [Core – Options]"* (Numeracy co-ordinator – college II). All interviewees also commented on how this approach facilitates *"the actual assessment process"* (AoN co-ordinator – college II) in helping WBQ co-ordinators, teachers and students to find evidence for the portfolio building. In fact, and as I mentioned in sub-section 7.2.1 of this chapter, the 'embedded' approach to integration can be considered as an assessment strategy rather than a pedagogic practice that aims to transmit knowledge and that is based on explicit instruction and explication of the sequencing rules. Consequently, and as I already mentioned in that section, the relative invisibility of sequencing rules to students means that expected performances and the learning stage by which students should be able to demonstrate them are only known to the transmitter (assessor) of knowledge. The WBQ co-ordinator of a school gives an indicative quote:

> *"If you ask my current Year 13s when they did their Communication Key Skill, they wouldn't tell you. They couldn't tell you. […] They know that they've done their compare and contrast. They know they've done their written work. They know they've had a discussion. When you say to them 'when did you do the discussion on personal statements?' 'Higher ed week.' Right. 'When did you have to sign that paperwork [portfolio of evidence]?' 'When she [WBQ co-ordinator] asked.'"* (WBQ co-ordinator – urban school I)

This distinct feature of the 'embedded' approach to integration has been negatively commented on by all 12 interviewees and linked to the limited curriculum time allocated for Essential Skills and by extension the limited time for explicit instruction. The WJEC official said on this:

> *"When you're talking about the development [of skills] and the teaching and learning that goes with it, it is not as effective as it could or should be, because of time constraints and having to jump through the hoops. The teachers are just going down the route of trying to get them [students] to complete the folios in an acceptable way and not actually worrying about the skills."* (WJEC official)

Similarly, for Application of Number, the AoN co-ordinator of a college points out:

> *"The downside of the integrated model is sometimes we don't have the opportunity or the lecturer doesn't have the opportunity to focus on the skills that perhaps they should be building in the first place. […] When subjects get integrated, it does sometimes become more of a question of just getting a portfolio of evidence done rather than looking at the actual skill base."* (AoN co-ordinator – college I)

In the case of Application of Number, and in both colleges in the study, an 'embedded' approach is used only with vocational programmes, which means that calculations and numerical tasks become part of a wider vocational activity, as the following quote shows:

> *"Our Horticultural department has integrated it fully this year. So when they are, for instance, if they're considering laying down a patio, then the Maths that they use for that then is highlighted. Likewise with Hairdressing, hair dyeing and perming, they are looking at volumes and ratio, different solution ratios and conversion of time, again, it's highlighted there."* (AoN co-ordinator – college II)

The 'embedded' approach to integration and the 'combined' approach, which I will discuss further on, result in the breaking down of the three parts of Communication (writing, reading, speaking and listening) or the calculations in Application of Number (amounts or sizes, scales or proportion, handling statistics, using formulae) by the 'mapping and tracking' (or 'signposting') process I mentioned in section 6.4 of chapter 6. Consequently, this breaks down the coherence of the specialised (re-contextualised disciplinary) discursive basis of the Skill, making Optional programmes such as A levels in English, English Literature, Media, Mathematics and Physics and BTECs in Media, Engineering, Science and the Built Environment the main 'site' of transmitting and acquiring specialised (re-contextualised disciplinary) knowledge (see also my discussion in chapter 8).

This breaking down is considered effective by the two interviewees in one of the colleges of the study for allowing non-specialist tutors to take on different parts (calculations) of Application of Number and offering theoretical (Mathematics) instruction comfortably. The WBQ of the college comments:

> *"I think from an integrated perspective, what we've started doing down here and I know other colleges do, what they do is, for instance, if you've got a vocational member of staff that's taking on the integration, they will cover the skills [calculations] that they're comfortable with."* (WBQ co-ordinator – college II)

Distinctions between 'embedded' and 'standalone' approaches to integration are made in a review of the literature on Basic and Key Skills (Powell et al., 2003) carried out for the Welsh government as well as the internal and external evaluations of the Welsh Baccalaureate pilots and the WJEC (2010a). For my

analysis, it has been helpful to take into account these different approaches to integration as they point out timetabling and administrative aspects. These "logistical", as the WBQ co-ordinator of a college called them, constraints remind us that despite the potential conflict between the "integrity of subjects and the need to show Key Skill development" (WJEC, 2010b, p. 5) or the different knowledge organisation of singulars, regions and generics, pragmatic limitations and opportunities have a reality of their own. These are points that all 12 interviewees raised and I give the following indicative quotes on the administrative arrangements of Essential Skill integration:

> *"When you're then giving it out to [A level] teachers and saying 'Right, okay, integrate it into your subject area', you've got the issue then of saying, well, you might say Who's responsible for what? Who's doing it? It becomes a management issue of how do we make sure that everything is getting completed? Is it therefore easier just to keep it within specific Welsh Bacc lessons?"* (WBQ co-ordinator – suburban school)

Interviewer:	*"Can they bring like an A level essay for it?" [asking if students can transfer their written materials for the writing part of Communication]*
College I WBQ co-ordinator:	*"Yes, absolutely. We know every single one of them [students] has got something to give in as evidence."*
Interviewer:	*"Yes."*
College I WBQ co-ordinator:	*"Lots of them do it [transfer written materials], and it is fine. We take charge of it, so we know where they are at; we do the target setting with them; they are following in many ways the criteria that you need for Comms. Whereas when you assign random bits of work to tutors [of Optional programmes], they [tutors] might not want to go back and redo it. Do you know what I mean?"*

Interviewer:	*"Um, not really."*
College I WBQ co-ordinator:	*"It is just way down on their list of priorities and quite rightly so. And why should they? They are not having hours off the timetable to do it."*

Unwin et al. (2000) plot the integration of Key Skills along a continuum with the 'standalone' (bolt-on) approach at one end and an 'embedded' (holistic) approach at the other. What I term as a 'combined' approach falls in between these two poles, but I conceptualise it differently. I see the 'combined' approach as the transfer of reading/writing materials or topics for discussion (in Communication) and a numerical problem (in Application of Number) from an Optional/Core component of the curriculum. This does not necessarily mean that the purpose of completing the Essential Skills task will necessarily align itself with the purpose of the wider reading or writing or numerical activity in which it is embedded. This distinction will become clearer in the following sub-section in which I discuss the two levels of Essential Skill integration (i.e. *Material - Topic- Problem level* and *Purpose level*).

By making the distinction between these two *levels of integration*, we can see different realisation of Communication and Application of Number practices based on the internal logic of these practices (i.e. control over selection of reading/writing materials and numerical problems, the control and visibility of pacing and sequencing of transmission, and explication of evaluation criteria). In other words, and based on the theoretical and analytical framework I discussed in chapter 4, we can see the variability of the strength of framing of different pedagogic aspects of the integration and the visibility of these aspects of practice.

7.3.2 Levels: Material – Topic – Problem

At this level of integration, we see the creation of contextual conditions (opportunities) for students to meet Essential Skills learning outcomes and assessment criteria. For Communication, this is achieved through the selection and sharing of written/reading materials and topics for discussions and

presentations. For Application of Number, it is achieved through the selection (or creation) of numerical problems. From the theoretical perspective that I developed in chapter 4, this is an empirical indication of how in an invisible pedagogy, the concern would be about arranging a pedagogic context "to enable shared competences to develop realisations appropriate to the acquirer" (Bernstein, 2003a, p. 71).

Writing

For the writing part of Communication, the majority of students tend to rely on sharing written work they have already completed (or are completing) in their Core or Optional programmes. With one of the written documents having to be at least 1,000 words long, students almost always bring over an essay they have written (or are writing) for their Optional programmes. Across all six sites of the study, this practice presents certain students with difficulties in terms of sharing written materials that conform to the requirements of length and complexity. This applies equally to students of A level, BTEC and other courses of study as the following two quotes demonstrate:

> *"There are certain areas that do more writing and there are certain areas that are more hands-on. Construction is an interesting one. You can have two, for instance, two bricklaying courses. One can be very theory based and one can be very hands-on based. So the amount of work then that they generate for their Comms is very different."* (AoN co-ordinator – college II)

> *"With students who are studying, say, Maths or Physics, then it does become more difficult so they [teachers] are going to need to look into the bank of ideas for what they can submit [for assessment] then."* (WBQ co-ordinator – faith school)

Given time limitations, the opportunities for students to develop writing skills or to distinguish between different genres, even at the basic level of recognising the writer's intentions, textual features and patterns of organisation, are limited. Such specialised knowledge remains the privilege of certain groups of students following programmes of study such as Media, Journalism, English, and English

Literature; in sub-section 8.2.1 of chapter 8, I give further examples of how the pedagogic context is adapted in creating the contextual conditions (opportunities) for students to meet Essential Skills learning outcomes and assessment criteria. Very often, this is linked to a relatively strong framing in terms of teachers/WBQ co-ordinators providing lists of suitable written materials to be handed in for assessment and consulting students on the process. Although students can choose (weak framing) to transfer any essay/assignment they want from Optional (and less commonly Core) programmes of study, in effect, it is teachers and WBQ co-ordinators that have control of the selection and transfer of written materials either through the provision of lists or through the consultation (tutorial) process.

Reading

Similarly, for the reading part, the majority of students in all six sites of the study also tend to rely on sharing materials they are already engaging with as part of their Optional or Core programmes of study. Very often, students use reading materials to inform their Individual Investigation for the Welsh Baccalaureate Core or an essay/assignment for their Options. Again, this practice presents certain students with the difficulty of finding materials that accommodate criteria for document length, type(s) and image requirements.

Reading a document solely for the purpose of Communication is very often seen as placing *"unnecessary demands"* (WBQ co-ordinator – urban school II) on students, particularly lower-achieving ones, who will resort to engaging with less complex documents and prioritise their Optional programmes of study. This is a point raised by more than half of the interviewees from all types of education site (school and college) and irrespective of the site's student population in terms of their attainment. One college WBQ co-ordinator makes a comment on this:

> *"If we can't get something which is, as you know, when you get to Level 3 the reading is basically 1,000-word documents, which is quite difficult to get hold of […] we use the internet […] guide them on what to read but we need to be careful*

that we're not putting extra pressure on students, because they already have massive amounts of assignments to get through […] because what will happen is, I know this, is they will not do ESW [Essential Skills Wales] work and they'll do vocational work." (WBQ co-ordinator – college II)

Higher-achieving students may also be reluctant to engage with long reading materials, especially if they also prioritise their Optional programmes of study or if they have not developed reading skills to synthesise information from complex and long documents of different genre. The WBQ co-ordinator of a school comments on how students following solely Science-based A level courses may not reach the same standard of performance as students following solely Humanity-based courses:

"You could say they [higher-achieving students following different Options – A levels] do it [spend different amounts of time engaging with the document] in reading, particularly if they're doing Literature or Science. I think of the two examples that were in the sample, for level two last year, they were both very different" (WBQ co-ordinator – suburban school).

Similarly, the WBQ co-ordinator of a college explains that this is also the case for Engineering students and how Communication is embedded by transferring reading material from a BTEC Optional programme of study:

"You always get, there are the vocational areas where you get good students come in on a BTEC Engineering […] Even they will question the need for this sort of reading [synthesising information on a single topic from different types of document]. We have to make them understand the need to learn that aspect of Communication […] to help them get the documents and see if it meets their need or if they can work with it. Reading in itself then becomes part of the subject [Options] and not just simply tagged on or an attachment." (WBQ co-ordinator – college I)

The distinction between students following solely Science or Mathematics-based and Humanities/Arts-based Optional programmes of study is very

prominent in interview transcripts and is made by all 12 interviewees. As we will see throughout the remainder of my empirical chapters, this distinction, the limited curriculum space devoted to Essential Skills and the dominance of *assessing forms* of pedagogic practice are indications that the promise of the Welsh Baccalaureate to provide a common learning Core to all students is unlikely to materialise. This also means that the extent to which Communication and Application of Number can make up for the early specialisation and complement Optional programmes of study is also limited.

Speaking and Listening

For this part of Communication, establishing the appropriate contextual conditions (opportunities) relates to the suitability of the discussion and presentation topics and students' familiarity with it. I discuss such distinct instances of integration in sub-section 8.2.1 of chapter 8 as examples of the Welsh Baccalaureate providing students following different Optional programmes of study with a common learning Core. This is achievable to large extent when the topics for the discussion are drawn from the interdisciplinary discursive basis of the Core themes.

Application of Number

If creating or standardising contextual conditions (opportunities) for students to demonstrate their commonly shared procedures/competences in Communication is linked to finding and transferring appropriate written and reading materials from the Core or Options, in Application of Number this is linked to identifying (or creating) a suitable practical problem and generating data. As I discuss in sub-section 8.2.2 of chapter 8, students are often given an assignment brief with the numerical problems they need to tackle and the calculations they need to perform rather than work independently to identify and/or create a problem. This practice is common across all six sites of the study and it takes place either as the Holiday Hunter project that I explained (as part of the 'standalone' approach to integration in schools) or as the curriculum

'mapping and tracking' of different calculations in the case of 'embedding' Application of Number in vocational activities of the Optional programmes.

In general, particularly for the Level 2 Application of Number, I found a relatively strong degree of teachers'/tutors' control over the selection of problems and selection of data (or sources of data). This has implications for the opportunities all 'classes' of student have to develop numerical skills and to access a common learning Core through the integration of Essential Skills into its curriculum (see also sub-section 8.2.2 of chapter 8). The following quote gives an indication of why students at a particular college are given the data sets to perform numerical calculations rather than being asked to search for the data and collect them autonomously:

> *"So I had hours and hours of trying to find certain data which would satisfy the AoN, and then when that was done, you know, it was kind of – she [vocational tutor] did just put the criteria [assessment criteria] on and that was the end of it. That worked very well because by doing that for the whole year, they were ticking the box."* (WBQ co-ordinator – college II)

The strong degree of control (framing) that teachers/tutors and ESW co-ordinators have over the selection of numerical problems and data sets is often linked to administrative arrangements and ease of record-keeping, as the WBQ co-ordinator of a different college explains:

> *"She [ESW co-ordinator] was very set in the way she wanted things to be presented because it was easier to monitor through and everything. If everything looked the same, that was pretty. It wasn't about giving students the opportunity to think for themselves [...] to find and work with the data [...] it was about being prescriptive, to make tutors' lives easier."* (WBQ co-ordinator – college II)

This strong framing at selecting numerical problems and data is also linked to the limited curriculum time devoted to Essential Skills and this is a point raised by all 12 interviewees. In the colleges of the study, it is also linked to a lack of specialised teaching staff: in the schools of the study, Application of Number at

Level 3 is delivered by the Mathematics department, but in colleges, I noted that the strong framing of the identification of numerical problems and data extends to the control Essential Skills co-ordinators have over the process of integrating Application of Number. This is either because a lot of tutors *"don't have the skills themselves"* (WBQ co-ordinator – college II) or is again due to time constraints. The following quote exemplifies this point:

> "*We [ESW co-ordinators] even try and develop resources, so for somebody in Engineering who goes, 'Oh, I don't want to touch that Welsh Bac', I'll go, 'Well, actually, I'll sit down with you. We'll plan it together. We'll look at your curriculum. We'll see where it can be embedded, and then I've got off-the-shelf lessons that you can deliver without even doing any prep.' 'Oh, great.'"* (ESW co-ordinator – college II)

This peculiar situation created by the 'embedding' of Skills, also evident in Communication, passes control over the rate of knowledge acquisition to ESW and WBQ co-ordinators rather than to Skills' teachers/tutors. In combination with the breaking down of the coherence of the specialised (re-contextualised disciplinary) discursive basis of the Skill and the fact that Options are the main 'site' of transmitting and acquiring specialised knowledge, it makes Level 3 Application of Number 'restricted' to certain groups of students. The distinction I mentioned above between different groups of students (i.e. students following solely Science or Mathematics-based and Humanities/Arts-based Optional programmes of study) is therefore particularly prominent in such instances of integration. While this is a point I bring up in my discussion in other parts of my thesis, I found the following quote to summarise this point precisely:

> *"Most of my ESW [including Application of Number Level 3] this year is delivered to [BTEC] Engineering students, so they come into college with a really good GCSE profile more often than not, they're very studious learners; they want to learn […] A few years ago, I went back to college and took my A level Maths […] there are different methods for doing different things, and as ESW tutors, with the Numeracy bit we have to support all of those learners, so we tend to deliver*

different ways of calculating problems and different formulae that can be used." (ESW co-ordinator – college II)

The above quote also highlights the importance of having subject specialists and this is an issue I pick up and discuss further in chapter 8. In moving from the *Material – Topic – Problem level* of integrating Essential Skills to the *Purpose level*, I wish to point out an important aspect of integration that was raised by all 12 interviewees: the 'suitability' of Communication and Application of Number tasks. This issue was raised in relation to a task allowing students to develop and demonstrate Essential Skills learning outcomes and assessment criteria, but it was also linked to tasks that afford *"a natural rather than some kind of forced relevance"* (WJEC official) to claims that 'embedded' approaches to integration facilitate *"learning that is a bit more purposeful"* (WBQ co-ordinator – urban school II) and *"the development of meaningful skills, and skills that are going to help them [students] in some other way"* (WBQ co-ordinator – college I).

All these three linkages (i.e. relevance, purposeful and meaningful learning) were emphasised to differing degrees by all interviewees and I bring these up throughout chapters 7 and 8. The issue of 'meaningful' and 'purposeful' skills is right at the heart of their transferability and their development, which is devoid of a particular occupational purpose. It goes to the heart of Bernstein's argument about the deep structure of generics being in the concept of trainability, their social emptiness and the inability of the student to "project him/herself meaningfully rather than relevantly, into the future, and recover a coherent past" (Bernstein, 2000, p. 59). Although I do not examine teacher and student identity, in sub-section 9.3.2 of chapter 9, I discuss my empirical insights in relation to this issue. In that chapter, I highlight a different aspect of the certification of Essential Skills other than the search for credibility (Hodgson and Spours, 2002), that is, certification as the materiality of generic knowledge consumption, as the signifier "whereby temporary stabilities, orientations and evaluations are constructed" (Bernstein, 2000, p. 59).

In returning to the issue of contextual relevance and task selection, WJEC writes that in appraising task suitability, each task must "be relevant to the candidate thus reinforcing the relationship between these skills and the context in which they are working" (2013c, p. 15). Contextual relevance is a characteristic of horizontal discourses making such knowledge(s) tied to specific, immediate goals and dependable on features of particular contextual segments in which knowledge is acquired (Bernstein, 2000, pp. 157–159). Interviewees made explicit that the highly contextual nature of Essential Skills, in other words their curricular aim to be "ends in themselves for setting up and working out problems" in addition to being "transferable skills called upon in more general contexts" (WJEC, 2013b, p. 5), means that the purpose of Communication and Application of Number tasks is likely to be part of a wider 'pedagogic' purpose rather than preparation for everyday life. This becomes apparent in the following sub-section.

7.3.3 Levels: Purpose

With students completing writing, reading and numerical tasks that are 'embedded' in or 'combined' with a wider activity of an Optional or Core component of the Welsh Baccalaureate curriculum, the second level of integration is linked to the converging purpose(s) of these activities (tasks). In other words, it refers to the extent to which the purpose of the Optional or the Core programme activity can 'accommodate' the purpose of the Essential Skill task as implied in the learning outcomes and assessment criteria. It is purpose that gives integration its coherence and it is not a coincidence therefore to see OCR asking students to give, after their name, the purpose of their reading strategy (i.e. the purpose of synthesising the two reading documents) in their reading assessment record of their portfolios.

A good example of the *Purpose level of integration* is the case of the reading part of Communication. On the selection of reading materials, the *Key Skills Qualifications and Standards* document advocates a strong framing:

> "In making a judgement of whether a document is suitable, consideration should be given to fitness for purpose. The scope of the content, the amount of factual information or number of different thoughts and ideas included (and the way in which these are expressed and developed) would influence this decision. The tutor or supervisor responsible for the original task would be best placed to make such a judgement." (QCA, 2004, p. 27)

Fitness for purpose here refers to the type of document (style and textual features) and whether it is suitable for the Level 3 reading task, which is to synthesise information about a single specialised topic from two 'complex' documents of different types.

The greatest purpose convergence I noticed is when the reading task of Communication is part of a wider activity such as preparing for the Individual Investigation of the Core or an Optional assignment/exam. This is a point raised by all 12 interviewees, and on this, WJEC's principal moderator writes: "At level 3 synthesis is often effective when it is rooted in AS/A2 equivalent programmes. Responding to a question in philosophy or history, for example, often demonstrates highly effective synthesis skills as long as the reading documents meet the word length, type and image requirements" (WJEC, 2014a, p. 2). An indicative quote, taken from the interviewee's transcripts, is also given by the WBQ co-ordinator of a college:

> *"Any Humanities-based subject, and I don't mean this funny, but something like philosophy, brilliant for Communication [reading part], probably not that good for Numeracy."* (WBQ co-ordinator – college I)

This is yet another indication that Essential Skills, with the limited curriculum time allocated to them and the lack of specialist teachers, cannot make up for the early specialisation or offer a common learning Core to all students. Based on the portfolios of work I collected, I noted that students' annotations on the reading texts were very brief and were mainly about summarising the key points in each paragraph. There were no annotations relating to the writing style of the document or to the organisational features of the text and its

structure, and no annotations on how the meanings of unknown words were inferred. Equally, there were no annotations on evaluating the writer's intentions and identifying their point of view, on identifying bias or on distinguishing factual information from persuasive writing. All 12 interviewees pointed out that very often, the purpose of the reading and writing tasks is to complete the portfolio of evidence. On this, the WJEC official and the WBQ co-ordinator of a school make two characteristic comments*:*

> *"Nearly all the problems with the development of these skills [reading and writing] was to do with the assessment regime, the way that they were creating these folios … Well, that wasn't the same thing as actually learning the skill, so they were learning how to put folios together, and how to put one page after another, but they weren't really learning the skills."* (WJEC official)

> *"[…] with the teacher just going down the route of trying to get the kids to complete the folios in an acceptable way and not actually worrying about reading skills."* (WBQ co-ordinator – urban school II)

It is in the following chapter, chapter 8, that we see *the power of certification* in the integration of generic modes of pedagogised knowledge in the Welsh Baccalaureate curriculum and by extension its ability to define 'what matters' in Communication and Application of Number practices. I discuss the case of Application of Number at this level of integration (i.e. purpose) in sub-section 8.2.2 as one interesting example of *the power of certification* in defining contextual relevance of knowledge. This is what the moderator of an awarding body called the "so what?" element of a calculation referring beyond the focus of Application of Number towards 'life' and practical contexts, to specifying the utility of different elements of its specialised (re-contextualised disciplinary) discursive basis as set by the awarding body itself. Equally, in that chapter, I also discuss large parts of the *Purpose level of integration* for the writing, listening and speaking parts of Communication. This is because they are typical examples of how *the power of certification* shapes practices, the purpose of tasks and what counts as valid knowledge to be transmitted and as a valid display of students' performances.

