

Dyslexia in pre-registration nursing students: Strategies for developing clinical competencies

by

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SUMMARY

This study explored the difficulties dyslexic nursing students have in achieving clinical competence, what coping strategies they employ and how they may be supported in practice, thus enabling them to meet the standards to register as a nurse.

A qualitative research study utilising case study methodology was chosen so that in addition to the personal experiences of individual dyslexic students, the wider social and cultural context that influences nurse education could be considered.

All eleven students who participated had difficulty in clinical practice attributable to the nature and severity of their dyslexia. These difficulties involved dealing with verbal and written information, comprehension, constructing reports, remembering things, and being able to prioritise and organise their work within specific timeframes. There was evidence of tension felt by staff about upholding the rights of the dyslexic student seeking to become a registered nurse against the potential risk they thought the student posed to patients/clients. This tension influenced the relationships between staff and students. The diagnosis of dyslexia impacted negatively on the students' self-image, particularly affecting those diagnosed as adults. Timing and nature of the work in clinical placements either assisted or further challenged the dyslexic students in the achievement of clinical competence. The students identified a range of coping strategies, including the use of informal support networks. The students desired the formation of peer support groups. The relationship the students had with their mentors was key to the development of clinical competencies. It is recommended that all mentors receive preparation in supporting students with specific learning needs.

Bronfenbrenner's (1979) Ecological Systems Theory was used as a framework to explain the implications of this study. The recommendations have relevance for policy makers, regulators and providers of nurse education, as well as for individual dyslexic nurses.

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“By 2025, disabled people in Britain should have full opportunities and choices to improve their quality of life and will be respected and included as equal members of society.”
(Tony Blair, Prime Minister’s Strategy Unit, 2005)

CHAPTER ONE: INTRODUCTION

1.1 RATIONALE FOR CHOICE

In order for a health profession to maintain its standards and develop as a discipline, it must rely on the integrity and performance of its members. Therefore, a fundamental question that every health profession faces is, “who should be permitted to enter the profession?”

For the six years I acted as the Head of Registry in a school of nursing, the question about applicant suitability proved to be the most consistently challenging. In that role I was instrumental in determining the admissions policy for the school and throughout the academic year oversaw the individual decisions made by the admissions lecturers. My subsequent role was in quality assurance for nurse education and included providing detailed advice to the nurse education sector. During both roles I found it particularly difficult advising on the admission of applicants who had been diagnosed as having a specific learning need, such as dyslexia. This study, therefore, focuses on dyslexic individuals who are seeking to enter the nursing profession.

The consequence of selecting inappropriate individuals, or inadequately supporting and supervising students in developing clinical competence has the potential to place patients and clients in harm’s way. While the rights of the individual seeking to train as a nurse should be protected, and discrimination should not be tolerated, patient safety and the quality of care they receive must be paramount.

1.2 WHAT IS NURSING?

In determining who should enter nursing it is relevant to consider what nursing is. Unfortunately this is not a simple thing to do. Although the Nursing and Midwifery Council sets the standards and competencies required to register as a nurse, it,

like its predecessor the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC), has not defined what nursing is.

As the health service evolves and changes, so do the roles of health professionals who work within it. This is essential to ensure a flexible workforce capable of delivering a modern service. Some members of the profession feel that introducing a definition of nursing would restrict the flexibility of the role of nurse (RCN 2003). The Nursing and Midwifery Council relies on the *Code of professional conduct: standards for conduct, performance and ethics* to govern the performance of nursing rather than specify a definition of nursing. The Code sets out principles by which nurses should practise and includes the requirement that the nurse must “*maintain professional knowledge and competence*” (NMC 2004a, p2). By putting the responsibility on the nurse to work within her/his sphere of competence, a degree of flexibility is maintained. As will be seen later in this section, the reduction of junior doctors’ hours imposed by the European Working Time Directive means that nurses can take on functions, which historically would have been considered outside their normal practice, provided they are competent to do so.