7.4 Linking Chapters 7 and 8

This chapter has provided a number of empirical insights in relation to my wider research aim and research objectives. In considering the extent to which the Welsh Baccalaureate can provide a common learning Core to all students irrespective of their Optional studies and site of learning, we begin to see some of the limitations of using the integration of Essential Skills to achieve this. First of all, there is the voluntarism associated with the Level of study which translates into Application of Number at Level 3 being accessible to a small proportion of students. Second, we see the distinction between certain 'classes' of students following solely Mathematics and Science-based or Humanities/Arts-based Optional programmes of study and the differentiated performances of these 'classes' of students. I complement this view in chapter 8 where we can more clearly see the role of the Optional components of the curriculum as the main 'sites' of specialised (re-contextualised disciplinary) knowledge acquisition. In exploring Bernstein's generics, we see a particular aspect of their complexity (i.e. the *universalism* underpinning generic skills and students' internal commonalities and procedures to acquire them) conflicting with the reality of Communication and Application of Number being pedagogised knowledge modes that are subject to official assessment, using external common standards that evaluate students based on their differences. Although it is in chapter 8 that I fully expand on the evaluation features of Essential Skills, in this chapter we have seen one aspect of their pedagogic practices: teachers' and WBQ co-ordinators' efforts to arrange the pedagogic context in ways that create opportunities for students to develop realisations of their internal shared trainability. This aspect appears as the *Material - Topic - Problem level of integration* that I continue to discuss in the next chapter for the speaking and listening part of Communication as a distinct instance of integration.

Chapter 8. The Power of Certification

Contents

8. The Power of Certification

8.1 Chapter Overview

"Sneezing and coughing, for instance, are not activities unless they are done with some sort of skill or effort, or according to certain conventions. Normally we either sneeze or we don't; we don't do the job with more or less skill or concentration. Activities, in other words, involve rules and standards and they usually have some kind of point."

Peters (2015, p. 151)

I found the above passage from Peters (2015) both amusing and indicative of *the power of certification*, a theme that emerged from the analysis of the data and which provides the focus of my discussion in this chapter. Through this discussion, we see *the power of certification* as a 'carver' of curriculum categories in the integration of Essential Skills and in defining 'what matters' in pedagogic practices for Communication and Application of Number. In this final empirical chapter, we see the two distinct 'practice spaces' in which teachers/tutors can take the role of the *instructor* or the role of the *formal* assessor of Essential Skills, the latter guided mainly, but not exclusively, by purposes of certification. Consequently, we see an alternation of what counts as valid knowledge to be transmitted and acquired and as a valid display of students' performances. We also see the splitting of evaluation criteria into *pedagogic criteria for practice* and *assessment criteria.* The former includes knowledge elements drawing from the specialised (re-contextualised disciplinary) discursive basis of Communication and Application of Number that is shared with certain curriculum subjects or themes of the Core (e.g. Media Studies, English, Mathematics, and Wales, Europe and the World). Through the discussion of my findings, we can see that by privileging *instructional forms* of generic pedagogic practices, the Welsh Baccalaureate can move closer to fulfilling its promise to provide a common learning Core to all students irrespective of their Optional studies and site of learning. Privileging *instructional forms* of practice, however, may not be adequate in the case of Level 3 Application of Number as the particular Skill requires specialised staff and a main 'site' of specialised (re-contextualised disciplinary) knowledge

transmission and acquisition, that is, a Mathematics or Science-based Optional programme of study.

8.2 Developing Versus Assessing the Skill

Developing versus assessing the Skill was one of the two sub-themes of the wider *power of certification* theme generated from the analysis of the data (the second sub-theme was *contextual relevance*). Analytically, the *developing versus assessing the Skill* sub-theme rests upon the distinction (classification) between the 'practice spaces' of school teachers and college tutors as either *instructors* or as *formal* assessors of Essential Skills, the latter guided mainly, but not exclusively, by purposes of certification.

I use the term *formal* assessors to express the value placed on assessment and certification and the rigidity of the *"assessment regime"* (WBQ co-ordinator – urban school II). This rigidity is linked to certification processes; the *"very, very strict [assessment] criteria"* (AoN co-ordinator – college I); time and teaching staff limitations, and the "*burdensome, trivial and time-consuming"* portfolio (ESW co-ordinator – college). The current assessment regime places restrictions on pedagogic practices and organisational arrangements with one aspect of this rigidity being expressed as the employment of quality assurers. The schools and colleges in the study have varying organisational arrangements for quality assurers who can also be remotely connected to pedagogic arrangements. The Literacy co-ordinator of a school explains:

> *"As part of my job description, I was asked to take responsibility for the quality control of the Communications unit. So I'm not part of the development of the unit in any way and I don't actually teach in my current role either. So that means I have no real awareness of how that works in the classroom; I'm purely at the other end of it when we do the quality control and the – no, I'm not even part of compiling the finished result. I see the finished product before they go off to the [name of awarding body]."* (Literacy co-ordinator – faith school)

In other sites, WBQ/ESW co-ordinators can take at different times the role of an *instructor* and of a quality assurer, as the following quote shows:

"*The idea is that the actual assessment [portfolio building – transferring written material from Options] is through the vocational tutors, and I just cross-reference and support [as an instructor – extra tutorials] as and when. This means, now, that I've got to go back through all those assignments [written part of Communication in the assessment portfolio] – I've got to go through them now and re-mark them and give them back and say, 'Not appropriate, sorry.'"* (ESW co-ordinator – college II)

In my analysis, I exclude the role of quality assurer and focus on how teachers and tutors can have a predominantly *instructing* or *formal* assessing role at any one time. Based on the theoretical framework I developed in chapter 4, my analysis in this chapter is based on two aspects: forms of legitimate communications [i.e. everyday (work/life) knowledge or specialised (re-contextualised disciplinary) knowledge] and the demarcation of teachers'/tutors' 'practice spaces' as *instructors* or *formal* assessors, each with its own distinguishing features. The alternating privileging of either one of them (i.e. the pedagogic 'context' of the Essential Skill in which students are developing the Skill and the one in which they are being assessed) means that at different times there are different criteria for what counts as valid knowledge to be transmitted and acquired and as a valid display of a student's performance, hence the distinction between *pedagogic criteria for practice* and *assessment criteria*.

During data analysis, different organisational arrangements emerged from descriptive data-driven codes. Common linkages to the privileging of the *assessing form* of practice, across all education sites of the study, include time limitations; the limited curriculum space allocated for Essential Skills; staffing issues, and teacher specialisation. These are linkages that all 12 interviewees made to different degrees and I found the following quote by the ESW co-ordinator of a college particularly expressive:

"one hour over 33 weeks – so 33 hours over an academic year to reinforce speaking, listening, reading, and written communication. You can't change a

> *lifetime of education in 33 hours and you can't revise what's done in the actual main programme [Options]."* (ESW co-ordinator – college II)

When I asked *"In which way do you reinforce reading skills?"* the reply was *"just through a general assessment".* Interestingly, and as I pointed out in sub-section 7.3.3 of chapter 7, students' annotations on the reading documents of their portfolios were mainly about summarising the key points in each paragraph. There were no annotations on writing styles, textual patterns, inferring the meaning of words or identifying bias. I took this to be a reflection of the basic nature of Essential Skills, the absence of explicit instruction covering these topics and the limited curriculum time devoted to Skills. This was a point raised by all 11 interviewees practising in the education sites. All 11 interviewees also commented on the practice of 'reinforcing' Skills and this issue was brought up irrespective of the 'class' of student (i.e. higher or lower achiever). Very often, interviewees implied, or directly commented on, students *"already having those skills"* (WBQ co-ordinator – urban school II),

> *"having all that knowledge, but when they come for Comms it's like all that knowledge is not there or they're not willing to use it or, I don't know"* (ESW co-ordinator – college II).

I gave a similar quote in section 7.2 to highlight how Communication is being 'embedded' in other activities and as such it exemplifies a case of pedagogy with invisible sequencing rules, although visibility is achieved through evaluative criteria, as we will see in this chapter.

The implicitness of the sequencing rules is an important point to consider if Essential Skills are to be used as 'remediation'. Without explicit sequencing rules, students cannot be aware of the development of their Skills and what is expected of them at each stage of the two-year programme. It is not a feasible option to weaken the frame of pacing (i.e. allowing more time for Skill development at the education site) and the ESW co-ordinator's assertion that *"you can't change a lifetime of education in 33 hours"* was communicated by all of the interviewees who practised in the two colleges and the two urban schools in the study, the latter schools having in general a lower-achieving student population.

Despite interviewees' claims that one purpose of integrating Communication and Application of Number in the Welsh Baccalaureate curriculum is to remediate for previous education 'failings', it is questionable whether these 'repair sessions' can materialise through assessment-led practices. In the following two sub-sections, I discuss the tension between *developing* and *assessing* the Skill and demonstrate how *assessing forms* of practice can hinder the effort to provide a common learning Core to all students as it is Optional programmes of study that act as the main 'site' of specialised (re-contextualised disciplinary) knowledge transmission and acquisition.

8.2.1 Communication

Speaking and Listening – Discussion

The 'content' of the discussion (topic) in all of the study's schools and colleges is linked to the themes of the taught components of the Core (i.e. Wales, Europe and the World and/or Personal and Social Education). This is largely because topics need to be familiar, controversial and complex enough to create the contextual conditions (opportunities) for students to take part in a purposeful group discussion on a complex subject and to work towards agreement, helping them to demonstrate the necessary evidence they need for assessment purposes.

Winch (2010a, p. 154) writes on knowing how to communicate:

> "the act of communicating, which may well consist of skilled performances of articulation or writing, may not be sufficiently thoughtful or coherent to constitute an act of communication. […] An illiterate may be very effective at oral communication, but he cannot communicate if he does not have something meaningful to say, in a manner which is capable of being recognised as such by an audience in an appropriate context."

The selection of discussion topics, therefore, is a particularly important aspect of integrating the speaking and listening part of Communication in the Welsh Baccalaureate curriculum.

Overall, and across all six education sites, students have greater control (relatively weak framing) over the selection of presentation topics with different students selecting distinctly different presentation topics (strong internal classification) in terms of their 'complexity'. For the discussion topics, the picture is different and the control of its selection lies usually with the WBQ co-ordinator. Given that students are often in different classes for their Optional programmes, particularly students completing A levels, the only common vehicle to carry out a discussion on a controversial and complex topic and work toward a general consensus is the Core. This observation was made by all 11 interviewees practising in the education sites of the study. Two WBQ co-ordinators explain:

> *"Whereas A level, they are in different classes with different groups of people, so we've got to be slightly careful with listening and speaking but certainly it helps to kind of focus on the Core […]"* (WBQ co-ordinator – college II)

> *"By nature though, they [A level students] are not in the same group all the time. They don't always know, they might know one or two [topics] in the class […] The rest of the time, they look at the different sort of arguments. I don't know how exactly it's fitting in yet. My hope is there'll be something that's part of subjects, part of [Optional] lessons as well that subject teachers will have input into this [speaking and listening part – knowledge on the debate topic]."* (WBQ co-ordinator – college I)

Certain familiar topics covered in the Core and as part of the PSE and WEW Framework (e.g. abortion, capital punishment, making Welsh a compulsory A level subject) are very controversial and can stimulate heated class debates. In most cases, WBQ co-ordinators will set specific topics to be used for assessment purposes or give tutors a list of topics from which the class can choose:

> *"The other one [topic] that I've set up for staff to use is on Nelson Mandela, so this idea of whether Nelson Mandela should be seen as a terrorist. The traditional viewpoint would be, obviously, that he's this iconic hero type figure, but wanting the children to be able to debate and argue so that's the other discussion we've got set up."* (WBQ co-ordinator – urban school II).

> *"For discussions, we can give them [as topics] the capital punishment and abortion and instead of having that superficial discussion, this year we've seen them sit down and go 'Actually, this is what happens in this country, and I don't think it's fair.' And then have somebody else be able to come back and debate […] and we can draw the work [topics covered in the Core and the PSE Framework] out of them from there [speaking and listening part]."* (WBQ co-ordinator – college II)

In all six education sites of the study, instruction for speaking and listening is minimal. When I asked the WBQ co-ordinator of a college "in addition to what you have just mentioned, do you teach anything else as part of speaking and listening?", he replied:

> *"I know the type of tuition you are thinking of, the delivery of how to communicate, argue a point, good eye contact, body language, what have you. Usually you find by the time they come in for a Level three qualification, they have already got those."* (WBQ co-ordinator – college I)

When interviewees commented on students they consider 'weaker' in terms of their speaking and listening skills, they usually referred to issues of confidence or in cases of learners from specific geographic areas, issues of dialect and 'standardised' English. The following are two quotes exemplifying these points:

> *"[…] because I think it is all just confidence. Honestly, I think it is not skill at all; it is confidence. We have amazing, on paper, preparations, amazing. Really well researched, they have done everything, and they stand up and they are like that, 'And them.. man...' It is confidence."* (WBQ co-ordinator – suburban school)

> *"It's a common dialect – not dialect, but a local sort of issue that we quite often misuse subject-verb and verb-tense agreement when we're speaking. […] That's how they speak, and it's hard to try and change their mindset that, that is incorrect […] and it's difficult because tutors might have gone through secondary education in the Valleys. […] They go back home and their language is – not foul, they don't swear, but they go back into Valleys speak."* (ESW co-ordinator – college II)

In their role as *instructors*, teachers and tutors place emphasis on the complexity of the topic and value specialised knowledge as they expect students to re-visit evidence and concepts they have already studied through the interdisciplinary themes of the Core. When there is instruction on speaking and listening, teachers/tutors themselves will draw upon theoretical concepts and evidence from the interdisciplinary themes of the Core:

> *"So I might teach how to do a discussion for 45 minutes, and then they will have an hour and a half to prepare a discussion. [...] If I was looking at the death penalty, I'd have talked about discussions. I would have shown them things like rules of three [rhetorical technique], how you should always have your own opinion, expert opinion, theoretical opinion, emotion, and I would use the death penalty for me to illustrate that."* (WBQ co-ordinator – college I)

In general, using a familiar topic for the discussion gives students the opportunity to *"study and share their experience in class"* (WBQ co-ordinator – urban school II) as they reach or work towards reaching agreement and a

> *"[...] common recognition of issues, an awareness that whilst they're familiar with their own behaviour and their own families, that there are other issues at play that they will come across and need to take into consideration."* (WBQ co-ordinator – college I)

In preparing to take part in the two discussions, students are asked to draw on their experience of living in Wales and specific communities and to then research, study and make notes to share their experience in class. This *"studying and sharing their experience"* (WBQ co-ordinator – urban school I) and the ability to reach a 'common understanding' is very often based on evidence or concepts of the interdisciplinary themes of the Core that draw from subjects such as Psychology, Sociology, Geography, Political Science, History and Economics. The WBQ co-ordinator of a school explains:

> *"Some of the boys come up with.. they want to discuss social networking and is it really responsible for deaths? So I said to them, look you discussed video games and computer games and if they are responsible for violence because you did violence in PSE [Personal and Social Education]. What do you know about social*

> *networking? Nothing. Because there have been some [deaths] in the Bridgend area, but is it enough to make it sort of a worthy thing?"* (WBQ co-ordinator – suburban school)

In one of the schools with high-attaining student population, the WBQ co-ordinator explained to me how they expected A level students to discuss a topic on the same day they had covered it in the Core programme. This approach did not prove effective as students needed to study the topic and further prepare for sharing their opinions and experiences in class. As she commented: *"So now that's working much better […] whereas in the past we've just said 'Here's some resources. Discuss'"* (WBQ co-ordinator – suburban school).

I was offered similar accounts by the WBQ co-ordinators of a college and one of the inner-city schools, where 80 per cent of the latter's student population speaks English as an additional language. Sometimes when students are developing discussion skills, they will rely on concepts they have covered as part of lower-secondary education (rather than the themes of the Core at the upper-secondary level). Teachers/tutors acting as *instructors* deem this acceptable as it allows students to communicate their experiences through a specialised lens and to make connections with other areas of the curriculum.

> *"If it's a meaty enough topic that they [students] like [then] they can discuss it. Abortion then, obviously coming up from… Because they've just gone into Year 12, they study abortion in RE for GCSEs, so it's a topic they can discuss […] linking it to teenage pregnancies in Wales and the UK eventually in Year 13 […] their Individual Investigations […] actually hitting a few more aspects of Communication and bringing them together with the PSE [Personal and Social Education] Framework because that's something they've not been very good at, realising the connections [between the interdisciplinary themes and subjects]."* (WBQ co-ordinator – urban school I)

When *formally* assessed, however, what counts as a valid display of a student's performance seems to be different. The AoN co-ordinator of a college comments on how students are not evaluated on the 'content' of their contribution, but rather on aspects of their performance relating mostly to the manner in which they present, including confidence.

> *"Again, speaking and listening, some people are naturally good at speaking, other people not so much. And again, we would judge that. It's not to say that whoever's maybe not good or confident doesn't have things to say. A lot of the times [the student] may have more kind of concise and succinct things to say but we have to be careful that we don't judge their contribution to the Core debate if you like; they are not assessed on that."* (AoN co-ordinator – college II)

As *assessors* of the speaking and listening part, all 11 interviewees practising in the education sites of the study value *'performance indicators'* linked to the manner in which students contribute to the discussion. These include non-verbal communication, appropriate turn-taking (not interrupting), engaging the audience's attention (tone of voice, formalness of appearance) and question probing.

For example, when asked "what would you look for when assessing a discussion?" the WBQ co-ordinator of a school replied: *"their tone of voice, becoming more competent and more confident at arguing their point, listening to the views of others."* (WBQ co-ordinator – suburban school). In response to the same question, the ESW co-ordinator of a college said: *"opening and closing discussions, questioning and encouraging others to participate, communicating feelings appropriately no shouting or interrupting is allowed."* (WBQ co-ordinator – college I)

The length (time) of the students' contribution or pacing of their talk and audibility voice loudness are additional *'performance indicators'* that would not have been used to judge whether a student is competent in the context of developing Communication skills. On this, two WBQ co-ordinators comment:

> *"'You've spoken enough now. It's fine. Oh my goodness, you really do know this topic' [...] 'Okay, you can talk a bit slower or clearer a bit', that sort of feedback."* (WBQ co-ordinator – college II)

> *"In the formal lessons, that meant that actually the information you were presenting was of substance, not are you able to speak standing up or sitting down [...] A main challenge when it comes to Communication is getting the pupils*

to realise that what they deem as sufficient for their standard is not necessarily class standard." (WBQ co-ordinator – suburban school)

In this light, it seems that the Welsh Baccalaureate can provide students with a common learning Core when the topic of the discussion is drawn from the interdisciplinary discursive basis of the Core. This is the privileged knowledge that teachers/tutors value in their role as *instructors* and can open up the possibility for students to examine "the power relations of their lived conditions" (Bernstein, 2000, p. 59) as we saw in the examples of discussing teenage pregnancy, violence and social networking/bullying.

In the new Welsh Baccalaureate, the interdisciplinary Core has been replaced by the Challenges, an entirely skill-based component. This means that Optional programmes of study will most likely now become the only transmission and acquisition 'site' of specialised (re-contextualised disciplinary and interdisciplinary) knowledge. The role of the Options as the main 'site' of transmitting and acquiring such knowledge is more visible in the writing and reading parts of communication. This is the subject of my discussion in the next two sub-sections.

Writing and Reading

Until the introduction of the Welsh Baccalaureate, the idea that students can use a piece of writing for two programmes of study was not only extraordinary but unacceptable in a pedagogic context. As the internal evaluators write in their Key Skill report, the implementation of an 'embedded' approach (see sub-section 7.3.1 of chapter 7) and the necessary 'signposting' was hindered by "the requirement for teachers to recognise a cultural change in accepting that double accreditation for a single activity was not only necessary but also allowable" (Hayden and Thompson, 2006a, p. 3). With the curricular aim of Communication to be generic and transferable and "to encourage candidates to develop and demonstrate their speaking, listening, reading and writing skills for different purposes" (QCA, 2004, p. 28), the WBQ co-ordinators of two schools in the study

found the sharing of written materials advantageous for Communication. The following quote indicates this:

> *"I give them the opportunity of either using work that they've completed, for another subject and, generally that lends itself well […] It has to be written for two different audiences, so that could then be their subject teacher and then me, as their Welsh Bacc tutor, so you'd have your two."* (WBQ co-ordinator – urban school II)

With the writing task 'embedded' and dependent upon the 'progression' of the main writing activity for the Core or Optional programme, the above quote also highlights the issue of students and teachers/tutors having very little control over the rate of knowledge acquisition (pacing). With sequencing rules relatively invisible, attention turns to evaluation and the visibility of these criteria.

In their role as *instructors*, more than half of the interviewees privilege relatively context-independent knowledge relating to comparing textual features, writing genre and styles of writing, and this is the case for both the writing and the reading part of Communication. Sometimes, transmitting this knowledge is considered to be the responsibility of the Optional programme teacher.

> *"Well, if I'm asking them to collect two written pieces of work, their work, or two reading documents for the 2.2, the 1.2, or 3.2 element [learning outcomes references], why aren't they understanding? Because they're going onto the website, onto Google, and just selecting the first two [reading documents] that pop up or because the main programme tutor [Options] is not trying to explain to them what they are writing. Is it a report, an essay, a newspaper article?"* (WBQ co-ordinator – college II)

In the two urban schools and colleges, particularly in cases of instructing academically weaker students, the explication of *pedagogic criteria for practice* often takes place through an initial weakening of the frame that allows students

to select their writing (and reading) materials. The WBQ co-ordinator of an urban school explains:

> *"The pupils won't gain anything out of it [if they are provided with materials/ideas of what to submit]; they've got to take responsibility for looking for them […] and working with them [materials] first. […] Sometimes you'll end up with two that are too similar and you say, 'No, go back, have a look again' […] what an opinionated essay is or you show them one that is too factual [descriptive] […] something like that."* (WBQ co-ordinator – urban school II)

This initial weakening of the frame is often followed by explicit instruction (e.g. on grammatical and spelling conventions or on different writing styles and organisational features of a text), especially for students who have English as their second language or are particularly weak:

> "*So we'll bring them in [before and after completing work at home] and we'll work with them and they get the support, obviously, of the English department."* (WBQ co-ordinator – urban school II)

> "*What these [weaker] students don't understand is the different writing styles and how to put together a leaflet, a covering letter or an essay. We often ask them to bring in different reading materials and work backwards if you like […] Yes, some of them will get extra tutorials."* (WBQ co-ordinator – urban school I)

However, and this is something all 12 interviewees commented on, it is the Optional programme of study that is considered the main 'site' for transmitting and acquiring the type of knowledge privileged in the *instructional form* of practice. In the case of Communication, certain Humanities-based Options seem to *"lend themselves better"* (WBQ co-ordinator – college I) to the integration, not only for offering students a greater range of written materials to choose from and a convergent task purpose (see sub-sections 7.3.2 and 7.3.3 of chapter 7) but also for sharing elements of a common specialised (re-contextualised disciplinary) discursive basis. The ESW co-ordinator of a college offers a revealing comment on the different criteria for evaluating students in

instructional and *assessing* forms of practice and on the role of Options as the main transmission and acquisition 'site' of specialised (re-contextualised disciplinary) knowledge:

> *"For assessment purposes, there's obviously a lot of emphasis on the grammar and stuff but we can strip it [Communication] back a lot and it's far more about the understanding of what a text is, how it's broken down, target audiences. And that maps itself very, very nicely to Media or Literature for example. This obviously gives students on certain [Optional] programmes an advantage."* (WBQ co-ordinator college I)

Five WBQ co-ordinators specifically pointed out that students who follow Science-based programmes sometimes have difficulties working, or are unwilling to work, with and understand different texts at *"a certain level of depth"* (WBQ co-ordinator – college II) and this applies even to *"the good ones where very often the kids… most of them they clearly have got Communication down to a tee"* (WBQ co-ordinator – suburban school). The WBQ co-ordinator of one of the suburban schools makes an intriguing comment on this when she refers to high-achieving students following Science-based A levels:

> "*So it's trying to make them think, okay, how can we present information that is fit for purpose? That's another challenge these kids ['scientists'] face. They don't understand the concept of the audience. They're like as far as they're concerned it's like 'I know the topic, I've got a handwritten draft so that's fine. What's the problem with that? What do you mean, it's too factual? Persuasive?' […] These [styles of writing – audience – fit for purpose] are alien concepts to them."* (WBQ co-ordinator – suburban school)

Similarly, the WBQ co-ordinator of a college points out the advantage a BTEC Creative Media student had over other students:

> *Interviewer:* *"It's interesting that you mentioned depth, because other co-ordinators mentioned that as the*

main difference [in Communication]. So what do you mean by depth?"