The reticence in defining nursing by the UK regulators, past and present, has not deterred other organisations, such as the Royal College of Nursing (RCN) and the International Council of Nursing (ICN), in developing a definition of nursing. Describing the nature of nursing has always been challenging, for example, ‘How is the nursing care given by a professionally regulated nurse different to care given by an informal carer such as a relative?’ Unlike medicine, which most people understand as being primarily about the diagnosis and treatment of illnesses, nursing tends to elicit varying views, e.g. descriptions of physical tasks involved in keeping a sick person nourished, clean and safe; a ‘hand-maiden to the doctor’; or as a vocation providing a compassionate nurturing function. Media depiction, e.g. from the Carry-On films, Holby City and Casualty have also left their imprint on the public’s imagination. The public perception and understanding of the role and function of a nurse has altered over time but it is often at odds with the reality of nursing today. It has been argued that nurses should provide a definition of professional nursing and an understanding of the scope of professional practice, and that this is vital to ensure that patients/clients receive treatment and care from

appropriately qualified people in an efficient and cost-effective way (ICN 1998; RCN 2003).

Virginia Henderson put forward the most well known definition of nursing in 1960. The ICN formally adopted the definition in that year. The ICN revised Henderson's definition in 1987, and further abbreviated it in 2002, as follows:

“Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well, and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles.”

In the UK, the most recent definition put forward is by the RCN in 2003 in the publication *Defining Nursing*. It states that:

“Nursing is the use of clinical judgement in the provision of care to enable people to improve, maintain, or recover health, to cope with health problems, and to achieve the best possible quality of life, whatever their disease or disability, until death.” (RCN 2003, p3)

The RCN also makes the distinction between the care given by a professional nurse and the nursing undertaken by other people by stating that professional practice is based on:

- *The use of clinical judgement inherent in the processes of assessment, diagnosis, prescription and evaluation*
- *The knowledge that is the basis of the assessment of need and the determination of action to meet the need*
- *The personal accountability for all decisions and actions, including the decision to delegate to others*
- *The structured relationship between the nurse and the patient, which incorporates professional regulation and the code of ethics within a statutory framework.* (RCN 2003, p4)

The RCN's definition reflects that of the ICN in that the focus is on the promotion of health and improvement in the quality of the individual's life.

Many countries use the ICN definition or reflect the elements within it, when defining nursing in their respective countries. A survey of the members of the ICN conducted by the RCN as part of the *Defining Nursing* project (2003) show that the

culture dominant within a country affects how the definition of nursing is presented. For example, most Western countries that responded had definitions that focussed on the promotion, prevention and maintenance of health, while there were examples of countries in the Far East, namely Japan and Thailand, whose definitions focussed on the care of the sick. Pang et al's (2004) systematic study of how Chinese nurses articulate nursing shows that although there are similarities with definitions used by Western nurses, the definition is grounded in the philosophy of traditional Chinese medicine and Eastern ideology. Nursing, therefore, does not exist in a vacuum; rather it is situated within a specific context, reflecting the political forces and value system dominant within the culture of the country.

Any definition of nursing has to be flexible as the traditional boundaries for health professionals, including nurses, are being blurred and in some cases dismantled. For example, with the reduction in hours worked by junior doctors through the introduction of the European Working Time Directive, nurses and other health professionals are taking on roles previously carried out by medical staff and new roles such as Physician's Assistant and Surgical Care Practitioner are emerging. With members of the regulated health professions taking on roles that had been traditionally carried out by medical staff, there has been a corresponding need for unregulated support staff to take on the roles of the regulated health professionals. In respect of nursing, a wide range of support and assistant practitioner roles has developed. To a certain degree the development of these trained nursing assistants is analogous with the role of enrolled nurse.

There are two levels of nurse registered by the Nursing and Midwifery Council, first level registered nurses and second level enrolled nurses; both levels of nurse have the same code of conduct governing their practice. Enrolled nurses undertake care under the direction of a first level registered nurse. Support and assistant nursing staff work under the supervision of both levels of registered nursing staff. Training for enrolled nurses ceased in the early 1990s, however, many enrolled nurses still work in the health service. The possible introduction of regulation for support and assistant staff, as evidenced by the Department of Health (Foster) review consultation (2006) *The regulation of the non-medical*

healthcare professions, heightens the similarity in roles between trained nursing assistants and enrolled nurses.

The health service is currently undergoing significant restructuring and modernisation, driven in part by the recommendations from major reviews of the health and social care services in England (HM Treasury 2002) and Wales (National Assembly for Wales 2003) chaired by Derek Wanless. These reports indicate that the demand for health and social care could overwhelm the current arrangements for the provision of services, and suggest that services should be realigned to focus on prevention and early intervention. The nursing profession, as the largest section of the health workforce, will be fundamental in any reform. A possible consequence of the modernisation agenda is the need to train a flexible health workforce, not one entrenched in professional silos, which in turn challenges the ideas of the traditional entrant to health professions.

1.3 OUTLINE OF THE RESEARCH STUDY

This section provides an overview of the chapters presented in this thesis.

Chapter two provides a summary of the debate around the existence and possible causes of specific learning difficulties such as dyslexia. The discussion will show that there is a lack of agreement on the cause, which means that defining terms such as dyslexia becomes difficult. This similarly affects determining the prevalence of specific learning difficulties within the population. Although there is currently no single verifiable statistic, evidence is presented in the chapter from a number of sources that indicates the possible prevalence of dyslexia in society.

Chapter 3 examines the changing views in Western society about disability, and explores the implications of the shift from the 'medical model of disability' to the 'social model of disability' as the dominant driver for change. Consideration is also given to the wider political, legislative and regulatory context of how disability is being tackled in the UK, and what this means for nurse education.

Legislation in the form of the Disability Discrimination Act (1995, revised in 2005), amended by the Special Educational Needs and Disability Act (2001), focuses

attention on the rights of individuals with disability and specific learning needs, challenging traditional views on who is fit to become a health professional. This means for schools of nursing it is increasingly difficult to answer the question about who should enter nursing, and it poses a new question about how less 'traditional' students should be supported through their training.

Chapter four sets out the problems faced by dyslexic nursing students as identified in the literature. The chapter considers the role of the admissions lecturers and clinical staff and the tensions encountered in selecting individuals and goes on to examine current practices in diagnosis, screening and assessment of dyslexia. Within this chapter, the limited information available on supporting dyslexic nursing students in clinical practice is discussed. The level of education and training that lecturers and clinical mentors receive regarding their role in teaching and supporting nursing students with specific learning difficulties is also considered.

This study explores how individuals who are dyslexic develop the clinical competencies to become registered nurses, and what support should be offered. As indicated in section 1.2, nursing is influenced by the political, environmental and cultural context. Therefore, I sought to consider not only the personal experience of individual students but also the wider context of nurse education and the health service. To this end I chose to do a qualitative research study using case study methodology.

Chapter five describes in detail the stages of the project, the ethical considerations including obtaining consent and ensuring confidentiality, how participants in the study were chosen and accessed, management of the data gathered and the process used in the analysis of the data. It should be noted that the students who participated in this study were those who had chosen to disclose to the schools that they were dyslexic.

The study was conducted in two stages. The purpose of the first stage was to gather contextual information about the environment in which nursing students study and begin to answer the research question about the nature of the problems dyslexic students had in acquiring clinical competences. The information gathered

in stage one helped determine the data collection strategy used in stage two, which involved a two year longitudinal study of the clinical experiences of four dyslexic nursing students. The findings from stage one and stage two are presented in chapters 6 and 7 respectively.