WBQ co-ordinator – college I: *"Because it was a better learner, and his planning. It's their clarity, the way they lay out their [written] work. A very bright kid can have messy handwriting, so you can't always look at the layout and things like that, but one who would understand the reasons for developing their work [in a certain way] and could probably justify them to someone else."*

Through setting strict criteria on what can be submitted for assessment, awarding bodies stipulate what counts as valid knowledge to be transmitted and acquired and as a valid display of students' performances. Through these criteria on the type of document that can be submitted, awarding bodies also set the degree of 'specialism' for Essential Skills. For example, transferring written materials[40] from an everyday context such as a UCAS personal statement, a CV or a covering letter can hinder students' chances of meeting the Level 3 assessment requirements as these pieces of writing are considered to be less complex and by extension less specialised. The Literacy co-ordinator of a school makes a typical comment on this:

> "*Previously, we've used the personal statements, but now OCR [examining/awarding body] has decided that we can't use the personal statements anymore. So last year they [students] provided a piece of work that they'd completed, for another one of their [Optional] subjects […] I think writing is now strengthened and I think the opportunities for extended writing, fully engaging in extended writing, are now formalised in the assessment process."* (Literacy co-ordinator – faith school)

OCR do not permit students to use UCAS statements or printouts of PowerPoint presentation slides as it is unlikely that these will be written in paragraphs or

[40] These materials are part of the Core – Work-Based Education component.

full sentences and thus "will not meet the accuracy requirements of the writing component" (OCR, 2013a, p. 3). Commenting on a student's portfolio of work for the Level 3 Communication, an OCR moderator writes:

> "this personal statement, while being a different type of document from the other, is not a document in its own right. It is part of the much longer and very prescriptive form used for UCAS applications. The candidate has had little opportunity to 'select… formats and styles of writing'" (OCR, undated, p. 2).

The WJEC also advise against students using their UCAS personal statements, but if these are to be used, the student should take into account the intended audience and the formality required, should achieve a writing tone that displays an attitude that is neither too boastful or too modest, and should use a persuasive style of writing rather than a descriptive one based on their schooling/employment history (WJEC, 2011, p. 21).

From this perspective, it is interesting to see that in their role as *assessors*, most teachers/tutors tend to privilege assessment criteria that relate to grammar, spelling and punctuation. In my data, this has partly been linked to the limited time allocated in the curriculum for Essential Skills. Privileging grammar, punctuation and spelling is also linked to an assessment culture that values 'context-free' judgements based on more 'objective' criteria that are consistent through each school/college. This is a point made by more than half of the interviewees and it is exemplified by the following two quotes:

> *"We've got a common Literacy mark scheme that has been disseminated through the college, every faculty has that. We're trying to get a consistent approach to assessing for Literacy, whether you're an ESW tutor or a vocational tutor, so learners have the same feedback mechanisms."* (ESW co-ordinator – college II)

> "*Following on from last week's meeting, there was a general consensus of can we have the school rule for what paragraphing is? How do they take place? How do they take place on the computers? How do they take place here in a written piece*

of work? Should you indent? Don't you indent? These are the skills we're expecting students to demonstrate." (WBQ co-ordinator – suburban school)

Privileging *"first of all, grammar, spelling and punctuation"* (WBQ co-ordinator – urban school I) is crucially what makes Communication distinct as a curriculum component once embedded in an activity of a Core or Optional programme. Similar to the case of assessing a student's performance during the discussion in the speaking and listening part, the 'content' of the written communication becomes a second priority in Communication. All 12 interviewees acknowledged that assessing 'content' knowledge is the concern of Optional teachers/tutors but not of those teaching Communication.

"When we get it [the written material] then what we find is that they may have had a distinction, for instance. So they've written maybe a 3,000-word essay. However, it's all in one paragraph. There's no capital letters and that's the real issue then." (ESW co-ordinator – college I)

"I think it [writing part] prepares them more readily for university, for extended pieces of writing. I wouldn't necessarily say that in terms of like a subject that there would be a specific level of content that they would sort of – again as a result of doing it, or I guess that's the way it's delivered in our centre, I don't know." (Literacy co-ordinator – faith school)

Consequently, and although one would expect an A level English student to have an advantage over other students in completing the writing part, this is not always the case. One of the aspects of the rigidity of the *"assessment regime"* is the need for written documents to be *"100 per cent accurate"*, meaning that students are expected to submit a written piece free from grammatical, spelling and punctuation mistakes and 'perfectly' structured in terms of paragraphing. The WBQ co-ordinator of a school with high-achieving students commented on this:

"Even if they're handing in a piece of English coursework, which they imagine is perfect, it's not going to be." (WBQ co-ordinator – suburban school)

Similarly, the WJEC official remarked:

> *"With Communication, it's one of the six [Skills] that can actually be integrated, although often schools will ask the English or Humanities areas to do that. It became more difficult when the standards were revised, and became very pernickety, and for example you're not allowed to make any spelling errors; it is ridiculous, really."* (WJEC official)

Moving beyond the *"basics of grammar, spelling, punctuation"* (WBQ co-ordinator – urban school II), a student of a Humanities-based A level or a student of 'regionalised' programmes of study such as BTEC Creative Media/ Journalism/Public Relations would be able, and is indeed expected in some cases, to work with organisational patterns of a text and the concept of the audience to enhance his/her writing and reading comprehension. In that sense, any differentiation in the sequencing (pacing) of what a student should learn first and second (i.e. context-tied operations or context-independent principles) and the rate of expected acquisition (i.e. the programme stage by which acquisition should take place) is based on features of the Optional programme. The distribution of such time-related knowledge and the sequencing and criterial rules seem to remain invisible to students, at least in comparative terms when distinguishing between different 'classes' of students (i.e. students on Science or Mathematics-based and Humanities/Arts-based Optional programmes).

Five of the interviewees commented on how they can tell, by looking at the work included in a student's portfolio, whether students belong to one or the other 'class'. Two interesting quotes come from the co-ordinators at one of the urban and the suburban schools. The first interviewee explains how they use Communication to complement the curriculum for students on Science or Mathematics-based Optional subjects and the second interviewee comments on the reading task and the different performance of two students who eventually went on to follow A levels in Physics and Biology and A levels in History and English respectively.

> *"We use Level three in a number of ways in the school […] or we use it through those students who've developed by the time they get to Year 12 and Year 13 with their English, to support those going into university. A lot of ours are very mathematically minded, very scientifically minded. We would have more issues, I would have said, with the Comms side of it […] It might be best if we have a look at the example when – this was one that was sent off to a moderator so I can find you some of the examples in this.* [She shows me different portfolios of work to make the point of how 'mathematically minded' students submit work of different quality and how they improve.] *The ones I've seen have differed in terms of what tasks have been completed and the evidence base."* (WBQ co-ordinator – urban school I)

> "*I think of the two examples that were in the sample, for Level two last year, they were both very different. With the reading, they have to make notes, they have to show that they understood if you like. One was very detailed [the notes – synthesis of the information]. It's the depth and development that's within that, and the understanding that's coming across as well, rather than just going through the motions, of ticking off skills."* (Literacy co-ordinator – faith school)

This *"ticking off skills"* is inevitable for both the reading and the writing part of Communication partly because of the limited curriculum time devoted to Essential Skills, the low value attributed to them and the prioritising of Optional programmes of study. Consequently, and as the principal moderator of OCR noted, not all students will acquire knowledge on different functions of writing and different writing genres:

> "Other weaknesses included the inclusion for the writing components of two documents which were not of different types, or did not include different information or were not aimed at different audiences. Centres are advised that giving a document a different name (for example, "case study", "report" or "investigation") when they are actually the same type of document … does not satisfy the standards." (OCR, 2012a, p. 3)

Interestingly, interviewees often acknowledged that certain aspects of their role as *formal* assessors are 'meaningless' and recognised that in order to fulfil the

universalist purposes of integrating Essential Skills, more time needs to be devoted to building elements of the specialised (re-contextualised disciplinary) discursive basis of Essential Skills. A quote that captures this message was given by the ESW co-ordinator of a college:

> *"Why should they [students] need to remember about these skills, with Literacy, about where a comma goes, or when to use a semicolon or a colon when Word will change it for you and when they do not seem to have the ability to take information from a handout or a book, and then arrange that information into a different way … It is not so much the fact that they don't understand types of documents and writing formats, but as we said earlier, it has got to be conceptualised."* (ESW co-ordinator – college II)

This quote also reflects the short-termism underpinning generics and the ability of students to be taught and adapt to continuous 'pedagogic reformations'. With computers proofreading and increasingly completing more communication and numerical tasks for us, more and more skills and areas of work are expected to undergo "continuous development, disappearance or replacement" (Bernstein, 2000, p. 59). In this sense, the specialised (re-contextualised disciplinary) discursive basis of Communication and Application of Number can be considered to be more 'stable' and valuable by teachers/tutors acting as *instructors*. Certification is also a more 'stable' signifier and I return to discuss short-termism, the concept of trainability and the socially empty generic practices, in relation to certification, in sub-section 9.3.2 of chapter 9.

In this chapter, I have so far discussed the *power of certification* as a 'carver' of curriculum categories in the integration of Essential Skills and in defining 'what matters' in Communication practices. I also exemplified the two 'practice spaces' in which teachers/tutors act as *instructors* or as *formal* assessors of Communication, privileging in the latter case criteria such as the manner in which students take part in a discussion and the use of grammatical, spelling and punctuation conventions.

During data analysis, I often annotated chunks of data that were not incorporated in the final coding scheme. I labelled these as "interesting data"

and took them into account for illuminating my findings in many respects. One such annotation, which eventually became an analytical code, is "Teacher Specialisation" and it is linked to the privileging of either an *instructional* or *assessing form* of pedagogic practice. Talking about underachieving students and their ability to read and write different types of documents, the ESW co-ordinator of a college made the following remark:

> *"I'm not an English graduate at the end of the day, and if I don't understand, I find out and I learn, to help support my learners, but that's because I'm aware of their situation and I want to help improve my learners' Literacy."* (ESW co-ordinator – college II)

This was a particularly interesting remark as in the analysis, Communication was deemed *"the Skill that anyone can teach"* (WBQ co-ordinator – college). Arguably, and as I discuss in the following sub-section, the role of teacher specialisation is more prominent in the practices of Level 3 Application of Number, a point raised by all 12 interviewees. The following comment made by the WBQ co-ordinator of a school exemplifies this:

> "*I think there's a difference between, for instance, being an English teacher and a Maths teacher. And it's the difference then between somebody having a go at being one of those. Now I mean that – now what I mean by this, sorry, is to teach you have to have a breadth of knowledge. And the reason you have to have a breadth of knowledge is to be able to cover things that may be a little bit out of leftfield, you certainly need this breadth for the Level 3 [Application of Number]."* (WBQ co-ordinator – faith school)

When teacher specialisation [i.e. when teachers have relevant background (subject) knowledge] is weak or absent, college vocational tutors[41] may need to evoke *the power of certification*, as we will see in the following sub-section in certain instances of integrating Application of Number at Level 3. This seems to be a case of maintaining a dominant position and making the hierarchical rules

[41] College tutors are mentioned here because in the study, only the colleges integrate 'Application of Number' using an 'embedded' approach.

of the practice and the power relationship visible through taking control of the evaluative criteria. After all, as Bernstein writes: "any pedagogic practice exists for one reason: to transmit criteria" (Bernstein, 2000, p. 28).

8.2.2 Application of Number

We can see *the power of certification* in the Application of Number case study through two examples: firstly, and similar to the case of Communication above, through the distinction between teachers'/tutors' 'practice spaces' and the alternating privileging of different evaluative criteria (i.e. *pedagogic criteria for practice* and *assessment criteria*), and secondly, in how contextual relevance of knowledge is determined by *assessment criteria.*

The case of Application of Number, however, differs from that of Communication in two aspects: 1) the explicitness of sequencing rules with *instruction* (almost always) preceding application and *assessment*, as I explain further on in this sub-section, and 2) the existence of what is considered to be an objective and 'visible' criterion for evaluating performances, that is, *"the correct answer"*, a criterion existing in both *instructional* and *assessing forms* of practice. Both of these differences between Communication and Application of Number were pointed out by all 12 interviewees. Different interviewees highlighted these features of the particular Essential Skill in a number of ways and to different degrees as they assigned importance to various aspects of pedagogic practice(s). The following three quotes exemplify this point:

> *"Number is easier to deal with. Number is easier, because if you've got a set of data that you were looking at – you know, you've given a set of data and you want those learners to calculate mean, median, mode, and range, the answer is the answer."* (AoN co-ordinator – college I)

> *"I mean, I've got them [students] at the moment writing a 3,000-word Individual Investigation, the new graded one, and we've been on it for about 10 weeks now at an hour a week and they're still only on the beginning part with the stats. It's like they've got to give a rationale for their methods and how they worked everything*

out and they want me to tell them what all the [correct] answers are." (WBQ co-ordinator – college II)

"So for their reading I'm getting them to be more selective and instead of me telling them what to write [what the answer is], I'm saying, 'You need to be a little bit more careful here and get documents that you can work with, so you can use them in order to answer the questions'." (WBQ co-ordinator – urban school II)

The difference between Communication and Application of Number also emerged from the answers interviewees gave to my question *"So what is it that makes these pupils skilful?"*. The following are some of the answers I got for each Skill:

Communication: "That they look at [the reading] articles, again, for what they are. They actually look into it rather than just stating what the articles are about. The way that sometimes they might be able to pick up points that aren't necessarily obvious and be able to link those in, and then use them to structure their answer." (WBQ co-ordinator – faith school)

Application of Number: "They're able to substantiate what they're saying [their decision on which area to buy a house based on statistical work] and justify a correct answer, provide a rationale. Having done the work, it becomes a formulated opinion […] We want a correct answer backed up and not just one that's pulled out of thin air." (AoN co-ordinator – college I)

In all six education sites of the study, justifying the methods used to obtain the correct answer and experimenting with different methods and calculations is an inseparable part of the *instructing form* of Application of Number practice. A typical quote comes from the WBQ co-ordinator of a college:

"*In our advanced classes, I will quite often put up an exercise on the board. If I then say to them, 'Use this' or 'Decide upon three or four different formulas and equations, or calculations for the purpose for your task', they should be able to say*

how each could be used to provide a result. Quite often I've got to get them to recognise that there is no purpose to it." (AoN co-ordinator – college I)

This point was made by all 11 interviewees practising in the education sites of the study, particularly when they referred to instructing students on Level 3 Application of Number or instructing weaker students at Level 2 as part of remediating classes. By remediation, interviewees not only referred to amending previous education 'failings' but also to refreshing what students learned as part of their GCSEs. This view of remediation was adopted by more than half of the interviewees and the following is an indicative quote:

"*They come along with these skills, and we do a revision or a refresher of what to do for the actual assessment process. We don't necessarily need to start from scratch. There may be some who are weaker than others, but generally not that weak that we need to begin all over again, so to speak."* (WBQ co-ordinator – college I)

Regardless of whether *instructing forms* of Application of Number practices aim to 'refresh' or 'amend' knowledge, they are always sequenced to precede the application and assessment of the Skill. This will become evident in the following sub-section in which I also demonstrate *the power of certification* by giving examples that relate closer to the ones taken from the case of Communication, that is, the alternating privileging of different criteria of what counts as the valid knowledge to be transmitted and acquired and as a valid display of a student's performance.

Developing Versus Assessing the Skill in Application of Number

All 12 interviewees gave accounts of how Application of Number is sequential and that instruction nearly always precedes assessment. These accounts were irrespective of the purpose of the integration (see sub-section 7.2.3 of chapter 7) and by extension, students' level of previous knowledge. This means that even when students just needed a *"refresher on what they've done at GCSE*

[Mathematics]" (WBQ co-ordinator – college II), some instruction on formulas and theory always precede *"the application of the skill"* because

> *"It's not like the application where we say 'Go and plan a holiday or go and work this out.' It's all [instruction and assessment] contained in one project. It's quite bitty in that you deal with different strands [calculations – formulas – and their application]. So to try to help them [students] we're condensing, like within a task we're hitting quite a few strands at the same time, but to answer your question, it's showing progression and knowledge that's important."* (WBQ co-ordinator – suburban school)

The following quote is indicative of the sequential arrangement of instruction and assessment in a remediating class:

> *"I have spent most of the academic year teaching them basic Maths. Now if they had come along with those skills in the first place, I would have saved two thirds of a year, and then moved on to something else, perhaps even a higher level. […] Then I spent the next third of the year showing them how to apply the Maths. Once they understood the working out, the calculation, they could provide the results."* (WBQ co-ordinator – college I)

In their role as *instructors*, teachers/tutors would expect students to include explanations and justification of the action they took to solve a particular numerical problem. In this way, students would make explicit elements of the specialised (re-contextualised disciplinary) discursive basis of Application of Number, a discursive basis shared with certain A level subjects or BTEC units such as Mathematics and Sciences. As *assessors*, and by privileging the procedural and operational elements of the subject of Mathematics, "producing evidence of what is often a mental process is not necessary on every occasion" (QCA, 2004, p. 55) and an accurate result is enough to see whether *"students can perform the calculations and use the formulas"* (WBQ co-ordinator – faith school). This is a point made by more than half of the interviewees and we could say that the difference between the two forms of practice (*instructing – assessing*) is that of 'application' and 'calculation'. This is how one WBQ co-ordinator explains it:

> *"They could work out the ratio of one adult to how many children, but they didn't understand the Maths. They understood what it meant, and the common-sense reality of it but it's Application, it's not calculation, it is Application. Can they really do it? Do they know what they are doing or they just learnt like a puppet the steps of doing it? […] That is what makes you good or not good."* (AoN co-ordinator – college I)

Similar to the case of Communication, a weakening of the frame in selecting (or creating) a numerical problem to solve and the data needed for this can be used to explicate *pedagogic criteria for practice*. In most cases, however, and as I already mentioned in sub-section 7.3.2 of chapter 7, numerical problems and data are often given to students together with *"an assignment brief which they tend to follow"* (WBQ co-ordinator – college II), meaning that students only need to carry out the calculations rather than *"actually work with the problem and see how to tackle it*" (WBQ co-ordinator – urban school I). This is an observation I made across all colleges and schools of the study, and particularly in the case of Level 2 Application of Number, as at Level 3, students are often invited to create the numerical problems. The WJEC official makes an insightful comment when describing how some colleges 'embed' Application of Number in vocational subjects:

> *"In some centres, particularly colleges, the idea was just a simple mapping and tracking exercise, where the kid would be told what calculation was needed and what evidence to collect and go around their various subjects and just collect it, almost like a treasure trail thing. Well, they weren't learning anything, really; they weren't reinforcing their skills either; they were just collecting stuff to put in a folio. So that's why it didn't work. They got better, but I still don't think it is that successful."* (WJEC official)

A common criticism found in moderators' and chief co-ordinators' reports is that at Level 2, there is often no evidence

> "to show that the candidate had played an active part in identifying and describing the problem or details of how the candidate intended to

obtain relevant data or a clear sequence of tasks showing how they intended to use this information" (OCR, 2013b, p. 2).

One of the differences between Level 2 and Level 3 Application of Number, therefore, is not only the increasing conceptual complexity but also the control that students have on selecting (identifying/creating) the problems and the data to use. This is one of the aspects that makes the particular Skill at Level 3 *"demanding and unpopular"* (WBQ co-ordinator – suburban school) with students of Optional programmes of study other than Mathematics or Science. I return to discuss the case of Level 3 Application of Number in the final sub-section of this chapter, after giving the second example through which *the power of certification* is manifested: how contextual relevance of knowledge is determined by *assessment criteria.*

Contextual Relevance in Application of Number

As I have already mentioned at the beginning of section 8.2, *contextual relevance* was one of the main sub-themes of *the power of certification* theme generated from the analysis of the data. Contextual relevance, as a characteristic of horizontal discourses, ties knowledge to specific, immediate goals and is dependable on features of particular contextual segments in which the knowledge is acquired (Bernstein, 2000, pp. 157–159). This is in effect the *Purpose level of integration* that I discussed in sub-section 7.3.3 of chapter 7. Here, I wish to exemplify how, in the case of Application of Number, contextual relevance of knowledge is about the 'artificiality' or 'authenticity' of a numerical problem and whether it justifies the calculation(s) listed in the assessment criteria. This is an interesting case through which we can see how assessment criteria, and by extension *the power of certification*, specifies the utility of different elements of the specialised (re-contextualised disciplinary) discursive basis of Application of Number (i.e. Mathematics and Statistics).

Consider the following numerical problem (adapted from WJEC, 2011) that is part of a wider catering activity. A cook who is required to prepare a joint of meat to be served at a particular time needs to calculate the roasting time per pound (e.g. 20 minutes per pound) plus an extra amount of time as part of a

roasting recipe (e.g. an extra 20 minutes) and to also allow for some 'resting' time after the joint is cooked. He/she also needs to take into account the temperature of the oven and how long it takes for the oven to reach a certain temperature (e.g. 10 minutes) before he/she can start the roasting.

In the context of a work-based NVQ programme, the student would only need to work out what time to set the oven by carrying out the appropriate calculations, including time conversions from hours to minutes, if needed. To ask students in this situation to convert temperature (to/from *degrees Fahrenheit and Celsius*) or to calculate the average price of the meat or cooking equipment used from a number of different suppliers would not be considered naturally occurring evidence (Jessup, 1991; WJEC, 2010b), unless of course the student was asked to order the supplies. Equally, it would not be considered 'natural' t*o carry out any conversions* using both a given conversion graph and then checking the results using an appropriate formula (as students are required to do by the Application of Number *assessment criteria*).

The 'artificiality' or 'authenticity' of a numerical problem relates to the extent to which the problem justifies each calculation based on contextual relevance and the wider purpose of the activity in which the numerical problem is integrated. This is what the principal moderator of WJEC called the "So what?" element of a calculation.

> "Some centres are still producing work that has **no real purpose**. This is especially true of centres using the 'Decorating a Room' investigation at level 2 when there is little obvious point to the handling statistic work – involving comparing the results for two different classes. One has to ask 'So what?'" (WJEC, 2014b, p. 1, emphasis in original).

This "So what?" element and the notion of purpose relate to the focus of Application of Number and its instrumentality. It extends beyond setting its focus towards 'life' and practical work contexts, what is known as 'authentic learning' (Billett, 1995; Van Oers and Wardekker, 1999; Stein et al., 2004), to specifying the utility of different elements of the specialised (re-contextualised disciplinary) discursive basis of Application of Number. Rule (2006) reviewed

studies on authentic learning and drew out four overarching themes relating to key elements of authentic learning across different contexts: real-world problems; open-ended inquiry and thinking skills; discourse among a community of learners; and self-directed learning. In a 'real-world' context, and according to the *assessment criteria* expressed by the moderator of the awarding body, when decorating a room, students may want to calculate the area and decide how much paint/wallpaper they need, but not to compare these results with other students (i.e. calculating the average size of the decorated rooms in the class or the average amount of paint/wallpaper required).

These calculations can be part of an *instructional form* of practice during which students are expected to produce generalisations and common patterns, as they would in the context of teaching and learning mathematics. In an *assessing form* of practice, these calculations are considered to be examples of 'artificially' extending the purpose of the activity and the numerical problem. This 'artificiality' conflicts with the principle of naturally occurring Skill development and assessment to the point that it threatens the validity of the whole assessment "if evidence is not naturally occurring" (Greatorex and Shannon, 2003, p. 7). In other words, inauthentic Essential Skill activities undermine their own rationale and consequently Skills cease to be the curriculum component they were intended to be.

The examples of the catering and decorating activities I gave above also bring to the fore the fact that it is *assessment criteria* that specify the utility of different elements of the specialised (re-contextualised disciplinary) discursive basis of Application of Number and by extension point to *the power of certification*. In the following, and last, sub-section of this chapter, I present an interesting instance of integration from the two colleges in the study that 'embed' Level 3 Application of Number in vocational activities. In this instance, we see vocational tutors evoking *the power of certification* in order to maintain their dominant position as they make hierarchical rules of practice and the power differential visible through taking control of the evaluative criteria.

Level 3 Application of Number

While the schools in the study have their Mathematics departments teaching Application of Number at Level 3, colleges often get two different tutors to act as *instructors* and *assessors*. This is what the WBQ co-ordinator of a college explains in the following quote:

> "*They do have discrete lessons, so [name] teaches them how to do, she teaches them, I don't know, I have never delivered it, but things like standard deviation or range. Then what they then have is they complete their Individual Investigation with me and go through the process [building the portfolio of evidence]."* (WBQ co-ordinator – college I)

When Application of Number is 'embedded' in a vocational activity, whether and how the purpose of the vocational activity will be 'extended' in order to accommodate all calculations within it depends on the person(s) responsible for 'mapping and tracking' Application of Number across the curriculum.

> *"Where the issue with that lies isn't so much how it maps across, more importantly who maps it across? […] So at the beginning of the year we [Essential Skills Wales co-ordinators] went into Construction for instance and looked at … plumbing, carpentry, bricklaying and we discussed with their lecturers, tutors what type of work they do throughout the year and how to integrate them [calculations] in every subject."* (AoN co-ordinator – college II)

The person mapping Application of Number is in effect the person that deceptively seems to have control of the pacing of the Skill, that is, the rate of its expected acquisition. I use the word deceptively because mapping individual calculations onto activities of the Optional or Core curriculum means that 'progression' of the Skill is tied to vocational activities that may not necessarily follow a coherent order in terms of knowledge progression. Teachers and tutors therefore have very little control over the pacing of the 'embedded' Application of Number. They often have very little control over the selection of numerical problem and data too. As I mentioned in sub-section 7.3.2 of chapter 7, ESW and Numeracy co-ordinators in the colleges of the study also seem to have greater

control of the selection of numerical problems and data as tutors may not be comfortable in their role as *instructors*, particularly at this Level of study. It is in these instances of integration where I was offered four accounts of tutors evoking *the power of certification* in order to maintain control of the evaluative criteria and by extension maintain their dominant position as opposed to students as knowledge acquirers. One of these accounts was given by the Numeracy co-ordinator of a college:

> *"I think it's easier to assess than to build Skills, because when you build Skills there may be certain areas of Skills that you are uncomfortable with [...] We have students in Construction and they use Maths, of course they use quite complex Maths. Their Skills can be contextual in an area and they may work with percentages in a certain way. Now if they have a Maths question they're putting staff [tutoring – AoN staff] under pressure, so for them [staff] it's much easier to say, 'Right, this is the assignment.' That way, then they're in full control over what's been delivered and what's been marked more importantly [...] This is where you need to get specialists. When you're a specialist you have that ability [to answer questions – to provide explanations] and this is one part of what we [AoN co-ordinators] do."* (AoN co-ordinator – college II)

A second account was offered by the WBQ co-ordinator of a different college:

> *"Slightly different in some vocational areas. The hardest thing is trying to, in the Numeracy aspect, have a course tutor to bring along these aspects of understanding. As we were saying a few minutes ago, they [tutors] can all do the arithmetic, but can they make sense of it? Are they there just to give them [students] numerical information or to assess because it's more clear-cut or whatever [...]"* (WBQ co-ordinator – college I)

The uniqueness of Level 3 Application of Number in a college (vocational) setting is that it creates a context which combines specialised knowledge (of Mathematics and Statistics) and everyday (work) knowledge. This offers the potential to accommodate the re-contextualisation of different knowledge(s) (Guile and Young, 2003) and aid cumulative knowledge building (Maton, 2009; 2013; 2014a). The common practice of 'extending' the purpose of the vocational

activity in which the numerical problems in Application of Number are 'embedded' is not and cannot be considered synonymous with constructing or reconstructing a meaningful context in order to help students see the relationship between theory and practice. This is because each numerical problem is tied to one instance of contextual relevance and the mathematics 'needed' for that. In my data, however, interviewees gave four accounts of Level 3 Application of Number practices in colleges where students were being facilitated to select, 'assemble' and use factual, operational and conceptual knowledge through working in many different contexts. The following quotes by the WBQ co-ordinators of the two colleges are indicative of this point:

> *"You can [teach them], but if they have come in brilliant, they end brilliant, because we have got some really highflying kids. They are testing you more than you are testing them. They are doing Engineering, Further Maths, Higher Maths. They would, you know, what is a Level three Maths [Application of Number] doing for them? Nothing. We can have a few novel situations thrown in their lessons. Especially once they have understood the formula and the situation, the working out, they give an opinion. It is forcing that opinion that, you know, it does make a difference."* (WBQ co-ordinator – college I)

> *"Yes, they all take the mean and median and mode and work them out, no problem, but would the mean work for that set of data, because it is extreme scores […] They may know it, if you ask them, but it is this recognition that comes from the application of the concepts to many different [contextual] situations I suppose."* (WBQ co-ordinator – college II)

This 'recognition', in all four accounts that I was given for these instances of integration, seems to be the privilege of a certain group of college students who follow certain BTEC courses (i.e. Engineering, Built Environment). With the voluntarism of the Level of study for Essential Skills that I pointed out in sub-section 7.2.3 of chapter 7, I take Application of Number at Level 3 to be the clearest indication that the promise of the Welsh Baccalaureate to provide a common learning Core to all students irrespective of their Optional studies and site of learning is likely to remain a promise for the foreseeable future.

8.3 Linking Chapters 7, 8 and 9

In the last two empirical chapters of my thesis, I explored the complexity of generics and established the limited extent to which the integration of Communication and Application of Number into the Welsh Baccalaureate curriculum can provide a common learning Core to all students irrespective of their Optional programmes of study and site of learning. Based on these findings, Application of Number at Level 3 seems to be the 'exclusive club' of Essential Skills as it is taken up by a minority of students who follow Optional programmes that are Science-based or Mathematics. It also seems to be the only one of the two Essentials Skills in the study that fulfils its 'complementary' purpose by providing students the opportunity to select, 'assemble' and use factual, operational and conceptual knowledge through working in many different contexts. In terms of fulfilling their universalist purposes, and as I conclude in sub-section 9.3.3 of the next chapter, certain peculiar features of generics and their integration may jeopardise the opportunities needed for that.

In chapters 7 and 8, we saw one idiosyncrasy of the 'embedded' Communication and Application of Number, that is, the implicitness of their sequencing rules. This means that it is the person 'mapping and tracking' Essential Skill tasks onto other curriculum components, rather than the teacher/tutor or student, who has some control over the rate of the students' acquisition. It is unlikely, however, that the person 'mapping and tracking' can obtain full control of sequencing as the progression of the Skill is linked to the development of the main Optional/Core activity in which Skill tasks are 'embedded'.

With its sequencing rules being implicit and with the progress of the Skill dependent on the 'progression' of the wider Optional/Core activity, attention is turned to evaluation and the visibility of evaluative and hierarchical rules. No matter how visible, what counts as valid knowledge to be transmitted and acquired and as a valid display of students' performances is ambiguous. This follows from the splitting of evaluation criteria into *pedagogic criteria for practice* and *assessment criteria*, the latter guided mainly, but not exclusively, by purposes of certification. The former includes knowledge elements that draw from the specialised (re-contextualised disciplinary) discursive basis of

Communication and Application of Number and that are also shared with certain Optional programmes of study. Although the privileging of *instructional forms* of practice can contribute towards the fulfilment of the promise to provide a common learning Core to all students, Optional programmes of study will continue to be the main 'site' of specialised (re-contextualised disciplinary) knowledge transmission and acquisition. With these observations in mind, I wish to summarise the study and conclude on the implications its findings have from a policy, practical and theoretical point of view. This I do in the next and final chapter, chapter 9.

Chapter 9. Conclusion

Contents pages

9. Conclusion

9.1 Chapter Overview

"The heart of discourse is not order but disorder, not coherence but incoherence, not clarity but ambiguity […] the heart of discourse is the possibility of new realities."

(Bernstein, 2003a, pp. 75–76)

I chose to open this thesis with an introduction that focuses on my motivations, personal background and aims of my research. Departures are meant to be auspicious and my starting point was a commitment to educational equity and a belief that research on curriculum principles and principles of justice could potentially contribute towards minimising educational disadvantage in a particularly competitive level of study (i.e. upper-secondary) in Wales. Arrivals can be equally auspicious as naïve enthusiasm gradually gives way to uncertainty and eventually to insightful understanding and the hope of glimpsing new realities with amazement. This chapter is therefore the most aspiring of my thesis as I attempt to summarise and discuss the findings of the study, exemplify its contribution to upper-secondary education in Wales and to curriculum studies, and reflect on the way I have travelled so far in considering possible directions for the future. Having located my research at the overlap between policy intentions, curriculum principles and actual pedagogic practices, in this thesis I provide a principled analysis of the Welsh Baccalaureate as an overarching qualification and curriculum innovation. Overall, I believe that my research is a considerable attempt to address a number of questions with important policy, practical and theoretical implications. It is to these implications that I devote a large share of this concluding chapter.

9.2 Revisiting the Study

I start my methodology chapter with a quote taken from one of Arthur Conan Doyle's novels as I comment on this PhD study being my first attempt to carry out independent research. In this way, I point to the importance of that chapter for bringing together the scope of my investigation, my theorisation of Essential

Skills integration into the curriculum, and the accomplishment of the empirical parts of the study.

It was during a workshop on research methodologies that I discussed the study using the metaphor of a detective (i.e. what methods do you use? What type of a detective are you?). From this perspective, I see the study as a type of scholarly detective work influenced partly from my own experiences as a vocational student in a continental upper-secondary education system, and partly from my inclination to search for empirical 'facts' and to 'logically' analyse data using theoretical insights and deductive coding. Arguably, and as my discussion in the methodology chapter shows, these influences were not the only ones that shaped the course of the research. They did, nonetheless, steer my investigation towards questions of curriculum principles and universal entitlements to Core knowledge that I then went on to investigate through a structuralist-informed methodology and a twin case comparative research design.

The broader aim of the study was to examine the extent to which the policy promise of the Welsh Baccalaureate to bring together academic (general) and vocational education and to provide a common learning Core to all students irrespective of their Optional studies and site of learning has been materialising. It was through the first part of my research that I established the small percentage of students that combine academic (general) and vocational qualifications as part of their Optional studies, bringing to attention the possibility of a shift towards vocational qualifications under the overarching Welsh Baccalaureate Advanced Diploma. In this light, and taking into account other indications and wider trends in upper-secondary education in Wales and the UK, my claim is that the Welsh Baccalaureate can be seen as the newest form of the applied studies track.

Through the findings of that part of the study I also point to the wider intention of the Welsh government to 'vocationalise' upper-secondary education and to the similarities between Essentials Skills and NVQs in terms of their knowledge basis in manual practices and the natural approach to the development and

evidencing of competences. In combination with my analysis in the second part of the study, I show how the centralised control runs from central government to the awarding bodies of Essential Skills qualifications and down to each classroom through evaluative (assessment) criteria of Skill. The persistence of attaching accreditation and offering Essential Skills as a separate suite of qualifications takes a different meaning in the second part of my research where I suggest that certification is an expression of the materialities of (generic knowledge) consumption. Here, and as Bernstein (2000, p. 59) writes, "the products of the market relay the signifiers whereby temporary stabilities, orientations and evaluations are constructed" in the socially empty pedagogic practices of generics.

In the second part of the study, the distinction between academic (general) and vocational education dissolves into Bernstein's three modes of pedagogised knowledge: singulars, regions and generics (2000, pp. 51–53). These are characterised by differing knowledge bases, foci and social relations and are differentially positioned in both the field of re-contextualisation and reproduction. My research objective here was to explore the concept of generics by comparatively describing instances of integrating Communication and Application of Number into the Welsh Baccalaureate curriculum across six considerably different education sites. These sites (four schools and two colleges) vary in terms of the number of years they have been offering the Welsh Baccalaureate, the make-up of their student population (attainment and eligibility for free school meals) and their geographic location (urban, suburban and exurban locations with the latter also serving wider rural areas).

By focusing on the organisation of knowledge in the curriculum, its orientation in terms of introverted or extroverted meanings and its transmission through pedagogic practices, I not only show the very limited extent to which the integration of Communication and Application of Number in the Welsh Baccalaureate curriculum can provide a common learning Core to all students, but I also present empirical evidence of the misrecognition and complexity of generics (Bernstein, 2000, p. 53; Beck, 2002, p. 624). By comparatively describing how these two exemplary 'species' of genericism are integrated into

different components of the Welsh Baccalaureate curriculum, I show how the controversial process of 'mapping and tracking' Essential Skills onto Optional or Core programmes of study creates a peculiar pedagogic situation in which control over the rate of knowledge acquisition rests neither with students nor teachers/tutors, but with ESW and WBQ co-ordinators.

Although generics can be mistakenly taken as a competence model of pedagogised knowledge with its emphasis on students' common shared procedures and abilities (i.e. trainability), they are in fact evaluated using an external common standard. Despite their invisible sequencing rules, visibility of their practices is ensured by strong hierarchical and criterial rules and this is what I refer to by *the power of certification*. Through my analysis in the second part of the study, we get to see the challenge of integrating Essential Skills from a theoretically informed perspective. Given the complexity of generics, the voluntarism underpinning their Level of study, the peculiar features arising from their integration and the limited curriculum time devoted to them, my claim is that the universalist purposes of Essential Skills (i.e. remediating for previous education 'failings', complementing Optional programmes of study and making up for the early specialisation at the age of 16) may not be that easy to fulfil through the integration of Communication and Application of Number in the curriculum.

In discussing the two parts of the study together and in meeting my broader aim to examine the Welsh Baccalaureate as a unification strategy (Spours and Young, 1996; Raffe et al., 1997; 1998a; 1998b; Spours et al., 2000) with analytically distinct qualificational and curricular dimensions, I also engaged with the curriculum principle of powerful knowledge (Wheelahan, 2007; 2010; Young, 2008; 2014; Young and Muller, 2013) in terms of its appeals to social (curriculum) justice. As I point out, in practice, it is almost impossible to break up monopoly of access (i.e. access to disciplinary frameworks of meanings) and to distribute the two main 'goods' of education (i.e. certification and knowledge) autonomously and by using distinct distributive principles. As Bernstein writes, any pedagogic practice exists for one reason, that is, to transmit evaluative criteria (2000, p. 28) and as I have made clear through my analysis, and

particularly through chapter 8, there is a joining point between curriculum knowledge and qualifications (certification), and that is evaluation (assessment).

Having revisited the study and summarised my empirical findings and insights, I wish to discuss these in more detail and to highlight their implications. I do this in the following section.

9.3 New Insights and Implications

9.3.1 The Welsh Baccalaureate as the Applied Studies Track

Shortly after introducing my personal background, my motivations for carrying out the study and its broader aim in chapter 1, I highlighted the conceptual and empirical challenge of defining what 'academic' and 'vocational' is and measuring their distance from each other. This challenge has been an inseparable part of addressing research questions about the extent to which the policy promise of the Welsh Baccalaureate to bring together these two poles of upper-secondary education has been materialising.

In the first part of the study, and for the purpose of examining the Welsh Baccalaureate Advanced Diploma as an upper-secondary qualification, I borrow ideas from the work of Raffe et al. (1997; 1998b) and Raffe (2002; 2005b) and I use the word 'track' to refer to "a qualification-led curriculum, which has a distinctive content, assessment and mode of learning. It thus tends to channel learners in a particular direction, minimising opportunities for flexible movement between different types of qualifications and curricula" (Pring et al., 2009, p. 117). Given the resilience of the 'gold standard' A level and its deeply entrenched position in UK upper-secondary education, the Welsh Baccalaureate did not completely fulfil the 2004 Tomlinson proposals (see section 2.4 of chapter 2). As a result, I suggest that the 'bringing together' of academic (general) and vocational education has been taking place in two ways: the mixing of Optional qualifications under its overarching Diploma, and the integration of Essential and Wider Skills with all Optional programmes of study.

In the first part of the study, my objective is to establish the proportion of students that mix academic (general) and vocational qualifications as part of their Optional studies and under the overarching Welsh Baccalaureate Advanced Diploma. For my analysis, I classify A Levels as academic (general) and broad vocational qualifications (i.e. BTECs and EDEXCEL Principal Learning) and occupational NVQs as vocational. Early appraisals of the 14–19 Learning Pathways initiative and the collaboration between schools with sixth forms and Further Education colleges (Estyn, 2006a; 2006b) suggest that the vision of having a large proportion of students combining academic (general) and vocational qualifications is far from becoming a reality. This is further confirmed by the WJEC data on the percentage of students who combined academic and vocational qualifications in the cohorts completing in 2005, 2006, 2007 and 2008. This percentage is relatively low (between 9 and 12 per cent) and it reflects a wider tendency of students to choose qualifications that are either academic or vocational. For example, the WJEC reported that the percentage of students of the Intermediate Welsh Baccalaureate Diploma who combined academic and vocational qualifications in the cohorts completing in 2006, 2007, 2008 and 2009 was between 10 and 12 per cent. (WJEC, 2008a; 2009a). Similarly, in the study of Raffe et al. (2001, p. 190) we see only 15 per cent of the 905 Welsh students of upper-secondary education programmes mixing academic and vocational qualifications[42].

Despite the government's efforts to encourage the mixing of academic (general) and vocational qualifications (WAG, 2002b, p. 12; Welsh Measure of the National Assembly for Wales, 2009a; 2009b; WAG, 2009; WG, 2012b), my analysis in chapter 6 brings to the surface a different way in which the *vocationalisation* of upper-secondary education seems to be materialising: a possible shift towards vocational qualifications under the overarching Welsh Baccalaureate award. This is an issue that has not been previously identified or discussed in this context and it was precisely this shift that prompted me to question whether the Welsh Baccalaureate Advanced Diploma can be seen as the replacement of the GNVQ Advanced, the latter being the old form of the

[42] In this study, broad vocational and occupational qualifications were also grouped together and were classified as vocational qualifications.

applied studies track, a qualification that was phased out in 2008. From this perspective, it comes as no surprise to see the introduction of the Welsh Baccalaureate in 2008 and the introduction of the 14–19 Diplomas in England in 2007, the latter being in many respects the applied studies track in England (Pring et al., 2009, pp. 119–121). In the following paragraphs I justify this view based on the observation that both the Welsh Baccalaureate Advanced Diploma and the GNVQ Advanced are policy instruments of increasing and widening access to Higher Education. Equally, both qualifications and programmes of study can jeopardise the prospect of its holders, and when compared to holders of three or four A levels, to achieve equal outcomes in terms of accessing and/or completing competitive courses in selective universities.

From the reported data I gathered and interpreted, it seems that school students are switching from A levels to BTEC qualifications (see table 13a, figure 7 and table 15 in section 6.3 of chapter 6) and this is possibly in an attempt to gain a positional advantage in gaining access to Higher Education. With the Core certificate (or Skills Challenge Certificate in the new Welsh Baccalaureate) carrying a 'credit tag' equivalent to an A grade A level, these students, and drawing from the findings of Taylor et al. (2013a), are most likely to be of lower prior attainment (GCSEs) and therefore they may not have otherwise had an opportunity to progress onto higher levels of study. Equally, it is more likely that they will be applying for entry to less competitive universities and courses. If students' switch to BTEC Optional qualifications under the overarching Welsh Baccalaureate Advanced Diploma can be confirmed by further research, then we can talk of a potential 'vocational drift' based on the increase of proportion of students following the particular route. Arguably, the extent to which we can classify an applied qualification such as the BTEC as vocational is questionable in the sense that it is classroom-based, rather than work-based, and its curriculum knowledge has very loose ties with actual practice. Nonetheless, even if we place upper-secondary qualifications on a continuum, rather than a binary opposition, BTECs are still at some considerable distance from the traditional academic A level subjects that competitive universities refer to as 'preferred' (LSE, 2016) or 'facilitating' (Russell Group, 2015, p.1).

In any case, the acceptance of the BTEC route as preparation for Higher Education studies is not an exclusively Welsh phenomenon. According to the 2016 report published by UCAS (2016, p. 32), the proportion of UK-based students aged 18 who applied for university admission solely on the basis of BTEC qualifications increased by 58 per cent from 2012 to 2016. A HEFCE (2015) publication on student attainment prior to entering Higher Education in England further confirms a doubling in the number of students who gained a Level 3 BTEC from 2005 to 2013. Finally, a study that examined the progression of London-based FE college students in the period 2005–2009 also showed an increase in full-time participation in BTEC programmes from 15 per cent of the overall population studied in 2005/06 to 24 per cent in 2009/10 (Joslin and Smith, 2013). The same study also found a 3 per cent overall increase in the Higher Education immediate progression rate for full-time BTEC students across the cohort studied. However, in the same study, the higher progression rate was for students on A level programmes (86 per cent) who also had a higher achievement rate (i.e. degree completion) when compared to students on BTEC courses.

Differences in achievement between students of BTEC and A level progression routes have also been noted by Gill and Rodeiro (2014) who carried out research for Pearson's, BTEC's awarding body. In their report, the researchers acknowledge the fact that these vocational programmes of study are not designed with the primary aim to prepare students for Higher Education. As they state: "it should be taken into account that preparing students for university study is not the BTEC's primary purpose" (Gill and Rodeiro, 2014, p. 5). This point is also explicitly made by the Russell Group's guide on students' upper-secondary subject and qualification choices: "It is extremely important that you are aware that these vocational qualifications are not considered to be suitable preparation for several university courses" (The Russell Group, 2015, p. 17).

So beyond the "distinctive content, assessment and mode of learning" (Pring et al., 2009, p. 117) that characterise and distinguish the different tracks of upper-

secondary education, the purpose of a programme of study is an important dimension of a qualification-led curriculum and this is reflected in the selective and discriminative function of qualifications. Establishing what the purposes of different progression routes and qualifications are and whether these purposes should, and indeed could, be shared is an issue that is under-specified in the Welsh context. Interestingly, and as reflected in the opening quote of chapter 3, this debate is not likely to be settle easily as debates about what the purpose of education should be date back thousands of years.

The main purpose of the Welsh Baccalaureate Advanced Diploma looks in many respects similar to that of the Advanced Level GNVQ: to accommodate in upper-secondary education a number of young people who are not inclined to follow solely discipline-focused and content-driven programmes of study (i.e. A levels) or skills-driven occupational ones (i.e. NVQs) and to offer them clear and accredited routes for progression onto Higher Education. The tension here is that applied studies tracks are vocational in a fairly restricted sense that makes them 'general vocational' rather than practical vocational. Finally, there is a further parallel that we can make between these two education programs: If the GNVQ Advanced jeopardised the prospect of its holders to access competitive courses and selective universities, then the Welsh Baccalaureate Advanced Diploma jeopardises the prospect of its holders to successfully complete such courses when compared to students who have completed solely three or four A levels.