1.4 THEORETICAL FRAMEWORK

As discussed earlier in this chapter, I was conscious of the need to consider the context in which the students were studying, as external political, cultural and social pressures and relationships are likely to influence the students' experience and behaviour. Work by Bronfenbrenner (1979) in the development of his Ecological Systems Theory, now referred to as the 'Bioecological Theory of Human Development' (Bronfenbrenner 2001), indicates that the relationships individuals have with their environment at different levels e.g. family, workplace, wider society and cultural systems, is mutually shaping. This theory brings together elements of sociology and developmental psychology and was originally developed to explain child development although it has application throughout a person's life.

The suggestions Bronfenbrenner (1979) makes about human development and the need not only to look at the individual but at their relationships with wider environmental systems is applicable to an adult with specific needs going through a process of personal development to become a registered nurse.

In chapter 8, the findings gathered in stages one and two of the study are discussed using Bronfenbrenner's work as a framework to set out the implications and recommendations for policy makers, nurse education and the health service in the education of nurses.

The thesis concludes with some personal reflections on the conduct and outcomes of the study and indicates how the Nursing and Midwifery Council and Health Professions Council have used this work.

CHAPTER 2: SPECIFIC LEARNING DIFFICULTIES

2.1 INTRODUCTION

The literature review is presented over three chapters. This chapter considers the definition of dyslexia, discusses the problems surrounding the determination of prevalence within the population and briefly summarises the hypotheses promoted to explain the causes of dyslexia. Chapter three considers the broader context of disability in society, including the political drivers and legislative controls that are in place. Finally, in chapter four, the focus of the review will be narrowed to consider the context of nurse education and the needs and problems of an individual who is dyslexic seeking to become a registered nurse.

A number of terms were identified in order to conduct the search of the literature in preparation for this review, namely: dyslexia, specific learning difficulties (for example dyslexia), specific learning disabilities, special educational needs, language based learning difficulties, and learning-disabled. This range of terms reflected the unease in some quarters in using the term 'dyslexia'. For example, educational psychologists who work with teachers and parents to assist children and young people with difficulties in reading and spelling avoid the term 'dyslexia' because it is felt that the term focuses attention on the causative factors that are within the person and diverts attention from instructional circumstances and interventions. Debate around the use of the term 'dyslexia' in the 1970s and 1980s resulted in education in the UK opting for the term 'specific learning difficulties'; similar discussions in the USA resulted in the adoption of the terms 'learning disabilities' or 'specific learning disabilities' (Pumfrey and Reason 1991). National policies in the UK currently use the compromise phrase 'specific learning difficulties (for example dyslexia)' (Reason 2001).

The UK Department of Education and Skills (DfES) use the term 'specific learning difficulty' (SpLD) to cover:

"a range of related conditions which occur across a continuum of severity. Pupils may have difficulties in reading, writing, spelling or manipulating numbers, which are not typical of their general performance. Pupils may have difficulties with short-term memory, with organisational skills, with hand-eye co-ordination and with orientation and directional awareness." (DfES 2002a, p.7)

In the US the term 'specific learning disability' is used in a similar way to SpLD in the UK. Students with SpLD in the US receive special education services under the *Individuals with Disabilities Education Act (IDEA)* (1997). In preparation for the reauthorisation of IDEA in 2004, the Office of Special Education Programs, US Department of Education, held a Learning Disabilities Roundtable discussion in August 2001. Over 200 participants, including representatives from ten leading US organisations took part. A report of this meeting was published entitled *Specific Learning Disabilities: Finding Common Ground* (Learning Disabilities Association of America 2002). The participants from the roundtable discussion agreed that the following core concepts are basic elements of the nature of specific learning disabilities:

"... neurologically-based, intrinsic to the individual, persist across an individual's lifespan at varying levels of intensity, and are not due primarily to other disabling conditions." (Learning Disabilities Associations of America 2002, p.5)