Within the scope of examining the Welsh Baccalaureate as preparation for Higher Education, Yhnell et al. (2016) carried out research on its impact on students' university performance. Having examined three cohorts of undergraduate Biomedical Sciences students at a Russell Group Higher Education institution, the researchers concluded that students who had achieved the Welsh Baccalaureate Advanced Diploma with three A levels as part of their Options performed less well academically than those who had achieved four A levels. The same study also found that students who had completed three A levels as part of their Welsh Baccalaureate Options performed significantly less well across the three years of their degree programme than those who had

entered the programme solely on the basis of three A levels (i.e. had not studied for the Welsh Baccalaureate). This observation holds even when the effect of assessment method (i.e. coursework – examinations) was accounted for. This is the second study, following the one carried out by Taylor et al. (2013a), that points out the potential for disadvantaging students of the Welsh Baccalaureate Advanced Diploma entering Higher Education when compared to those following the standard route of three or four A levels. In other words, the Welsh Baccalaureate may enable entry to Higher Education, but it is disadvantaging students'' performance after entry.

Admittedly, the evidence I presented in chapter 6 on the shift towards vocational (BTEC) qualifications is open to multiple interpretation and inconclusive. Yet, I devote a large share of my concluding chapter to discuss this shift and to make parallels between the GVNQ Advanced and the Welsh Baccalaureate Advanced Diploma. Considering that the introduction of the Welsh Baccalaureate has been made compulsory since I started my study, my discussion in this sub-section seeks to point out a number of important aspects of the Welsh Baccalaureate Advanced Diploma. One of them is its potential to covertly differentiate its holders from those following the 'standard' A level route, not only in terms of the number of A levels they complete (see table 17 and discussion in section 6.3 of chapter 6 which suggests that the majority of WBQ students may only complete two A levels) but also in terms of achievement. My observations, together with the making of the Welsh Baccalaureate as the 'national' secondary qualification of the country, has significant policy implications as it is set to influence the future of young people in Wales.

In closing this sub-section, and from a policy point of view, there is always the danger of deepening the divide between preparatory routes that lead to universities and courses that are highly competitive and whose graduates can expect higher earnings and higher-status jobs (Bratti et al., 2004; Power and Whitty, 2008) and the 'rest' of upper-secondary education routes leading to 'lesser' education and professional opportunities. More significantly, and with

the introduction of the Welsh Baccalaureate as an overarching upper-secondary qualification, any deeply entrenched divisions that have historically existed may now endure in a more covert manner. Given that processes and manifestations of academic drift are bound to contextual and historical factors (Neave, 1979; Raffe et al., 2001; Harwood, 2010) we should not overlook the masking of the deeply entrenched divide between more or less 'powerful' qualifications and preparatory routes as we celebrate the newest strategy of widening access to Higher Education. Consequently, we should acknowledge the possibility that the move from 'elite' to 'mass' to 'universal' education in Wales, and in the UK more widely, can be illusionary as this move may be a disguised "domino effect"(Green et al., 1999, p.30) in the expanding secondary and tertiary education systems.

When viewing the Welsh Baccalaureate Advanced Diploma as a strategy of readdressing inequalities in terms of widening participation and access to Higher Education, one important question to ask is participation and access to what? Widening access, as the WISERD (2015, p. 3) research team write, "involves not only entry to Higher Education, but also successful progression to completion of the programme". For completing the empirical part of the study, I made the analytical decision to keep qualificational and curricular aspects of the 'bringing together' of academic (general) and vocational education as distinct. During the study, I acknowledged that these aspects are inextricably intertwined and that their linkage seems to be at the joining point of evaluation (assessment). Consequently, when discussing qualificational aspects of bringing together academic (general) and vocational education, purpose and function also seem to be decisive joining points. Distinguishing between knowledge and certification as the two different 'goods' of education is an issue I pick up in the final sub-section of this chapter. What my discussion here, and in chapter 6, makes clear is the power that universities retain to influence upper-secondary education and the distribution of its different 'goods'.

9.3.2 The Misrecognition and Complexity of Generics

In addition to the mixing of academic (general) and vocational qualifications, the second way in which the Welsh Baccalaureate attempts to bring together the

two poles of upper-secondary education is by the compulsory integration of Essential and Wider Skills with all Optional programmes of study. It is partly through this integration that the Welsh government aspires to fulfil the policy promise of providing a common learning Core to all students irrespective of their Optional choices and site of learning. As I mention in the introduction chapter, to my knowledge, my research is the first empirical attempt to explore the concept of generics (Bernstein, 2000, pp. 51–56) through comparatively describing how two exemplary 'species' of genericism are integrated into different curriculum components across six considerably different education sites.

My analysis makes empirically visible the theoretically identified misrecognition and complexity (Bernstein, 2000, p. 53, 55, 59) of generic forms of everyday knowledge that have been re-contextualised to become curriculum knowledge. There are three interrelated aspects behind the misrecognition and complexity of generics, and I discuss these in the paragraphs that follow:

- their resemblance to competence models;
- their deep structure in the concept of trainability and the social emptiness of trainability;
- their suppressed "awareness of the fact that they are themselves tacitly rooted in theory, notwithstanding their claims to being based on practice and on experience in the 'real world'" (Beck, 2002, p. 624).

Resemblance to competence models

Bernstein (2000, p. 55) attributes the complexity of generics to their resemblance to competence models of pedagogised knowledge, when in fact they are modes of a performance model and subject to official assessment based on common external criteria. According to Bernstein (2000, p. 55), generics share

> "the fundamental features of competence modes of pedagogised knowledge, that is, 'similar to' relations. What is 'similar to' in the case of

> competence modes is a common humanity (liberal/progressive mode), a common local culture (populist mode), a common position and opposition (radical mode). What is 'similar' in the case of generic modes is a set of general skills underlying a range of performances."

In chapter 7, I describe the *standards of performance* students are expected to demonstrate and I point out that these performances are undifferentiated (ungraded), partly reflecting in this way the transferability of the Skills underlying these performances. This *universalism*, strongly expressed in policy and teaching specification documents, masks variations in the levels of students' 'skilfulness' and power differentials by implying that all students, irrespective of their social circumstances and background, possess similar shared competences and internal common procedures that they bring to the pedagogic context (i.e. their trainability). Essential Skills are, however, part of official education and in many instances of integration, I show how teachers/tutors attempt to match "the acquirer's text against an external common standard" (Bernstein, 2003a, p. 71), with this standard often being drawn from Optional programmes of study or from the interdisciplinary basis of the Core.

One manifestation of the complexity of generics that my analysis uncovers is teachers'/tutors' and WBQ co-ordinators' efforts to arrange the pedagogic context

> "to enable shared competences to develop realisations appropriate to the acquirer. Thus, in the case of invisible pedagogies, external non-comparable differences are produced by internal *commonalities* – that is, shared competences – whereas in the case of visible pedagogies external *comparable* differences are produced by internal differences in potential." (Bernstein, 2003a, p. 71)

The tension arising from the complexity of generics and their pedagogic practices is manifested as the *Material – Topic – Problem level of integration* (see sub-section 7.3.2 of chapter 7) which is in effect the creation of contextual conditions (opportunities) by teachers/tutors and WBQ co-ordinators for students to meet Essential Skills learning outcomes and *assessment criteria* as realisations of their trainability. Hence, we see teachers/tutors and WBQ and

ESW co-ordinators having control over the selection of numerical problems and topics for discussion, distributing lists of 'acceptable' reading and writing materials based on distinctively different genres and text organisation, supplying 'suitable' numerical data, and pacing (sequencing) the development of Skills in the form of 'mapping and tracking' them into other curriculum components.

This level of integration, in combination with the prioritisation of *assessing forms* of practice, results in what the WJEC official described as 'spoon-feeding' students rather than helping them to develop the skills of Communication and Application of Number. These peculiar characteristics of Essential Skills, coupled with the 'artificiality' of tasks and purpose (see sub-section 8.2.2 of chapter 8) that conflicts with the 'naturally occurring' principle and threatens the validity of their assessment, limit the credibility and value of Essential Skills in official education.

Drawing from the findings of chapters 7 and 8, and my discussion above, my claim in this sub-section is that the challenges of integrating Essential Skills in the Welsh Baccalaureate curriculum stem from the attempt to incorporate externally assessed and certified generic modes of pedagogised knowledge into official upper-secondary education. In this sense, and as Bernstein (2000, p. 51) writes, generics may be seen as interruptions or resistance to the normality posed by performance models in official education or they may be appropriated for specific purposes (e.g. remediation or broadening the curriculum). I also take the existence of *instructing* and *assessing* forms of Communication and Application of Number practices and *the power of certification* (chapter 8) as a manifestation of the tension created by the attempt to integrate generic forms of knowledge, usually constructed for 'repair sessions', into official education.

With practitioners (i.e. WBQ co-ordinators and teachers/tutors) retaining a large degree of control over how Essential Skills are integrated into the curriculum and 'who' gets access to 'what' knowledge, the existence of *instructing* and *assessing* forms of practice can also be seen as a manifestation of

the government's attempt to retain influence over official education by emphasising assessment (criteria) and certification (see section 6.2 of chapter 6). Regarding the appropriation of generic forms of knowledge for specific purposes (e.g. remediation or broadening the curriculum), and as I further discuss in sub-section 9.3.3, my claim is that the complexity of generics and their integrated practices give rise to certain peculiar features that seem to jeopardise the opportunities for meeting these universalist purposes.

The Concept of Trainability and Social Emptiness

In sub-section 4.2.2 of my theoretical chapter, I discuss Bernstein's pedagogic device (2000, pp. 25–39) which refers to the rules by which knowledge is classified and framed, the way it is distributed to different social groups and the shaping of identity. Bernstein sees the essence of pedagogy to be continuous evaluation as it condenses the meaning of the whole pedagogic device: "We are now in a position where we can derive the whole purpose of the device. The purpose of the device is to provide a symbolic ruler for consciousness" (Bernstein, 2000, p. 36). Although my analysis does not cover processes of knowledge re-contextualisation and reproduction and I do not explicitly address issues of student or teacher identity, I wish to make a bold suggestion by drawing from three empirical observations.

The first observation concerns the assessment-led approach to integrating Communication and Application of Number. This goes beyond teachers'/tutors' *assessing forms* of practices being guided mainly by the purpose of certification (see chapter 8) to include interviewees' remarks that a general skill underlying students' performances is the skill to assemble the assessment portfolios and to evidence their Communication and Application of Number abilities.

The second is the desirability of the 'embedded' approach to integration which, according to all interviewees, makes Essential Skills more meaningful, relevant and purposeful. In other words, there is a lack of key purpose behind the learning tasks (outcomes) of Communication and Application of Number. These behavioural objectives do not reflect a coherent occupational role and its wider purpose, as they would in the case of a traditional competency-based training

model. Although I discuss 'purposefulness' further on in this section, and by referring to the *Purpose level of integration* (see sub-section 7.3.3 of chapter 7 and sub-section 8.2.2 of chapter 8), here I wish to point out that the issue of meaningfulness goes right to the heart of their transferability and their development which is devoid of a particular occupation/profession.

The third and final observation points to the persistence to integrate Core/Key/Essential Skills into the upper-secondary curriculum as a separate suite of accredited qualifications. This can be seen as a policy effort to enhance the credibility and status of Skills (Hodgson and Spours, 2003) in a pedagogic context which values mental over manual work. However, the idea of turning contextualised small units of 'real-world' study into qualifications, with centralised specifications and assessment criteria, conflicts with their very essence. As Wolf (2011, p. 171) writes, "if functional skills are to have any currency, they have to involve some form of external, standardised assessment. And if they do that, then they cannot be true to the original concept."

So despite the tension created between their essence (i.e. their 'similar to' relations) and their assessment against an external common standard (i.e. being part of official education), and despite their low value as upper-secondary qualifications and their questionable assessment validity (Greatorex and Shannon, 2003, p. 7), why have Core/Key/ Essential Skills always been integrated as standalone qualifications? My bold suggestion points to Bernstein's argument about the deep structure of generics being in the concept of trainability, its social emptiness and the incapacity of students acquiring generic forms of knowledge to "project him/herself meaningfully rather than relevantly, into the future, and recover a coherent past" (Bernstein, 2000, p. 59). I justify this suggestion in the paragraphs below.

Since their establishment, Core Skills (see section 2.2 of chapter 2) needed to be generic and transferable, reflecting in this way the expectation that individual students would now have to single-handedly lift the burdens of modern capitalism. By the late 1980s, the old vocationalism with its occupationally

specific skills and knowledge had already given way to genericism. The institutionalisation of trainability as a pedagogic objective, therefore, goes hand in hand with the aim of accommodating academically less 'able' young people in upper-secondary education and preparing them for a future that demands flexibility and frequent job changes. As Wolf (2011, p. 37) points out, the average young person (in his/her 20s and early 30s), who was fortunate enough to remain in employment throughout the 1998–2008 period, changed jobs 3.5 times, occupations 2.5 times and sectors 1.8 times. Official education, with its human capital discourse, is increasingly being based on a new concept of work and 'life', a concept that Bernstein calls short-termism (2000, p. 59). Bernstein's trainability is the vital new ability students have (or must develop) in order to cope with the new requirements of work and 'life', in order to be taught and adapt to "continuous pedagogic reformations" as skills and areas of work are expected to undergo continuous development, disappearance or replacement (Bernstein, 2000, p. 59). Wheelahan (2005, p. 3) further writes:

> "The new principle governing the way knowledge is classified is oriented outwards, but to markets and not to a field of practice, and this severs the link between the regions and disciplines and changes the relationship between knower and knowledge. The knowledge and capacities "that matter" are oriented to the market, and to the market's demands and accountabilities because markets endure while knowledge and occupations change."

According to Bernstein's theoretical insights, however, "the ability to respond to such a pedagogised future depends upon a capacity, not an ability. The capacity to enable the actor to project himself/herself meaningfully rather than relevantly into this future, and recover a coherent past" (2000, p. 59). This capacity is based on a specialised identity arising out of a particular social order and the relationship this identity enters into with other identities of mutual legitimation and through a negotiated collective purpose.

> "There seems to be an emptiness in the concept of trainability, an emptiness which makes the concept self-referential and thus excluding. If the identity produced by trainability is socially empty, how does the actor recognise him/herself and others? By the materialities of

> consumption, by its distributions, by its absences." (Bernstein, 2000, p. 59)

My bold suggestion, therefore, is that commitment to *formal* assessment (chapter 8) is also an expression of the materialities of (generic knowledge) consumption in the form of certification. In this light, Essential Skills qualifications are the products of the market relaying "the signifiers whereby temporary stabilities, orientations and evaluations are constructed" (Bernstein, 2000, p. 59). At different points in my thesis I briefly discussed or made references to issues of knowledge and stability. For example, in chapter 3, I explained how Hirst's curriculum theory (1974) treats forms of knowledge, such as logico-mathematical, literature, aesthetic and empirical, as cognitive structures that can take different appearances, but remain in principle uniformly stable. In the same chapter I also pointed out that one of the main characteristics of powerful knowledge is its irreducibility to the agents of its production and its ability to systematically expand and become a more stable and enduring form of knowledge than fluctuating individual experience. Through my analysis of empirical data in sub-section 8.2.1 of chapter 8, I also showed how a number of WBQ co-ordinators acknowledged that certain aspects of teachers'/tutors' role as *formal* assessors are 'meaningless', given the short-termism underpinning generics. With computers proofreading and increasingly completing more communication and numerical tasks for us, more and more skills and areas of work are expected to change, disappear or be replaced. Based on these observations, the specialised (re-contextualised disciplinary) discursive basis of Communication and Application of Number can be considered to be more 'stable' and valuable by certain teachers/tutors who then move on to promote its acquisition through *instructing forms* of practice. *Instructing forms* of practice, however, are dependent on a number of enabling conditions such as teachers'/tutors' specialised knowledge, adequate curriculum space and teaching time and 'combined' or 'standalone' rather than 'embedded' approaches to integration. While the distribution of specialised (re-contextualised disciplinary) knowledge and *instructional forms* of practice is varied, institutional and individual teachers'/tutors' commitment to

certification is constant. Hence, my claim that it is certification, as the materiality of (generic knowledge) consumption, that relays the signifiers in the socially empty pedagogic practices of Communication and Application of Number.

Suppression of Their Discursive Bases

The final aspect behind the misrecognition and complexity of generics links my previous observations of the social emptiness of trainability to their knowledge bases in manual practices. This aspect relates to the principle of functional analysis applied to occupational roles and the wider purpose(s) of these roles, an exercise that underpins traditional competency-based training models. I write traditional to denote the fact that functional analysis, that is, the breaking down of an (occupational) role into objectives and outcomes for the purpose of training, reflects a coherent profile of a specific occupation or practice rather than a qualification or a range of generic and transferable skills, which is the intention in the case of Essential Skills.

Through my findings and discussion in section 7.3 of chapter 7 I make explicit why WBQ co-ordinators consider the 'embedded' approach to integration as desirable. In such instances of integration, the purpose of an Essential Skill task can align its purpose with (i.e. in effect draw a purpose from) the wider activity in which the task is embedded. This is the second level of integration that I discuss in sub-section 7.3.3 of chapter 7 and in sub-section 8.2.2 of chapter 8. In the latter sub-section, I give an interesting example of *the power of certification* defining the contextual relevance of knowledge through the "So what?" element that (re)purposes numerical practices. From a theoretical point of view, and based on the empirical descriptions I present in my empirical chapters, it seems that the final aspect behind the complexity of generics is the tension of their double curricular aim to be "ends in themselves for setting up and working out problems and as transferable skills called upon in more general contexts" (WJEC, 2013b, p. 5).

A further insightful take on the misrecognition of generics is Beck's observation that generics suppress "recognition of their own discursive base (i.e. they suppress awareness of the fact that they are themselves tacitly rooted in theory) notwithstanding their claims to being based on practice and on experience in the 'real' world" (2002 p. 624). This is not an issue that my empirical findings or conceptualisation and aims of my research address. It points to an assertion that regardless of pedagogic practice(s) and context, all pedagogised knowledge is specialised, codified and subject to evaluation, these being the features that distinguish it from everyday knowledge acquired at home and in local communities. On this, Gamble (2001; 2004) studied the practical, tacitly acquired knowledge of cabinet makers as apprentices and showed that there is a distinction between 'proceduralised' (everyday) and 'principled' (specialised) practical knowledge(s). While further research can unmask this peculiarity of generics as re-contextualised everyday knowledge, my findings indicate (through the differing visibility of evaluation criteria and the need for specialist teachers in the practices of Communication and Application of Number) that these two exemplary 'species' of genericism may be structurally distinct.

In concluding this sub-section, and by drawing from Bernstein's theoretical insights of generics, my analysis makes aspects of the misrecognition and complexity of Communication and Application of Number empirically visible. In addition, whereas Bernstein's insights on generics address their complexity as modes of pedagogised knowledge, my empirical work also examined their integration into different components of the Welsh Baccalaureate curriculum and their practice, based on a mix of visible and invisible features of their pedagogy. By focusing on Essential Skills' practices, we get to see the peculiarities of their pacing and sequencing (i.e. expected rate of knowledge acquisition – what should come first in learning) and their "evaluation features" (Bernstein, 2000, p. 46). These peculiarities have important implications for practice and particularly for the extent to which Communication and Application of Number can fulfil their universalist purposes. These are issues that I discuss in the following sub-section.

Before moving on to the next sub-section, I would like to reflect on my Bernsteinian-inspired theoretical framework and its limitations for the analysis of the empirical data. At different points in the thesis, specifically in chapters 3 and 4, I justified my decision to use Bernstein's theoretical insights to frame my research and commented on their value to my project. It is worth pointing out that, as a novice researcher, I initially used theory as an aid to understand and conceptualise my research problem and as a prism through which to filter in or out the numerous details of the empirical world. Arguably, the prism distorted my view of the world, but this is true for any theory, without which, I felt I would be left with the Sisyphean task of formulating and re-formulating research questions having lost grip of the focus and direction of my research. The adequacy, or inadequacy of a theory, in terms of its empirical traction, its power of interpreting/explaining the world or the clarity of its relations to data become a concern, at least in my case, later on in the research project and it is these aspects I want to discuss.

The biggest shortfall of relying on a Bernsteinian-inspired theoretical framework for analysing my data on the integration and practice of Communication and Application of Number is that Essential Skills cannot comfortably fit, conceptually or empirically, to either side of the structural division between horizontal and vertical knowledge structures. Bernstein places them, together with guild-regulated manual practices, outside the Pedagogic Recontextualising Field and his theory cannot adequately account for empirical observations that want certain aspects of the teaching and learning of Communication and Application of Number to be based on tacit transmission and 'doing' rather than a mental operation. This tension between data and my theoretical framework is apparent in three instances in the thesis: in the instruction of the Listening and Speaking part of Communication (see p. 185 for an example of how instruction of debating equals modelling how to debate); the difference between arithmetic and Application of Number or the difference between knowing how to perform a calculation and carrying out the calculation by rote (see p. 203 and p. 208) and the wider distinction between an *instructional* and an *assessing* form of practice and the 'splitting' of evaluation rules (see my discussion of findings in chapter 8). Arguably, had I referred more

extensively to the distinction between horizontal and vertical knowledge structures, and complemented it with alternative theoretical perspectives[43], it could have helped me uncover parts of Essential Skills that can be assigned to a vertical discourse in a similar manner that Gamble (2004) analysed craft knowledge. Equally, I might have been able to make a clearer distinction between generic and subject-specific aspects of Communication and Application of Number and clarified how their double curricular aim to be "ends in themselves for setting up and working out problems and as transferable skills called upon in more general contexts" (WJEC, 2013b, p. 5) is played out in practice. Maton's (2009; 2011; 2013; 2014a; 2014b; 2016) "semantic waves" and his conceptualisation of changing semantic profiles based on shifts in "semantic gravity" and "semantic density" may also have provided a set of analytical concepts offering more empirical traction and the opportunity to address similarities and differences in the progression of generic forms of knowledge, something that Bernstein's theory cannot address.

Having set out to examine the extent to which the compulsory integration of Communication and Application of Number into the Welsh Baccalaureate can provide a common learning Core to all students, a Bernstein-inspired theoretical framework and in particular the analytical concepts of *framing* and *meaning orientation* helped me to compare the rules of the instructional discourse across different instances of integration; to develop an insightful perspective of the different pedagogic relationships between teachers and four different 'classes' of students[44] and offer theoretically-informed insights to the challenges of integrating Essential Skills and their peculiarities in the Welsh Baccalaureate.

[43] An example of such an approach is followed by Breier (2004) who examines the integration of everyday knowledge (horizontal discourse) by employing the concepts of 'localising and generalising strategies' from Dowling (1993; 1998) and Bourdieu (1977) to make up for the lack of empirical traction and ambiguity of what counts as 'horizontal' and 'vertical' in empirical data. Gamble (2004) also employs the concepts of the 'general' and the 'particular' to expand and re-describe the distinction between theoretical (context-independent) and practical (context-dependant).

[44] Normally paced (higher-achieving) and remediating (lower-achieving) and students) and by differing Optional programmes of study (i.e. students following solely Science or Humanities-based studies).