The participants acknowledge that the manifestations of a person's disability vary during the different stages of development and by environmental demands placed upon them. They make reference to the possibility of it appearing with other conditions but do not include comments about the individual's intelligence, which has appeared in definitions in recent years. They agreed that:

"Specific learning disabilities may occur in combination with other disabling conditions, but they are not due to other conditions, such as mental retardation, behavioural disturbance, lack of opportunities to learn, primary sensory deficits, or multilingualism." (p.6)

They also agreed that:

"Specific learning difficulties are evident across ethnic, cultural, language and economic groups." (p.6)

The recommendations described in the paper *Specific Learning Disabilities: Finding Common Ground* will be used by the Office of Special Education Programs, US Department of Education, as a tool for working through the issues surrounding the reauthorisation of IDEA. The recommendations have implications for the identification of individuals with specific educational needs and implications for the systems designed to address their needs.

The DfES in the UK lists three specific conditions under the heading SpLD:

- *“Dyslexia – difficulties in learning to read, write and spell.*
- *Dyscalculia (also referred to as Dyscalcula) – difficulties with numbers and remembering mathematical facts as well as performing mathematical operations.*
- *Dyspraxia – an impairment or immaturity of the organisation of movement, often giving the appearance of clumsiness.” (DfES 2002a, p.7)*

While accepting that all three specific learning difficulties listed above may cause problems for individuals seeking to become registered as a nurse, e.g. dyscalculia has obvious implications for drug calculations; this study is focussed on the more widely recognised condition of dyslexia. It is recognised that an individual may present with any combination of the three listed conditions. It has been estimated, for example, that 17% of individuals who have dyscalculia are also dyslexic, while 26% of the same individuals will suffer concurrently from Attention Deficit Hyperactivity Disorder (Ansari and Karmiloff-Smith 2002).

The remainder of this chapter sets out a discussion on the various definitions for the term/concept ‘dyslexia’, makes suggestions as to the possible prevalence of dyslexia, and provides an overview of current thinking in relation to its causes.

2.2 DEFINING DYSLEXIA

The etymology of the word ‘dyslexia’ is from the Greek, the prefix ‘*dys*’ meaning ‘difficulty’ and ‘*lexis*’ from the root ‘*logos*’ meaning ‘words’. A literal translation is ‘a difficulty with words’. Confusion can arise when people associate the word with the Latin root of ‘*lexis*’, which is ‘*lego*’ meaning ‘to read’. In this case a literal translation would be ‘difficulty to read’, which would be incorrect as dyslexia includes difficulties with reading, spelling, writing and other aspects of language.

The concept of dyslexia is now recognised officially in many countries, however, there is still considerable debate as to the cause/s and hence there are conflicting definitions of the term/concept ‘dyslexia’. The purpose of defining a term is to clearly communicate an understanding of meaning. Fletcher (2002) puts this quite eloquently,

“Without a common understanding of meaning, we are communicating in a Tower of Babble [sic], each of us understanding what we say with no one understanding what they hear.” (p.8)

The multitude of definitions put forward vary by discipline; for example, medical and neuropsychological definitions tend to focus on the underlying causes of dyslexia, specifically neuro-anatomical, developmental and genetic causes. They tend not to include cognitive, behavioural and cultural influences within their definitions. Educational practitioners, on the other hand, might define dyslexia in cognitive and behavioural terms, such as an unexpected difficulty in learning to read, write and spell, with no reference to possible causation. These definitions are challenged on the grounds of appearing to be ambiguous and subjective, for example who determines that a difficulty is unexpected, does every child have to show the same type of difficulty at the same stage to be classed as dyslexic?