9.3.3 Essential Skills in the Welsh Baccalaureate

Writing about the challenge of integrating Key Skill qualifications in upper-secondary education, Hodgson and Spours (2002, p. 1) ask: "Is it a case of understandable 'teething problems' which will be overcome as the qualification 'beds in' or are there deeper and more fundamental problems of the purpose and design of the Key Skills qualification for Advanced level students?" Their conclusions parallel my empirical observations and my claim that the three fundamental, and interrelated, issues behind the challenge of integrating Communication and Application of Number in the Welsh Baccalaureate curriculum are indeed context, purpose and design.

Arguably, the place of everyday horizontal discourses in the secondary curriculum remains 'illegitimate' since Whitty et al. (1994) carried out their research. In sub-section 7.2.3 of chapter 7, I point out that WBQ co-ordinators place less emphasis on Communication and Application of Number as preparation for work and 'life' and prioritise instrumental and universal purposes for their integration, these being more closely related to the pedagogic context in which Essential Skills are developed and assessed. These purposes include helping students boost their performance (and grades) in Optional subjects such as A level Mathematics (by using Application of Number at Level 3), making up for the early specialisation at the age of 16, and remediating for previous education 'failings'.

Remediating for previous education 'failings' can be considered the primary purpose of Essential Skills, particularly when we take into account their evolution (see section 2.2 of chapter 2 and section 6.4 of chapter 6). The extent to which the integration of Communication and Application of Number, as segments of re-contextualised horizontal discourse, can be used to make up for past education 'failures' is questionable. Through my analysis in chapters 7 and 8, I show that the only option teachers/tutors have in facilitating less 'able' students to acquire the specialised knowledge that forms part of the discursive basis of Skills is to weaken the selection frame in terms of letting students decide on written/reading materials and numerical problems and to offer them

additional support through tutorials (i.e. weakening the pacing frame by adding additional school time). In any case, the opportunity to weaken the frame of pacing is limited and so is the current curriculum space for Essential Skills.

Based on my analysis in chapters 7 and 8, I can also suggest that the implicitness of the sequencing rules in the integrated Communication and Application of Number practices can be a further feature that hinders their universalist potential. Although these two Essential Skills differ in the sequencing of what students should learn first and second (i.e. context-tied operations or context-independent principles), with theoretical instruction always preceding application in the case of Application of Number, even if it is a matter of 'refreshing' knowledge, the practice of both of these Skills exemplify cases of invisible pedagogies in terms of their sequencing rules. The invisibility of these rules creates a situation where students are not aware of what is expected of them at each stage of the two-year programme and of the rate of expected acquisition (i.e. the programme stage by which knowledge acquisition should take, or should have taken, place). When Essential Skills are 'embedded' in different components of the Welsh Baccalaureate curriculum, control of pacing and sequencing rests with the person 'mapping and tracking' Communication and Application of Number tasks onto the curriculum (i.e. the ESW or– WBQ co-ordinator). We therefore get a peculiar situation in which pacing and sequencing is determined by the structuring of the main Core or Optional programme and the sequencing of the main activities in which Communication and Application of Number are integrated, cancelling out in this way any universalist standard of progression for the Skill.

Being part of official education and subject to evaluation (assessment) using an external common standard means that the visibility of Communication and Application of Numbers practices is ensured via their hierarchical and criterial rules. It is particularly interesting to note that despite their resemblance to competence modes of pedagogised knowledge and the intention to engage teachers/tutors as facilitators rather than *instructors*, the power relations between teachers/tutors and students are clear and visible. This also appears to

be the case in more informal educational interventions such as parenting skills classes and behaviour-changing classes for improving students' attendance, social and communicative competences (Power and Whitty, 2008 cited in Whitty, 2010). Through the research of Power and Whitty we get to see that despite the weak interdiscursive relations between everyday knowledge of the family and school knowledge, the power relationship between the teacher and the taught can remain visible. Their argument is that, this is a manifestation of the problems arising from the complexity of genericised knowledge when used for compensatory educational purposes. As Power writes (2008, pp. 33–34):

> "the strong framing theoretically enables the everyday to be developed into the esoteric, the context-dependent into the abstract, the horizontal discourse into the vertical discourse. But there is no esoteric, abstract or vertical knowledge within it – or at least not as currently developed. It is empty of knowledge content – or at least the kind of knowledge that will enable disadvantaged pupils to have access to the forms of knowledge available to advantaged children."

In my analysis, and given the assessment-led approach to the integration of Essential Skills and institutional and individuals' commitment to certification, the visibility of evaluative rules is particularly prominent. When examining what is considered to be a successful performance in Communication and Application of Number, we see the splitting of evaluation criteria into *pedagogic criteria for practice* and *assessment criteria*, with the first set often privileging more context-independent meanings. The former characterise *instructional forms* of practice which are deterred and restricted by 'embedded' approaches to integration (see section 7.3 of chapter 7). Regardless of the approach to their integration, the manner in which the visibility of hierarchical and evaluative features of Communication and Application of Number is achieved gives rise to a range of mixed pedagogies across the six education sites of the study.

From the literature (Morais and Neves, 2001; Morais and Pires, 2002; Bourne, 2004; Rose, 2004; Reeves and Muller, 2005; Hoadley, 2007), we can conclude that mixed pedagogies can be beneficial in helping students from low(er) socio-economic backgrounds to successfully acquire school (specialised) knowledge

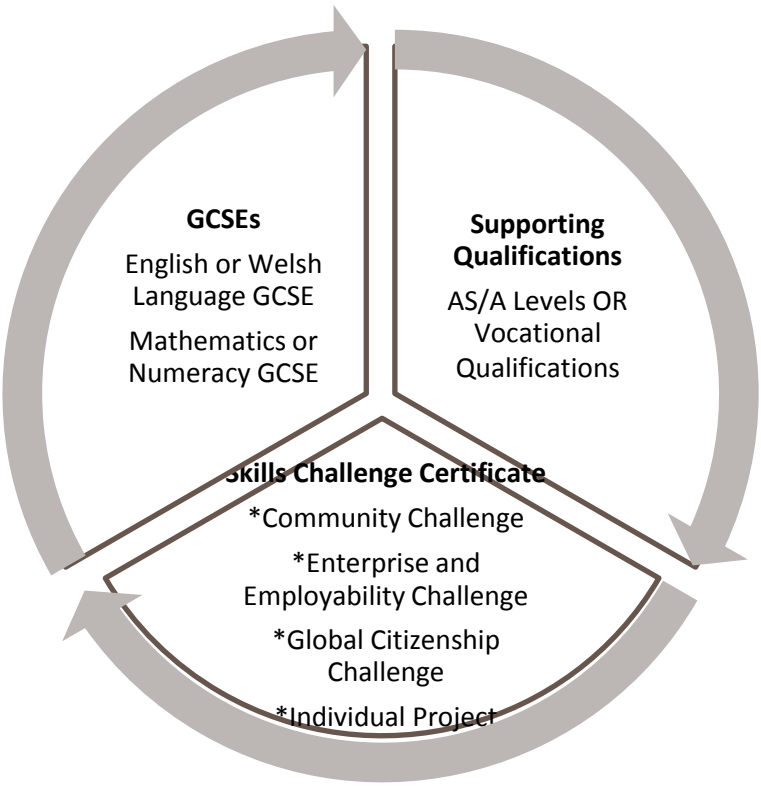
as a vertical discourse. These mixed pedagogies are characterised by strong interdiscursive relations between everyday and school knowledge, strong interdisciplinary relations between subjects, weak framings of pacing and visible hierarchical and evaluative rules. However, my analysis offers a different perspective of differentiating between student 'classes': given the basic nature of Essential Skills and their shared specialised discursive basis with certain Options (e.g. English, Media Studies, Journalism, Mathematics, Engineering, the Built Environment), in my findings we do not so much note students' social background (through the school they attend) but instead we see their 'background' through the Science or Humanities-based 'cultures' of their Optional programmes of study.

In this light, and based on my findings in chapters 7 and 8, the purpose of Essential Skills to make up for the early specialisation at the age of 16 seems to be compromised by the limited curriculum time allocated to them, the prioritisation of *assessing forms* of practice, a lack of specialised teachers and the fact that it is Optional programmes of study that act as the main 'site' of specialised (re-contextualised disciplinary) knowledge acquisition rather than the generic Communication and Application of Number. Equally, and in relation to the second universalist purpose (i.e. the 'complementary' one), it is only Application of Number at Level 3 that can enhance Mathematics or Science-based Optional programmes of study. By providing a different knowledge context and focus, the procedural and operational everyday knowledge of this Skill can complement the knowledge a certain group of students acquire. This was one of the earliest indications in the study that the policy promise of the Welsh Baccalaureate to provide a common learning Core is failing to materialise. This comes as a result of the voluntarism underpinning upper-secondary education in Wales and the UK, the low percentage of students following Application of Number at Level 3 and the fact that Optional programmes are the main 'sites' of transmitting and acquiring specialised (re-contextualised disciplinary) knowledge. As my analysis shows, the availability of specialist teachers also seems to be an important factor in this case of integration. When teacher specialisation is weak or absent, we see instances of college tutors evoking *the power of certification* and refraining from engaging in

instructional forms of practice. Consequently, and although they can maintain their dominant position and make hierarchical rules visible by taking control of the evaluative (assessment) criteria, they risk depriving their students of the opportunity to 'complement' their Optional programmes of study.

Before concluding the two sub-sections in which I discussed the integration of generic forms of knowledge into the Welsh Baccalaureate curriculum, I would like to consider my empirical observations and findings in the face of two changes implemented in the new Welsh Baccalaureate (i.e. the compulsory introduction of GCSEs as the accredited numeracy and literacy qualifications and the embedding of numeracy and literacy in the Skills Challenge Certificate). In doing so, I discuss any implications these changes may have for teaching and learning from September 2015 and I reflect on the usefulness of Bernstein's and social realists' theoretical insights to my study.

Figure 11. *The new Welsh Baccalaureate Advanced (from September 2015)*



Undoubtingly, the Welsh government has renewed its vision and plans for Essential Skills, their purpose in different curricula and how these should be developed and assessed. From September 2015, the newly developed suite of Essential Skills Wales and Wider Key Skills qualifications (WG, 2015) will be a significant component of apprenticeships and other forms of work-based learning. They will also continue to be used in adult and community education settings. In a way, we are seeing the return of Essential Skills to the 'origin' of their construction and the diminished importance placed on their remediating purpose in upper-secondary education. Arguably, this move ingrains even deeper the divisions of the tripartite system I discussed in sub-section 9.3.1 and associates Skills with the occupational/technical track, as well as the view of generics as interruptions or resistance to the normality posed by performance models in official education (Bernstein, 2000, p. 51).

The universalist objective of remediating for past education 'failures' is now to be achieved through the compulsory addition of the newly developed GCSEs in English/Welsh and Mathematics/Mathematics Numeracy. All students of the new Welsh Baccalaureate will need to achieve an A*– C grade in these subjects by the end of their upper-secondary education. So while there are indications of a possible shift towards vocational qualifications, the introduction of the GSCEs and the addition of an the Individual Project, with its extended writing, that accounts for 50% of the overall Skills Challenge Certificate grade, can be seen as a shift towards academic goals and relevance and away from the employability focus and manual-base of Communication and Application of Number.

The introduction of the new GCSEs, however, also carries the entrenched division between theoretical and applied knowledge; the GCSE Mathematics and GCSE Mathematics Numeracy qualifications vary significantly in terms of content and its arrangement. The latter qualification, for example, is to be taught and assessed using context-specific examples and does not cover theoretical elements of geometry and other algebraic calculations and knowledge. It may be that academically less 'able' students who are working towards a GCSE in Mathematics may benefit from the integration of literacy and numeracy in the four Challenges, in a similar manner that Application of

Number at Level 3 served a complimentary purpose to the study of A level mathematics.

It remains to be seen, of course, how literacy and numeracy are to be integrated in the Skills Challenge Certificate and the pedagogic practices that arise across different schools and colleges and when teaching students who follow different Optional (or Supporting, as they are termed in the new Welsh Baccalaureate Advanced) qualifications. It is envisaged (WJEC, 2016) that literacy and numeracy are both to be embedded and assessed in the Individual Project; numeracy is to be embedded and assessed through the Enterprise and Employability Challenge and literacy through the Global Citizenship Challenge. It is difficult to foresee how teaching and learning may differ from the practices I studied, but it is very likely that the problems of the embedded approach arising from the invisibility of pacing and sequencing rules of Communication and Application of Number, as well as the lack of specialist teachers, will persist. It is also very likely that literacy and numeracy, and similarly to Communication and Application of Number, will be re-contextualised and guided by the principle of naturally occurring evidence, hence will also become an 'assessment strategy' rather than a taught component. Given that the extended Individual Project will now carry a 50% weighting of the overall Skills Challenge Certificate grade, the variability between the two distinct 'classes' of students that emerged from my findings (i.e. those who follow solely Mathematics and Science-based or Humanities-based subjects) will more likely persist. In the view of my findings and the changes to the Welsh Baccalaureate, the introduction of literacy and numeracy in its current form can do very little to address the issue of early specialisation in upper-secondary education by contributing to the provision of a common learning programme to all students.

Influenced by Bernstein's and social realists' theoretical insights, throughout my thesis, I have signalled that the provision of a common learning programme to all students, and in line with the social democratic ideals of universal entitlements and equality of outcome, is more likely to be achieved, partially even, by making available to all students abstract knowledge that is part of an organised system of meanings. At present, the type of knowledge that is more

valued by selective universities and whose emergent properties can allow it to transcend specific contexts and personal experiences cannot be made universally available to all young people through the integration of generic pedagogic modes and the weakening of the boundaries between disciplinary knowledge fields and curriculum components. Perhaps the greatest usefulness of social realism is that it establishes an epistemic discontinuity between different types of knowledge, whether they are termed theoretical or practical or context-independent or procedural, and links knowledge differentiation to the distribution of educational opportunities and outcomes. The greatest usefulness of Bernstein's theoretical project is that it sensitises us to viewing boundaries as the expression of relations of power, making the relationship between different types of knowledge as the relay for power relations. In chapter 6, I discuss the influence universities have on the upper-secondary curriculum and the stratification of upper-secondary education. In chapters 7 and 8 we see other persisting boundaries in upper secondary education such as boundaries between grading bands, boundaries between teachers and students and boundaries between specialised (i.e. subject) teachers and Skills teachers. As Young and Muller (2015, p.72) write: "educational boundaries are social but also real; that is, they cannot be dissolved, at least in the short term, without serious consequences for most if not all learners." In examining this reality, the main limitation of the theoretical insights offered by Bernstein and Young's social realism, and as I have pointed out in sub-section 9.3.2, is the challenge the pose for empirical research.

In concluding the last two sub-sections of this chapter, the compulsory integration of Communication and Application of Number into the Welsh Baccalaureate has been a notable attempt to change the relationship between specialised (re-contextualised disciplinary) and everyday knowledge. The compulsory integration of Core/Key/Essential Skills into upper-secondary curricula has been a gradual and challenging process over the last 40 years. At present, it looks like the mainstreaming of skill-based pedagogies is likely to be an enduring feature of upper-secondary education in Wales. The question remaining is whether the integration of literacy and numeracy into the Welsh Baccalaureate curriculum in its previous, current, or any form for that matter,

can fulfil universalist promises rooted in social democratic ideals. Based on the observations I have made during my study, this seems unlikely. Before finalising my answer to this question, however, it is essential that I discuss issues of egalitarianism and social (curriculum) justice.

9.3.4 Social Realism, Powerful Knowledge and Justice

Young (2008) explains how his contribution to the social realist school of thought was significantly shaped by his involvement in policy-making in post-Apartheid South Africa. This involvement started shortly after proposals for a British Baccalauréat (Finegold et al., 1990) were made (see section 2.3 of chapter 2), proposals in which Young was also a key figure. Behind the UK proposals and the South African reforms were the same socio-political concerns of educational disadvantage in terms of 'who' gets 'what kind' of post-compulsory education and how unequal access to different 'goods' of education multiplies to further inequalities (e.g. progression onto Higher Education, and distribution of employment gains and high-status jobs). Undoubtedly, social realism has had a profound impact on education policy and academic research in South Africa (Young, 2008). One of its distinctive features as a school of curriculum theory is the appeals it makes to social (curriculum) justice. Young expresses this in a single sentence: "the extent to which a curriculum is underpinned by powerful knowledge is both an epistemological and a social justice issue" (2013, p. 196).

The only coherent and direct attempt to evaluate social realism on its appeals to social justice is made by Zipin et al. (2015). Their three grounds for critiquing social realism are:

- the claim that no knowledge can ever be truly and fully objective;
- the Vygotskian dialectical relationship between scientific (specialised) and everyday knowledge; and
- social realism's philosophical underpinning that marginalises axiological (ethical) purposes of education in privileging epistemological (cognitive) ones.

Based on the above three grounds, Zipin et al. conclude that the social justice basis of social realism is too weak.

For the purpose of discussing the two parts of my research collectively, I wish to engage with the social (curriculum) justice basis of social realism, but pursue a different, and empirically grounded, approach from the one of Zipin et al. (2015). The question of 'who' gets 'what kind' of upper-secondary education and debates about unequal access to different 'goods' of education (e.g. certification and knowledge) can be framed as an issue of distributive justice, and this is the perspective I adopt for my discussion in this sub-section. Although this view can be challenged for being crude and for failing to account for the complexity of educational justice and its multiple dimensions (Power, 2012; Power and Taylor, 2013; Whitty et al., 2015), it is closely aligned to the social realist school of thought (see Muller, 2012; 2014) to build a critique *from within*. It also allows me to accommodate my analytical decision to treat qualificational and curricular aspects of the attempt to bring together academic (general) and vocational education as distinct while acknowledging that these aspects are inextricably intertwined and linked at the points of purpose, function and evaluation (assessment).

The social realist distinction between knowledge of the powerful and powerful knowledge that I discuss in section 3.5 of chapter 3 can be loosely mapped onto the distinction between formal and epistemological access (Muller, 2014) borrowed from the South African philosopher Morrow (2009). Formal access is reflected in the instrumentality underpinning the perceived and actual benefits of completing the Welsh Baccalaureate Advanced Diploma in the study by Taylor et al. (2013a). It is also the prime focus of policy-makers in terms of measuring retention, achievement, education programme completion and progression. In this light, it is almost synonymous with accessing certification and Higher Education, making the Welsh Baccalaureate a strategy of progression onto further study. Epistemological access, however, and approaching it from the sociological camp of social realism (see discussion in section 3.5 of chapter 3), is linked to the transmission and acquisition of powerful knowledge and the resources (e.g. curriculum) that enable students to

move beyond knowledge that is dependent on sensory, everyday experience towards establishing a relationship to the social world that is mediated by more abstract disciplinary concepts.

Social realists (in particular Wheelahan, Young and Muller) advocate breaking up the monopoly of epistemological access (e.g. access to disciplinary frameworks of meaning) by the egalitarian distribution of one of the 'goods' of education (i.e. powerful knowledge) so that it reaches privileged and disadvantaged students equally. It is unclear whether this concept of social justice is warranted, based on the intrinsic 'common good' of the ends the right of acquiring powerful knowledge serves or the equal moral worth of all students. Both are open to debate and critique,[45] but this is beyond the scope of my analysis and thesis.

Equally debatable is the assumption that privileged students have access to powerful knowledge given the social realist assertion that there different forms of powerful knowledge (i.e. STEM, Social Sciences, Arts, Humanities), each contesting for power and each gaining dominance in different socio-historical contexts (Young and Muller, 2013). My empirical findings exemplify this point, as we see higher-achieving students across all six education sites of the study not having the opportunity to engage with abstract, specialised (re-contextualised disciplinary) knowledge that is beyond the realm of their Options, even if this knowledge is at the basic level demanded by the pedagogic practices of the Essential Skills (e.g. knowledge of textual patterns, styles of writing, concepts of the audience, mathematical principles). This is in effect the issue of early specialisation or curriculum breadth versus depth that again is beyond the focus of my discussion here.

Drawing from Walzer's idea of complex equality (1983; 2004), my focus is on social realists' concept(s) of equality and their ambiguity about whether and

[45] See for example the classic work by Williams (1973) in which he argues that there is a deep conflict between the Kantian idea of equality of respect and equality of opportunity, a standpoint which would come into opposition with any attempt to withdraw or complement Optional programmes of study.

why powerful knowledge is the dominant 'good' of education, the acquisition of which will provide students with the opportunity to acquire further 'goods' within education and wider society. Social realism's basis of social (curriculum) justice is undoubtedly an egalitarian one, but it is grounded in a notion that Walzer (1983; 2004) terms simple equality, that is, the assertion that monopoly is unjust and that the prime or dominant 'good' of education should be equally distributed. This assumption is exemplified by the work of Wheelahan (2007; 2010), Young (2008; 2014) and Young and Muller (2013) who seem to consider powerful knowledge as the dominant 'good' of education as well as a convertible 'good', meaning that its unequal acquisition will multiply inequalities. Their work also tends to prioritise curriculum issues at the expense of pedagogic practices and certification (linked to assessment) and downplays issues of dominance and legitimation.

One line of work in the social realist school of thought which centres on issues of domination, legitimation and 'knowledge practices' is the work of Maton. This work comes closer to acknowledging the struggles over resources and status within the field of education as an autonomous field of practice in society, struggles that are constitutive of the field itself. Maton's languages of legitimation (2000; 2006; 2007; 2014b) acknowledge that agents' pedagogic practices are indicative of 'what matters' in the field, 'what counts' as success and 'what should' be used as a measure of achieving success. Through my empirical findings in chapter 8, I exemplify how the alternation of what counts as valid knowledge to be transmitted and acquired and as a valid display of students' performances is driven mainly by purposes of certification. Furthermore, the alternating legitimation of specialised (re-contextualised disciplinary) knowledge and everyday knowledge is also linked to timetabling and administrative arrangements, as well as financial concerns and the availability (or absence) of specialist teachers. This raises the question of whether the dominant 'good' of education, the acquisition of which leads to the opportunity of acquiring further 'goods', is powerful knowledge or certification.

Practical constrains, financial concerns and individual and institutional commitment to the demonstration of knowledge acquisition (i.e. certification)

are issues that will most likely persist after the introduction of the new Welsh Baccalaureate. Questioning which is the dominant 'good' of education brings us to Walzer's views of complex equality and the belief that it is dominance and not monopoly that is unjust (1983; 2004). According to his theory, even if powerful knowledge (or certification) is monopolistically distributed to different social groups, if these are not convertible into further 'goods' (e.g. Higher Education and academic discipline membership, financial gains in the labour market), inequalities will not persist. His basic assertion is that no education 'good X' should be distributed to men and women who possess some other education 'good Y' solely on the basis of possessing Y and without regarding the societal meaning of X.

Arguably, in practice, the two prime 'goods' of education (i.e. knowledge and certification) are not only convertible but also inextricably intertwined, as I show throughout my empirical chapters. This means that knowledge of the powerful and powerful knowledge and formal and epistemological access are not entirely distinct types of educational 'goods' and therefore they cannot be easily, if at all, distributed separately and based on a distinct distributive principle. This assertion opens up a challenge for social realists: to either establish distinct and non-conflicting distributive principles for these two prime 'goods' of education or to consider whether their theory is in a position to accommodate the notion that there is no naturally dominant 'good' of upper-secondary education and to support a quest for finding a third, new, 'good' to be monopolistically distributed to a new social group in order to promote social (curriculum) justice.