In 1968 the World Federation of Neurology (cited by Ott 1997) put forward the following working definition of 'specific developmental dyslexia', which is still widely quoted:

"A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and socio-cultural opportunity. It depends on fundamental cognitive disabilities, which are frequently constitutional in origin." (p.3)

Although this definition includes behaviour, cognition and underlying cause it has been criticised because it uses exclusionary criteria. In other words a person is defined as dyslexic if a number of other factors are excluded. This has led some critics to claim that the approach favours the identification of 'middle class' children and excludes identification of children who are socially disadvantaged or are only mildly learning disabled (Raddick 1996). This definition also refers to 'adequate intelligence'. The relationship between specific learning difficulties and intelligence is somewhat controversial. Reference to intelligence is noticeably absent from some of the most recent definitions being put forward, e.g. *Specific Learning Disabilities: Finding Common Ground* report (Learning Disabilities Associations of America 2002).

In 1995, Morton and Firth proposed a neutral framework in which to compare different theories for developmental disorders. This framework has three levels: biological, cognitive and behavioural, set in the context of environmental and cultural influences, e.g. provision of teaching, cultural attitudes and socio-economic factors. Firth (1999) reflects on this framework and suggests that trying

to define dyslexia on a single level, either biological, cognitive or behavioural, 'will always lead to paradoxes' (p211). Firth does not put forward a definition but includes the following description of dyslexia:

"...dyslexia is a neuro-developmental disorder with a biological origin, which impacts on speech processing with a range of manifestations. There is evidence for a genetic basis and there is evidence for a brain basis, and it is clear that the behavioural signs extend well beyond written language. There may well be many different kinds of genes and different kinds of brain conditions that are ultimately responsible for the dyslexia syndrome, but in each case the symptoms have to be understood within the relevant cultural context." (p.211)

Firth supports Gilroy and Miles' (1996) belief that dyslexia should be considered as:

"A 'syndrome', that is a cluster or family of difficulties which regularly go together but which may take somewhat different forms in different individuals". (p.8)

The definitions adopted by the American based organisation, the International Dyslexia Association (formerly the Orton Dyslexia Society), and the American National Institutes are quite detailed and attempt to encompass a number of theoretical hypotheses. The following definition was adopted in 1994:

"Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifest by variable difficulty with different forms of language, often including, in addition to problems reading, a conspicuous problem with acquiring proficiency in writing and spelling." (International Dyslexia Association, WWW, 2003)

In 1998 the Division of Educational and Child Psychology of the British Psychological Society set up a Working Party to achieve a consensus about what is meant by the concept of dyslexia and to set out principles for educational psychology assessment. The Working Group was concerned with developing a clear working definition of dyslexia recognising it as a learning difficulty in individuals where there is no known neurological damage relevant to the acquisition of reading and writing skills. They took as a starting point the report produced by the Committee of the Health Council of the Netherlands on the

definition and treatment of dyslexia (Gersons-Wolfenberger and Ruijsenaars 1997). This committee stated that any definition should fulfil the following conditions:

- The definition should be descriptive with no explanatory elements;
- The definition should be specific enough to identify dyslexia within the whole of severe reading and spelling problems;
- The definition should be general enough to allow for various scientific explanatory models and any developments those models might undergo;
- The definition should be directive for statements concerning the need for intervention and applicable to the various groups involved.

Working on this basis the rather technical definition they arrived at was:

“Dyslexia is present when the automatization of word identification (reading) and/or word spelling does not develop or does so very incompletely or with great difficulty.” (p.209)

The Division of Educational and Child Psychology of the British Psychological Society Working Party felt that the term ‘automatization’ and the underlying ‘skills automatization’ hypothesis would need explanation in the UK context and therefore replaced it with the phrase referring to fluency and accuracy. The working definition that was published by the Working Party in 1999 states:

“Dyslexia is evident when accurate and fluent word reading and/or word spelling develops incompletely or with great difficulty. This focuses on literacy learning at the ‘word level’ and implies that the problem is severe and persistent despite appropriate learning opportunities. It provides the basis for a staged process of assessment through teaching.” (p.18)

The Working Group acknowledge that this working definition does not address some of the operational issues faced by educational psychologists, for example, how long to wait before considering whether accurate or fluent reading was developing ‘very incompletely’ or ‘with great difficulty’. One of the advantages of this definition, they suggest, is the accommodation of the different theoretical explanations and hypotheses. In fact there is no explicit reference to underlying causation in this definition. It also has no exclusionary criteria and is therefore widely applicable.