For example, through my analysis I make clear that BTEC Engineering/Built Environment students and students from all socio-economic backgrounds that complete A levels in Mathematics and Sciences are the only ones who are able and willing to tackle Application of Number at Level 3, the 'exclusive' Essential Skill. Access to this form of knowledge (i.e. STEM) is at present more valued. With labour market needs and workplace 'relevance' as knowledge re-contextualisation principles in a scientifically driven knowledge economy, other

'goods' of education include STEM careers with significant professional and earnings opportunities. It is therefore through the belief in the inherent democratic nature of scientific areas of study, when compared to the Humanities for example (Maton, 2006; 2007), that we might harness the potential for re-distribution of the 'goods' of education in Wales. Even in these cases of re-distribution, however, equality will be threatened by the current gender bias (Xu, 2008; Kiwana et al., 2011; Moss-Racusin et al., 2012; Silim and Crosse, 2014; Wallace and Sheldon, 2014;) in these traditionally male-dominated 'powerful' areas of knowledge and employment.

In concluding the largest section of this chapter, I return to my underlying motivation for completing this study, that is, my belief that researching curriculum principles and principles of justice can potentially contribute towards achieving educational equity and minimising educational disadvantage in a particularly competitive level of study (i.e. upper-secondary). Throughout my thesis, I present and discuss a number of attempts to reform this important stage of education, which I see as a minefield for policy-makers and as a major transitory step in the life of young people. In chapters 2 and 3, I discuss proposed models of Baccalaureates that did not materialise, and in chapter 6, I bring to attention systemic and institutional factors that can limit the unification of academic (general) and vocational education. In the latter chapter, I also justify my concerns about the Welsh Baccalaureate deepening and masking existing divisions between 'powerful' and 'less powerful' qualifications and progression routes to Higher Education.

Behind any system reform and any qualification and curriculum innovation, there are structural and political realities. One of them is the deep-seated tradition of specialisation. On this, Beck (2013, pp. 187–189) notes an unnegotiable tension between breadth and specialisation in education systems that are characterised not only by intensive competition in terms of securing access to Higher Education, and in particular higher-status selective universities and courses, but also by a commitment to measuring institutional performance. In this light, the introduction of the compulsory skill-based component of the new Welsh Baccalaureate (i.e. the Skills Challenge Certificate) with its embedded literacy and numeracy, and similarly to the integration of

Communication and Application of Number, cannot compensate students for not taking a qualification in a 'facilitating' A level subject such as English, Mathematics or History.

A second reality is the ingrained tripartite system of upper-secondary education constantly re-engineered to reflect societal and technological changes, as well as national political processes. This tripartism is more likely to continue to change form than to disappear and this holds true for all UK nations. A recent example of how change is instigated is the apprenticeship reforms in England, which, following on from Richard's (2012) review of apprenticeships, is soon to re-instate an occupational, practical track via the introduction of the new 'Trailblazer' employer-led apprenticeships. In Wales, we see the association of Essential Skills with the occupational/technical track and informal education, while those following the new Welsh Baccalaureate programmes will be required to be educated to a minimum standard of an A*- C grade in GCSEs English (or Welsh) and Mathematics (or Mathematics Numeracy). Under the overarching Welsh Baccalaureate awards, distinctions between applied and more theoretical qualifications will remain. Of particular concern, given the universal adoption of the Welsh Baccalaureate as the national 14-19 qualification, is its resemblance to the GNVQs and the potential to disadvantage its holders, when compared to those who have completed three or four A levels, to achieve equal outcomes in terms of accessing and/or completing competitive courses in selective universities. If my claim that the Welsh Baccalaureate is the newest form of the applied track is valid, then it will be interesting to see whether and how the academic track is re-established. If we are to place trust in Bernsteinian theoretical insights, then we ought to be treating students' homes as one of the main sites of knowledge acquisition.

Any discussion on qualifications, curriculum and social justice cannot overlook evidence that it is social class that determines to a large extent educational opportunities and attainment and particularly access to prestigious, elite universities (Curtis et al., 2008; Whitty et al., 2015). What the empirical aspects of my investigation indicate is that the integration of Communication and Application of Number may have been a cheap alternative to English and

Mathematics, but at this level of study, it cannot be a strategy for achieving universal entitlements and equality of outcome. The same applies to the overarching award of the Welsh Baccalaureate Advanced Diploma. Both of these attempts to bring together academic (general) and vocational education may contribute to the creation of a more subtle system of differentiation, but upper-secondary education in Wales and the UK will most likely continue to be highly specialised, competitive and stratified.

9.4 The Way(s) Ahead

As Raffe (2002, p. 1) writes, "there are at least two ways to consider the futures of education" with one of them being based on extrapolating the future by using existing trends within a national education system. This is the course that he and his colleagues pursued in a project that examined the trend of unifying upper-secondary academic (general) and vocational education in a number of OECD countries. They (Raffe et al., 1997; 1998a; Raffe, 2002; 2005a; 2005b) bring to attention a number of factors that can influence the progress of unification including the organisation of the education systems, the role of academic (general) and vocational education, the structure and organisation of the labour markets, and the peculiarities of Higher Education systems.

My claim in this concluding chapter is not that I am in a position to propose specific policies or that I have uncovered a changing trend in bringing together academic (general) and vocational upper-secondary education in Wales. More modestly, I believe that my analysis has the potential to stimulate discussions centring on the possibility and desirability of a shift towards vocational qualifications under the overarching award of the Welsh Baccalaureate Advance Diploma. My findings and discussion in chapter 6 point at one of the ways ahead, that is, to fulfil my original intention (see section 5.2 of chapter 5) to describe *who* the Welsh Baccalaureate students are, based on their socio-demographic and educational characteristics, and *what* Optional programmes they complete. This is one of the ways in which we can establish whether school students are switching from academic (A level) to vocational (BTEC) Optional

qualifications and the typical socio-demographic and education profile of these students.

In his 2002 paper, Raffe concludes that, despite the common global rhetoric on the knowledge economy, parity of esteem and flexibility of pathways, national unification strategies can vary significantly. He ends his paper by reminding us that we have choices, and he gives a quote by the director of the Swiss federal office for vocational training and technology: "Globalisation leaves countries' decision-making power in the field of education, research and technology intact; it is up to us to decide how much must be invested in this crucial field and what kind of education system we want" (Clement et al., 1999, p. 44 quoted in Raffe, 2002, p. 10). The second way of considering the futures of education according to Raffe (2002, p. 1), therefore, starts with *the kind of education* we want and intercalates the implications for education from a vision of a future society and the principles underpinning it.

This takes us back to Rhodri Morgan's expression of the "clear red water" and the social democratic ideals of Welsh society (Power, 2016, p. 286) that I first mentioned in chapter 1. One of the contributions of my analysis is establishing the limited extent to which the integration of Communication and Application of Number with all Optional programmes of study can contribute towards the fulfilment of the policy promise to provide a common learning Core to all students. In this light, and from a practice point of view, my work also has the potential to inform and stimulate discussions around alternative ways of integrating these two Essential Skills, especially now that the burdensome and time-consuming portfolio of evidence has been withdrawn.

In the new Welsh Baccalaureate, the development of literacy and numeracy at the upper-secondary will be achieved through their embedding (see section 7.3 of chapter 7) in the four skill-based Challenges. This signals that there may be fewer opportunities to follow *instructional forms* of practice (see chapter 8) that privilege the transmission of context-independent meanings and the understanding and application of theoretical principles. My findings and discussion in chapters 7 and 8 point to a second way ahead that I am considering following: to examine the interplay between pacing/sequencing

rules and the two universalist purposes of literacy an numeracy (i.e. complementing Optional programmes of study and making up for the early specialisation at the age of 16) in the creation of stratified generic pedagogic practices.

Inevitably, Raffe's second way of considering the futures of education (2002) shifts attention to debates on the purpose of education and to curriculum theories as normative projects. For my research, I decided to draw theoretically from Bernstein's sociological project but I also discuss how elements of his work provide a pillar for the social realist curriculum theory, bringing to the forefront issues of differentiating between specialised and everyday knowledge, and between the institution of economy and education. In that respect, my exploration of generics and their integration with different curriculum components has empirically uncovered aspects of their complexity and misrecognition.

With indications that Communication and Application of Number are different 'species' of genericism and the role of certification in relaying the signifiers in their socially empty pedagogic practices, there are a number of possible ways ahead: researching the internal relations of knowledge within different generic modes of pedagogy and researching the construction of students' identity in relation to the concept of trainability and institutional and individuals' commitment to certification.

Before concluding this chapter, and in effect my thesis, it is worth pointing out a final scholarly agenda for the future that also happens to be a significant theoretical challenge for social realists and their appeals to social justice. Contrary to the pluralistic views and local meanings of social 'goods' that underpin Walzer's theory of distributive justice (1983; 2004), the opening quote of chapter 1 exemplifies the social realist inclination to a non-relativistic approach to both knowledge and, by extension, justice. Young (2008, p. 27) writes, "if all knowledge is from a standpoint and there are no standpoint-independent criteria for making judgements, appeals in terms of 'social justice' or the 'common good' become no more than other standpoints". Moving beyond a conception of social justice as conventional, that is, linked to the specific

values of communities and historical eras, a major challenge for theorising the social realist basis of social justice is to establish a relational view of principles of justice that transcend both intrinsic and relativistic/conventionalist ways of linking justice to the 'common good'. So far, the social realist curriculum principle of powerful knowledge – characterised by sociality, emergence, and irreducibility to the agents of its production – has been nebulous and controversial (Scott, 2008, pp. 48–51; White, 2012; Beck, 2013). One can only imagine that a similar transcendental, objective and standpoint-independent principle of justice will be subject to the same reception and criticism, but this still remains to be put forward and debated.

In concluding my thesis, and having indicated the significance of my research in terms of addressing a number of questions with significant policy, theoretical and practical implications, I find that I have also identified a sense of political realism that I see as fundamental to establishing common ground in this contested territory. By studying the relationships between academic and vocational qualifications, specialised and everyday knowledge, between access to quantitative equality (i.e. formal access) and access to social (curriculum) justice, I inevitably noticed parallels with the ways in which the terms policy, theory and practice are used in the field of activity in which I am engaged. Policy wishes to ally itself with theory, leaving practice and practitioners to carry the can for failure.

As I make clear, however, policy, even at the level to which it aspires, contains its own paradoxes and contradictions. Furthermore, the very attempt to separate out policy from its implementation for any purposes other than to win a specific perspective is perhaps a misrepresentation of the nature of what is involved. The curricular road to social justice will most likely not be built via the implementation of theoretical policy, but by the identification of successful practice and the theorising of how that success was achieved.

In addition, the in-built dysfunctions of the policy–implementation dichotomy may pose a particular threat to the very notion of the kind of democratic society

that the Welsh education system seeks to serve. Across the Western democracies in the second decade of the 21st century, we see an increasing disjunction between voting populations and the political class that forms their governments. The voters' weary expectation of the unkept promises is being replaced by revulsion at the misinterpreted statistics, the gross oversimplifications and the alluring rhetoric. Populist demagoguery becomes ever louder. It is all the more important, therefore, that those engaged in upper-secondary education in Wales do not also appear to overpromise results as they sketch legitimate aspirations.

Finally, then, it is to these two areas of thought and action that my thesis makes its contribution.

A Personal Epilogue

"Ούτω Μαιάδος υιόν άναξ εφίλησεν 'Απόλλων παντοίη φιλότητι, χάριν δ' επέθηκε Κρονίων. Πάσι δ' ό γε θνητοίσι καί αθανάτοισιν ομιλεί: παύρα μέν ούν ονίνησι, τό δ' άκριτον ηπεροπεύει νύκτα δι' ορφναίην φύλα θνητών ανθρώπων."

"Thus the lord Apollo showed his kindness for the Son of Maia by all manner of friendship: and the Son of Cronos gave him grace besides. He consorts with all mortals and immortals: a little he profits, but continually throughout the dark night he cozens the tribes of mortal men."

Homeric Hymn to Hermes, Transl. Alexander (2007, pp. 156–157)

It is not a novelty to associate the Olympian god Hermes with late modernity and the era of globalisation. Samuels (1993) uses the myth of Hermes to explore contemporary economic and political culture, and Neville (1992) argues that the postmodern condition can be seen as an exaggeration of the image and energy of Hermes. Although I never intended to follow a mythological approach to my research, I find it fascinating that a number of key issues that I encountered during its course reflect Hermean 'traits'. Similar observations are also made by Whitty (1997) who discusses a series of Education Acts in England and Wales in relation to the domains 'ruled' by the god of postmodernity: the marketplace, change, flexibility, diversification, anti-universalism and, ultimately, paradoxical tensions.

I saw Hermes, the restless god of change, behind the "frenetic hyperactivity" apparent in the "constant stream of initiatives, new curricula and qualifications" (Coffield, 2006, p. 4). I only had two years to complete the empirical part of the study before numerous changes were implemented: the grading of the Core Certificate, the replacement of the Core Certificate by the skill-based Challenge Certificate, and the insertion of a new GCSE in Numeracy. I would be dishonest if I tried to cover my personal antipathy towards the excessive emphasis on 'can do' and learning outcomes in education. As a vocational student in Greece, I was often asked to theorise my personal practice and to turn practical problems into

theoretical ones. So, I saw Hermes as the psychopomp[46] behind pseudo-progressive education practices that strip out specialised knowledge from education and turn teachers into 'de-professionalised' (Beck and Young, 2005) fellow travellers ready to accompany students to their 'end' destination, this often being the achievement of a certificate. It is Hermes, the god of the marketplace, who stood behind the subordination of education to economic imperatives (Ball, 2008) and the seduction of knowledge to the charm of the market and its products. These products include certification, "the signifiers whereby temporary stabilities, orientations and evaluations are constructed" (Bernstein, 2000, p. 59) in the socially empty practices of generics. Hermes the trickster, the rogue, was behind policy promises of bringing together the 'academic' and the 'vocational' in a divided education system of a stratified Welsh society (Gorard, 2008; Taylor et al., 2013b). Image over substance is another Hermean trait and so I saw him behind completion and attainment rates. It is not just education professionals that want to be seen to be doing well but education policy-makers too. Recently, the good news for the latter is that the Welsh Baccalaureate Advanced Diploma is widening Higher Education participation by helping young people who, based on their GCSE results and socio-demographic characteristics, may not have been able to access university (Taylor et al., 2013a), at least in terms of formally accessing (Morrow, 2009) buildings and certifications.

Hermes may at times be an illusionist and a rogue, but he does not conflate or dissolve boundaries; rather, he simply crosses them. Ultimately, the study was about boundary drawing. It was about the boundaries between vocational and academic qualifications, between different 'classes' of knowledge and students, between curriculum and assessment. As with all boundary drawing we have 'classification' and inevitably hierarchical positionings privileging one or the other side of any division. The opening passage of this personal epilogue refers to the ending of a myth in which Hermes steals and sacrifices an ox. He then carves it into 12 pieces and proceeds to equally honour all 12 gods of the Pantheon including Zeus, the personification of dogmatism, one-ness and

[46] Psychopomps are responsible for guiding souls on their journey to the afterlife.

absolute truth, and himself, the personification of multiple truths and realities. It is no surprise to read that the ox was stolen from the herd of Apollo, the god of Logos and binary distinctions, the archetypal image of the Enlightenment. The myth continues by unravelling their quarrel, their reconciliation, and the friendship struck up between Hermes and Apollo with the blessings of Zeus. Inevitably, during my research, I had to encounter and accept a number of tensions and paradoxes. I found Apollo's binary divisions perplexing in the world of Hermes, a world of multiple realities, a post-'everything' world of complexity that no longer has room for universals and boundaries in its thinking. Completing the study was a long and challenging journey. Interestingly, Hermes is also the patron of travellers and he is worshipped at crossroad milestones. I certainly had to stop at many crossroads during the study to decide which path to follow and at times to even question whether I should carry on.

I added this personal epilogue as I felt the need to carve out some space that would not be bound to the writing conventions of a PhD thesis. If in my concluding chapter I pointed out the significance of the study in terms of addressing a number of issues with important policy, practical and theoretical implications, here I would like to point out another dimension of its significance: from a personal point of view, and as a novice researcher, I was given a unique opportunity to work with two very knowledgeable and kind people. Both of my supervisors helped me develop both professionally and personally and they turned my PhD journey into a remarkably enjoyable and productive period of my life. The personal significance of the study is that it has truly opened up the way(s) ahead that I proposed in chapter 9 in manners that I could not have imagined four years ago. It is more than a matter of justice or a gesture of gratitude, therefore, that I start and close my thesis with acknowledging the interest, commitment and advice of Prof. Gareth Rees and Prof. David James.

Appendix 1

First coding framework - data driven codes

1) Aims /Role of Communication Application of Number (part of WB curriculum)	2) Assessment	3) Practice/Skill Development
- Preparation for University - Complementing Options (making up for deficiencies) - Continuing PSE and LNF - Developing Life Skills - Preparation for Work - Certification for Ability (producing work to a certain standard)	- Regime of 100% - Evidence Hunting (collection of evidence) - Criteria - Box Ticking - Finished Product (emphasis on) - Capturing Fine Distinctions (difficulty) - Rules of Practice (& examples, length of work, presentation, spelling, punctuation) - Moderator Feedback - Justification - Rationalisation - Skilfulness as organisation of work - Teacher professional judgement (in assessment)	- Fixing Development Process (artificial) - Value of Skills - Progression as Development Process - Prior attainment (part of skilfulness) - Confidence as Development Process - Context of Development Process (artificial) - Appreciation for Development Process - Rules of Practice - Opportunity to Practice - Skilfulness as Attention to Detail - Fine Distinctions in Skilfulness - Skilfulness as Specific Ability - Barriers to Development Process (time, resources) - Role of Teacher in Development Process - Role of Curriculum Organisation (space) in Development Process - Role of Context in Development Process

4) Delivery	5) Curriculum Elements	6) Aspects of Integration
- Administrative Issues (Linked to students following different options) - Barriers (HR, time, funding) - Types of Delivery (Lessons, merged, discreet units) - Teacher Role (task/material selection) - Teacher Role (assessment) - Teacher Specialisation (knowledge/experience) - Teacher Role (error correction) - Role of Departments - Teacher Training - Teacher Collaboration (other schools) - Trust of Exam Board to Centres	- Types of Knowledge (practical - theoretical) - Types of Practical Knowledge - Relationship Between Types of Knowledge - Relationship Between Skill and Context - Easiness/Difficulty in Making Relationship (between types of knowledge) - Value of Different Elements	- Material/Topic Relationship (transfer) - Barriers to Material/Topic Relationship (administrative, time) - Relationship Between Task and Purpose/Aim - Suitability of Optional Subjects (fit with Skill) - Suitability of Materials/Topic (need to meet criteria) - Artificiality of Context

Appendix 2

Interview schedule

Participant's Role: …… **Code of School/College: ……**

Date of Interview: …… **Notes:**

Checklist	☑
Sign Consent Sheet	
Invite and Answer Questions	
Consent to Record	
Check Recorder	

Tell participant about *STARTING THE RECORDER*

Tell them about FIRST ROUND of questions about Communication - SECOND ROUND about Application of Number

(ONE Question for Part 1)

1. Role and Purpose of Communication and Application of Number

(1a) Can you describe the role and purpose of (name of Skill)?

- How does (name of Skill) fit into the overall curriculum?
- What is the role of (name of Skill) in the Welsh Baccalaureate Advanced Diploma?

(1b) What would you say pupils/students learn as part of (name of Skill) at Level 2/3?

(Examples of additional questions - taken from recordings)

- *So on its own, a skill-based curriculum, how do you think it fulfils this aim?*
- *How well does Application of Number fil the knowledge gap for these students then?*
- *There are three elements to Communication, how each one of them fits in the curriculum?*
- *What about Application of Number at Level 3? You mentioned that it's not for everybody.*

(SIX Questions for Part 2)

2. Delivery of Communication and Application of Number

(2a) Tell me how (name of Skill) is delivered in your school/college

- Who teaches (name of Skill)?
- How is it timetabled?

(2b) Tell me how (name of Skill) is integrated

- How is (name of Skill) integrated in the Core?
- How is (name of Skill) integrated with A levels?

- How is (name of Skill) integrated with BTECs?
- What other programmes of study do you integrate (name of Skill) with?

(2c) Can you give me some examples of (name of Skill) activities at Level 2/3?

- Would you say these activities complement Optional courses?
- If YES - in which way? - If NO - why not?
- Talk about specific activities

(2d) Tell me how (name of Skill) is assessed?

- Do these activities help students complete their portfolios?
- If YES - in which way? - If NO - why not?

(Examples of additional questions - taken from recordings)

- *Why do you use Maths teachers for Application of Number?*
- *Why did you say that anyone can teach Communication?*
- *Why do you only integrate it with the Core?*
- *You mentioned a type of activity (…..) can you give me some more examples of successful activities or examples of successful practice in integrating Communication?*
- *I didn't understand how the choice of topic influences what they decide to write about, is it quite flexible?*

3. Relationship between Communication and Application of Number and Options/Core

(3a) Is (name of Skill) connected to Optional programmes in any way?

- Elaborate and expand on the answer
- Ask for specific examples - if appropriate

(3b) Is (name of Skill) connected to the Core in any way?

- Elaborate and expand on the answer
- Ask for specific examples - if appropriate

(3c) Based on what we talked so far, what is the relationship between (name of Skill) and the Options or the Core?

- Can you think of examples of specific A level subjects?
- Can you think of examples of specific BTEC programmes?
- Can you think of examples of specific Core units?

(Examples of additional questions - taken from recordings)

- *Why did you say that some Optional subjects lend themselves better?*
- *So you said there should be some co-operation between the Welsh Bacc teachers and the subject teachers in terms of schemes of work and some kind of an agreement of what they are going to cover. How does this work out in practice?*
- *Why would these students feel that the application of number at Level 2 is beneath them?*
- *What happens if a student is not that strong in Mathematics?*
- *And how would you* this knowledge and the practical skills relate to other aspects of the curriculum?

4. Prior and New Knowledge

(4a) Do students need any kind of prior knowledge to complete (name of Skill) at Level 2/3?

- Elaborate on answer - ask for examples of appropriate

(4b) Do students learn something additional as part of their (name of Skill) at Level 2/3 than they wouldn't have learned in their Options?

- Elaborate on answer
- Can you give me an example of……

(Examples of additional questions - taken from recordings)

- *Based on what we have discussed so far, do you think that the Optional subjects influence what we've talked about?*
- *Can you tell me more about the co-operation between specific subject teachers and you delivering the Core and Key Skills?*
- *Do all of your students come here with an existing C grade in Maths?*
- *Can you tell me more about this kind of additional support?*
- *You mentioned the topic of abortion linking to what they do in religious education and the Core and the discussion for Communication. How does this work out in practice?*
- *You also mentioned something about grammatical errors, the concept of the audience and paragraph styling. Where would you say they get this type of knowledge from?*

5. Skilfulness

(5a) How would you describe a skilful pupil/student in (name of Skill) at Level 2/3?

- Talk about specific aspects/tasks the participant mentioned
- Can you give me some specific examples?

(5b) What would you say makes a pupil/student more skilful in (name of Skill) than someone else?

- Talk about specific aspects/tasks the participant mentioned
- Can you give me some specific examples?

(Examples of additional questions - taken from recordings)

- *A number of co-ordinators mentioned depth. What do you mean by depth?*
- *What about listening and speaking? How would you assess that?*
- *Can you give me some examples of a skilful performance in writing (other area/Skill)?*
- *So how would you make this separation, again in a specific calculation, to say that this student is better than someone else?*

6. Summarising Questions

(6a) Overall, what would you say that pupils/students learn as part of (name of Skill) at Level 2/3?

- Elaborate on answer
- Ask for specific examples - if appropriate

(6b) What would you say the most important features of (name of Skill) at Level 2/3?

- Elaborate on answer
- Ask for specific examples - if appropriate

(6c) Do you have any examples of good practice about any of these Skills?

- Elaborate on answer
- Facilitate answer

(6d) Do you have any concerns on any of these Skills?

- Elaborate on answer
- Facilitate answer
- Ask for specific examples - if appropriate

7. The New Welsh Baccalaureate

(7a) How do you see these two Essential Skills in the new Welsh Baccalaureate?

- Elaborate on answer - Talk about the Challenges
- Ask for specific examples - if appropriate
- Talk about the new WB being entirely Skills-based

(7b) What difference do you think it will make that all Skills need to be integrated in the challenges?

- Ask for specific examples - if appropriate
- Do you think this will make a difference for assessment
- If YES - in which way?
- If NO - why not?

(Examples of additional questions - taken from recordings)

- *So you are concerned that some challenges may not actually offer the ground for these two skills, is this what you mean?*
- *How do you see the role of these two Essential Skills in the new WB?*

8. Open Comments

(8a) Is there anything you would like to add?

(8b) Do you feel there is some important elements on Communication and Application of Number or on Key Skills in general that I haven't asked you about?

(8c) Do you think that some of my questions were more important than others?

Tell participant about *STOPPING THE RECORDER*

Thank them

- **Tell them how valuable their views are**
- **Ask for the possibility of a second interview**
- **Ask for permission to see documents (student work/curriculum plans)**

END OF INTERVIEW

Appendix 3

Example of data coding instrument- Framing

FRAMING			
Selection of Materials / Topic / Numerical Problem			
Code F++	**Code F+**	**Code F-**	**Code F--**
Selection by the WBQ Co-ordinator or teacher/tutor	**Selection by the WBQ Co-ordinator or teacher/tutor in negotiation**	**Selection by student in negotiation**	**Selection by student**
The topic of discussion or presentation, reading and writing materials and the numerical problem is stipulated or given by the WBQ co-ordinator or teacher/tutor	The topic of discussion or presentation, reading and writing materials and the numerical problem is stipulated or given by the WBQ co-ordinator or teacher/tutor. In the first case, teachers/tutor select from a range of options (offered by WBQ co-ordinators) OR negotiate alternatives in the second case, students select from a range of options OR negotiate alternatives	The topic of discussion or presentation, reading and writing materials and numerical problem are chosen or created by the student and alternatives are negotiated with teachers/tutors	The topic of discussion or presentation, reading and materials and the numerical problem is chosen by the student
Pacing of Tasks			
Code F++	**Code F+**	**Code F-**	**Code F--**
Paced by the WBQ Co-ordinator or teacher/tutor	**Paced by the WBQ Co-ordinator or teacher/tutor in negotiation**	**Paced by student in negotiation**	**Paced by student**
WBQ co-ordinators or teacher/tutors decide when tasks are to be completed	WBQ co-ordinators or teacher/tutors decide when tasks are to be completed. In the first case, teachers/tutor select from a range of options (offered by WBQ co-ordinators) OR negotiate alternatives in the second case, students select from a range of options OR negotiate alternatives	Tasks are paced by the student and alternatives are negotiated with teachers/tutors	Tasks are paced by the student

Evaluation Criteria			
Code F++	**Code F+**	**Code F-**	**Code F--**
Evaluation criteria are very explicit	**Evaluation criteria are explicit**	**Evaluation criteria are unclear**	**Evaluation criteria are very unclear**
The teacher/tutor will demonstrate (or explain) what is considered a good performance	The teacher/tutor will give feedback to students on their performance	The teacher/tutor will comment on what is considered a good performance	The teacher/tutor will not comment on what is considered a good performance

Appendix 4

Example of data coding instrument- Classification

Classification			
Relations between curriculum components (inter-disciplinary relations)			
Code C++	**Code C+**	**Code C-**	**Code C--**
Distinct	**Combined**	**Integrated**	**Fully integrated**
Very strong boundary between Essential Skills and other programmes of study. Essential Skills are taught by WBQ teachers in discreet timetabled lessons using ESW assignment briefs and projects	Strong boundary between Essential Skills and other curriculum components. Essential Skills are taught by WBQ teachers in discreet timetabled lessons using materials, topics and numerical problems drawn from the Core or Options	Weak boundary between Essential Skills and other curriculum components. Essential Skills are taught by subject/vocational teachers	Very weak boundary between Essential Skills and other curriculum components. Essential Skills are 'mapped' on the curriculum of other programmes and taught by subject/vocational teachers
Relations within materials, topics, communication and numerical tasks (interdiscursive relations)			
Code C++	**Code C+**	**Code C-**	**Code C--**
Specialised (singular - subjects)	**Specialised (regionalised - themes)**	**Practical Skill**	**Everyday**
The knowledge, materials, topics and tasks draw from subjects such as English, English Literature, Politics, Sociology, Psychology, Mathematics, Statistics	The knowledge, materials, topics and tasks draw from subjects such Media Studies, Journalism, Business, the Built Environment/ Construction and interdisciplinary themes of the Core (WEW and PSE)	The knowledge, materials, topics and tasks draw from Essential Skill practices relevant to students' learning context (school - academic - vocational education)	The knowledge, materials, topics and tasks draw from Essential Skill practices relevant to students' family, community or everyday context

Relations between agents' practice spaces			
Code C++	**Code C+**	**Code C-**	**Code C--**
Distinct	**Combined**	**Integrated**	**Fully integrated**
The agents (WB co-ordinators, teachers, tutors, quality assurers) involved in the integration and practice of Essential Skills have very clear roles that do not overlap and they practice in distinct timetabled sessions for Essential Skills	The agents (WB co-ordinators, teachers, tutors, quality assurers) involved in the integration and practice of Essential Skills have roles that can overlap and they practice in distinct timetabled sessions for Essential Skills	The agents (WB co-ordinators, teachers, tutors, quality assurers) involved in the integration and practice of Essential Skills have roles that can overlap and they practice in Essential Skills using materials, topics and numerical problems drawn from the Core or Options	The agents (WB co-ordinators, teachers, tutors, quality assurers) involved in the integration and they practice of Essential Skills have roles that overlap and practice in Core/ Optional programmes on which Essential Skills have been 'mapped'

Meaning orientation	
Knowledge, Materials, Topics, Communication and Numerical tasks	
Introverted - Introjected	**Extroverted - Projected**
Forms of knowledge are selected according to their specialised grounding and common conventions Essential Skill tasks are carried out based on principles and standards drawing from students' learning contexts (school - academic - vocational education), disciplinary (singular) or interdisciplinary (theme) conventions	Forms of knowledge are selected according to their functional utility and contextual relevance Essential Skill tasks are carried out based on principles and standards drawing from assessment performativity and 'objective', measurable goals

Appendix 5

Example of 'charting' - Instrumentality theme

Interviews - Theme: Instrumentality				
	Preparation for Work	**Preparation for 'Life'**	**Preparation for University - Skills**	**Preparation for University - Entry**
Inter. ID			*when they get to HE, they already know how to do Harvard referencing, or how to do a similar version. If you go on to any university site you'll find examples of how the university wants people to reference things - these kids already know*	
Inter. ID	*they've never had to present a report. They've never had to… They've never had to present a report to a boss where you're saying "This is what I think and this is how it's laid out"*	*So we've looked at sort of issues surrounding perhaps drink driving or you look at sort of borrowing money and payday loans and those kind of issues*	*It's that realisation of them going "I've got a bibliography at the back." "Yes, but it's still plagiarism because you still haven't told me which bit in there… Is this all your own words?" "No." "Well, it's plagiarism then." "Yes, but I've referenced"*	*for us it formalises lots of what we did actually before the Welsh Bac. So lots of our students went out and did volunteer within the community. And they did work experience and it kind of brings all those elements together into an accredited qualification*
Inter. ID	*it's a good qualification for the workplace anyway and it gives them the skills to be able to partake in other areas of community life*	*it's a good qualification for the workplace anyway and it gives them the skills to be able to partake in other areas of community life*	*In 24 months' time they're going to lectures. They'll be expected to make notes. Well, what sort of notes do they need? Brief notes? so we're doing it in year 12*	*For the Investigation we encourage them to do something that they might be pursuing in university and put it in their UCAS personal statements*
Inter. ID	*At the end of the day, these learners are going to go on to go into employment. They're going into a business where they are possibly customer-facing people, and will speak proper English*		*When they do their investigations and when they use that, then, that skill, and when they get to university – a lot of them take these investigations with them to interviews anyway*	*When they do their investigations and when they use that, then, that skill, and when they get to university – a lot of them take these investigations with them to interviews anyway*

Appendix 6

Ethical considerations

1. Confidentiality: In all interview transcripts and notes I identified participants by using random initials. I omitted or codified any information that could have led to participants' direct identification. This extends to names of schools and colleges in which participants are practicing. I will adhere to this principle for any subsequent publications.

2. Informed Consent: I informed participants about the purpose of the study and how I intended to use data and research findings by giving them a study information leaflet. In the leaflet I made clear that they had the right to withdraw from the study at any time and without stating any reason. There were no participants who decided to withdraw from the study but had there been any, I would have destroyed all data obtained from them. I obtained written informed consent by all participants prior to their involvement in any research activity and particularly prior to recording each interview session. I stored all consent forms safely and as I describe in point 5 - Data Security. Obtaining informed consent was an ongoing process throughout the project, especially as the summer holiday break interrupted fieldwork, and I obtained permission to start audio recordings each time. I gave participants the opportunity to obtain a copy of their interview transcripts but they were no participants who took up this offer.

3. Recruitment: I obtained access to schools by writing to head teachers and gaining their approval to approach individual WBQ co-ordinators. I sent/emailed head teachers the same study information leaflet that I used to inform participants about the purpose of the study and my intentions of using data and research findings.

4. Risk assessment and Safe Guarding: All participants were adults and none of them was identified as vulnerable or unable to consent. I found that they were no exceptional factors which raised risk, harm or ethical dilemmas and concerns. I reassured participants of their anonymity and a number of times throughout the interviews, many participants made comments such as: "I know I shouldn't be saying this…" or "This is not what you would expect to hear from me…" indicating that they did not feel constrained to share their thoughts and opinions with me. I offered participants open channels of communication via email and mobile telephone throughout the study. I made all participants aware that in the exceptional event that there would be evidence to raise serious concerns about the safety of students, I would have to pass on information to the relevant authorities. Overall, I believe that the potential benefits of carrying out the study outweighed its risks: there were no disruptions of classroom teaching sessions, participants did not experience unnecessary disruption to their teaching schedules

and I made every effort to achieve methodological rigor in ensuring that the value of the study justified the time and resources invested by all parties.

5. Data Security: During all stages of data handling (data collection, data analysis, thesis writing up) I stored data (including audio files, interview transcripts and other notes) in a secure, lockable cabinet. When I will no longer need the data I will shred all paper-based sources and securely dispose of them and I will digitally delete all electronic data. I stored all electronic data on a secure system with recognised virus protection software accessed using a password.

6. Values guiding the study: The views of all participants were paramount to the study. I valued all participants equally and irrespective of their individual differences, including professional standing and status and contribution to the study. I sincerely appreciate the fact that my research topic may have personal/professional significance to these participants as well as other parties, including students and their parents/guardians, to whom I did not give the opportunity to take part in the study.

Appendix 7

Invitation Letter - Consent form

Cardiff University, 1-3 Museum Place, Cardiff CF10 3BD,

Prifysgol Caerdydd, 1-3 Plas yr Amgueddfa, Caerdydd CF10 3BD

Tel - *Ffôn* +44(0)29 2087 4436

5th November 2014

Information Sheet - Teacher and Learner Experience of the Welsh Baccalaureate
This information sheet tells you everything you need to know about the study and how you can take part. Please get in touch, if you need to discuss anything prior to making your decision.

1. What is the purpose of the study?

The study is trying to find out how Communication and Application of Number Essential Skills Wales are delivered. More particularly, we are looking at how these two Essential Skills are integrated in the Welsh Baccalaureate Advanced Diploma and the different learning opportunities this integration offers to students.

2. Who is organising and funding it?

The study is organised by Ms. Stavroula Bibila, a doctoral researcher at Cardiff University, and it is funded by the *Economic and Social Research Council* (ESRC) and the *Welsh Joint Education Committee* (WJEC).

3. Who has reviewed the study?

The School of Social Sciences Research Ethics Committee at Cardiff University has reviewed the study and issued a favourable opinion.

4. Why have I been invited?

You are one of the key people involved in the design/delivery of the Welsh Baccalaureate Advanced Diploma.

5. Do I have to take part?

No. It is entirely up to you whether you take part or not.

6. Why take part then?

As professionals involved in the education of young people we always seek to maximise positive learning opportunities and outcomes for all Welsh Baccalaureate students. Your participation in the study can potentially help to do that.

7. Will everything I say be confidential?

Yes. Everything you say will be confidential and you will not be named in any of the written materials produced. Your name or the name of your organisation/institution will not appear anywhere.

8. I want to take part. What will happen?

We can arrange for a mutually convenient time and a face to face or telephone interview.

Prior to the interview you will be asked to sign a consent form.

The interview should not take longer than an hour.

The interview needs to be voice-recorded. Once all information has been studied, all tapes and transcripts will be destroyed. During the study these will be kept in a locked cabinet and your name will not be recorded anywhere.

You will also have an opportunity to see the transcript of your interview and findings of the research.

8. What do I do next?

If you decide to take part in the study, then please contact Ms Stavroula Bibila on bibilaS@cardiff.ac.uk or on ***** *********

Thank you.

Stavroula Bibila, Doctoral researcher
School of Social Sciences § Cardiff University § 1-3 Museum Place § Cardiff CF10 3BD

Interviewee Consent Form

1. I have read and understood the information sheet dated 5th November 2014 for the study.

Please tick box and give your Initials …… ☐ Your Initials…….

2. I have had the opportunity to make a choice, to ask any questions and clarify issues of concern.

Please tick box and give your Initials …… ☐ Your Initials…….

3. I understand that my participation is voluntary and I can withdraw from the study at any time without stating any reasons.

Please tick box and give your Initials …… ☐ Your Initials…….

4. I give permission to have our discussion recorded (using a voice-recorder).

Please tick box and give your Initials …… ☐ Your Initials……

5. I agree to take part in the study.

Please tick box and give your Initials …… ☐ Your Initials…….

Name of participant: ……

Date: …….. **Signature:**…….

Name of person taking consent: ……

Date: …….. **Signature:**…….

Appendix 8

Final coding framework - data driven codes

1) Purpose of Communication Application of Number	2) Organisational Arrangements	3) Integration Aspects
- Preparation for University - Complementing Options - Specialisation - Broader Curriculum - Preparation for Work and Life - Remediating	- Time Limitations - Timetabling Arrangements - Additional Support - Staffing Issues - Funding - Teacher Specialisation - Role of Department - Curriculum Space - Teacher Collaboration - Role of Awarding Body	- (Transfer of) Materials - (Transfer of) Topics - (Transfer of - Creation) Numerical Problems - Purpose of Tasks (Skill) - Purpose of Activities (Options - Core) - Types of Activities (Options - Core) - Types of Tasks (Skill)
4) Skill Practice	**5) Assessment**	**6) Fixed Comparative Parameters**
- Knowledge Progression - Confidence - Criteria for Practice (evaluation) - Opportunity to Practice - Skilfulness as Ability - Barriers to Development - Role of Teacher - Role of Optional Programmes - Role of Core - Student Classification (Options) - Student Classification (Ability)	- Collection of evidence - Universal Assessment Criteria (external) - Subjective Assessment Criteria (internal) - Product (portfolio) - Process (of assessment) - Moderator professional judgement - Know WHY - Justification - Teacher professional judgement - Role of Teacher	- Type of Educational Site (School, College) - Characteristics of Site (student population, experience delivering the WBQ, location) - Type of Optional Programme - Integration (A level, BTEC, NVQ) - Type of Core Component - Integration (WEW, PSE, WRE) - Type of Optional Programme - Followed by Student (A level, BTEC, NVQ) - Type of Agent (WBQ co-ordinator, ESW co-ordinator, Teacher, Tutor)

Appendix 9

Assessment criteria - Communication Level 3 - WJEC

Level 3

Subject matter and materials should be *complex* i.e. those that deal with abstract or sensitive issues and lines of enquiry that depend on clear reasoning which may not be immediately clear. The subject matter will have several strands and will be challenging to candidates in terms of the ideas it presents. Specialist vocabulary and complicated sentence structures may also be used. Assessment activities must be relevant to the candidate.

There must be at least **one** image evident in the reading documentation for C3.2; however other images can be used to obtain and convey information. An image is a photograph, model, plan, sketch, diagram, picture, graph and chart but **not** a table of text or numbers. The image must aid the understanding of the written or spoken word and must **not** be a 'bolt on'.

IN ORDER TO SHOW THAT YOU ARE COMPETENT, YOU NEED TO KNOW HOW TO:

C3.1 Speaking and listening

identify relevant detail and information in complex explanations, instructions, discussions and presentations

understand and follow detailed explanations and instructions on a range of topics in familiar and less familiar contexts

respond constructively to criticism

use strategies to show you are listening and to clarify and confirm understanding

identify the speaker's intentions

use appropriate varied and specialist vocabulary and expressions to suit your subjects, purposes and situations

confirm that listener/s understand your meaning

adapt your language and what you say to suit different subjects, purposes and situations

give constructive feedback

prepare for discussions so that you can say things and provide information that is relevant to the subject and purpose of the discussion

take part in a purposeful group discussion on a complex subject to work towards agreement

make clear and relevant contributions in a way that suits your purpose and situation

develop points and ideas, with a sensitive awareness of others' feelings, beliefs and opinions

encourage others to contribute

prepare your talk/presentation to suit your purpose

bring together information from your reading and from other sources to present your own interpretation to suit your purpose

speak clearly and use language and a style of presentation to suit your purpose, the complexity of the subject, the formality of the situation, and the needs of the audience
structure what you say to progress logically through each stage of your presentation
use a variety of techniques to engage the audience, including using images or other material to support or enhance what you are saying

C3.2 Reading
read and understand specialist and complex vocabulary
identify the main points, ideas and lines of argument and reasoning from text and images, including by inference
recognise the writer's purpose and intentions and infer meaning which is not explicit
locate and understand information using organisational features
find the meaning of unfamiliar words and phrases, using reference materials
compare accounts and recognise opinion and possible bias
select and explore a range of different complex documents to obtain relevant information
explore and understand complex information and lines of reasoning in documents
ask others when you are unclear about what you have read

C3.3 Writing
bring together information from your reading and from other sources to present your own interpretation to suit your purpose
plan and draft writing
select and use formats and styles of writing that are appropriate to your purpose, audience and the complexity of the subject matter
organise material coherently to suit the length, complexity and purpose of your document
use correct grammar
use punctuation correctly
spell words correctly
select and use an appropriate style and tone to suit your audience, the degree of formality required and the nature of the subject
present information and ideas in a logical or persuasive sequence
produce legible text
make your meaning clear
check and where necessary revise your documents

Assessment criteria - Application of Number Level 2 - WJEC

IN ORDER TO SHOW THAT YOU ARE COMPETENT, YOU NEED TO KNOW HOW TO:

N2.1 Understand numerical data
Work with an appropriate person to help you identify and describe the problem or task and confirm how you will tackle it
Read, understand and extract information from tables, diagrams, charts, and simple graphs
Read and understand numbers presented in different ways
Collect and record data from making accurate observations
Read scales on a range of equipment to given levels of accuracy

Use shape and space to record relevant measurements and make accurate observations
Estimate amounts and proportions
Understand compound measures

N2.2 Carry out calculations
identify and use methods and calculations that are appropriate for your task, including grouping data when this is appropriate
show clearly your methods of carrying out calculations and give the levels of accuracy of your results
carry out calculations involving two or more steps, with numbers of any size with and without a calculator
use mental arithmetic involving whole numbers and simple fractions
work with and convert between fractions, decimals and percentages
calculate with sums of money and convert between currencies
calculate, measure and record time in different formats
estimate, measure and compare length, weight, capacity and temperature using metric and, where appropriate, imperial units
calculate within a system and between systems using conversion tables and scales, and approximate conversion factors
recognise and use common 2-D representations of 3-D objects
solve problems involving 2-D shapes and parallel lines
work out actual dimensions from scale drawings
use proportion and calculate using ratios where appropriate
identify the range of possible outcomes of combined events through probability and record the information using diagrams and tables
compare sets of data of an appropriate size, using percentages, mean/median/mode
use range to describe the spread within sets of data
understand use given formulae
calculate efficiently using whole numbers, fractions, decimals and percentages
check your methods and calculations
identify and correct any errors
check that your results make sense

N2.3 Interpret results and present findings
understand what the results of your calculations mean in the context of your problem or task
identify and describe appropriate ways to present your findings to two different audiences, including numerical, graphical and written formats
construct tables, charts and graphs, and label with titles, scales, axes and keys appropriate to your purpose and audience
use more than one way to present your findings, including numerical, graphical and written formats
describe your methods, highlight the main points of your findings, and explain how they meet your purpose

Assessment criteria - Application of Number Level 3 - WJEC

IN ORDER TO SHOW THAT YOU ARE COMPETENT, YOU NEED TO KNOW HOW TO:

N3.1 Understand numerical data

N3.1.1
identify, analyse and accurately describe the problem or task and its sub-problems

N3.1.2
plan how you will tackle the problem by breaking it down into a series of tasks
plan how you will obtain the data and information you need

N3.1.3
read, understand and extract information from tables, diagrams, charts and graphs
collect, obtain, read, understand, select and record relevant data and information from different sources, including at least one data set of a size appropriate to a planned activity, and use this to meet the purpose of the activity
make accurate and reliable observations over time and use suitable equipment to measure in a variety of appropriate units
group data into classes of width appropriate to the data
use estimation to help you plan, multiplying and dividing numbers of any size
read and understand ways of writing very large and very small numbers
understand compound measures

N3.2 Carry out calculations

N3.2.1
identify and design methods that are appropriate for your task and justify your choice

N3.2.2
carry out calculations clearly showing your methods
justify the levels of accuracy you have worked to
carry out multi-stage calculations with numbers of any size
use powers and roots
use compound measures
use mental arithmetic involving numbers, simple fractions, and percentages
work out missing angles and sides in right-angled triangles from known sides and angles
calculate with sums of money in different currencies
calculate, measure, record and compare time in different formats
estimate, measure and compare dimensions and quantities using metric and, where appropriate, imperial units, and check the accuracy of estimates
calculate within and between systems and make accurate comparisons
draw 2-D representations of simple 3-D objects
solve problems involving irregular 2-D shapes
work out actual dimensions from scale drawings and scale quantities up and down
work out proportional change
compare distributions, using measures of average and range, and estimate mean, median and range of grouped data

rearrange and use formulae, equations and expressions
make multi-step calculations efficiently
use checking procedures to identify and correct errors in methods, calculations and results
check that your results make sense.

N3.3 Interpret results and present findings

N3.3.1
understand what the results of your calculations mean in the context of your problem or task
select and use appropriate methods to present and illustrate your findings, showing trends and making comparisons, including numerical, graphical and written formats
justify your choice of methods of presentation

N3.3.2
construct and label tables, charts, graphs and diagrams using accepted conventions
describe and justify your choice of methods
describe what your results tell you
draw appropriate conclusions based on your findings, including how possible sources of error might have affected your results
explain how far your results meet your purpose
respond constructively to feedback

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