The UK Disability Discrimination Act (1995) Part 4 amended by the Special Educational Needs and Disability Act (2001), revised in 2005, specifically requires bodies responsible for the provision of post-16 education and training not to discriminate against disabled students and other disabled people. The Act defines a disabled person as someone who has a physical or mental impairment, which has an effect on his/her ability to carry out normal day-to-day activities. The effect must be substantial, long-term and adverse. It specifically cites learning difficulties and dyslexia as examples of impairments. This Act recognises dyslexia as a special educational need and seeks to ensure that individuals are not discriminated against. It is interesting to note the Act uses the term *disability* like the US, rather than *specific learning difficulty*, which is usually seen as more acceptable in the UK. (See chapter 3, section 3.4, page 32 for further discussion on legislation.)

In contrast to the definitions described above, the British Dyslexia Association (BDA) focuses on the manifestations of dyslexia and tries to include some positive abilities. The BDA is primarily a supportive charitable organisation, which conducts campaigns to raise awareness of dyslexia in British society. It also purports to be the 'voice of dyslexic people' and as such has used words that are accessible to the general population.

"Dyslexia is best described as a combination of abilities and difficulties that affect the learning process in one or more of reading, spelling, writing. Accompanying weaknesses may be identified in areas of speed of processing, short-term memory, sequencing and organisation, auditory and/or visual perception, spoken language and motor skills. It is particularly related to mastering and using written language, which may include alphabetic, numeric and musical notation. Some dyslexics have outstanding creative skills. Others have strong oral skills. Some have no outstanding talents. They all have strengths. Dyslexia can occur despite normal intellectual ability and teaching. It is independent of socio-economic or language background." (British Dyslexia Association, WWW, 2003)

There is some evidence to support the BDA's assertion that individuals who are dyslexic have creative talents. Everatt et al's (1999) study compares two groups of individuals – non-dyslexic and dyslexic adults. In a series of tasks the adults who were dyslexic consistently showed evidence of greater creativity in tasks requiring novelty or insight and more innovative styles of thinking. However,

Everatt et al did not find evidence for an association between creativity and enhanced visuo-spatial skills.

Davis and Braun's (1994) book entitled *The gift of dyslexia* makes the bold claim that all people with dyslexia share eight mental functions:

- Can use the brain's ability to alter and create perceptions
- Are highly aware of the environment
- Are more curious than average
- Think mainly in pictures instead of words
- Are highly intuitive and insightful
- Think and perceive using all the senses
- Can experience thought as reality
- Have vivid imaginations

While there is anecdotal evidence to support this claim, it has not been substantiated by research.

The conclusions that can be drawn from this review are that although there is no one agreed definition of dyslexia, there are elements that appear to be accepted across disciplines, namely that dyslexia is characterised by difficulties in learning to read, write and spell and that this difficulty persists throughout a person's life. It is widely accepted that there is a biological basis and it is clear that there is no one specific sign by which a person who is dyslexic can be identified.

2.3 PREVALENCE OF DYSLEXIA

The problems experienced in defining 'dyslexia' and the debate over the cause or causes mean that it is difficult to know the exact prevalence of dyslexia in the population. There is currently no single agreed statistic to indicate the prevalence of dyslexia, however indications can be drawn from a number of sources, which will be reviewed in this section.

The UK Department of Education and Skills (DfES, WWW, 2006) and the Welsh Assembly Government (WAG, WWW, 2006) statistics for school age children in England and Wales have consistently shown since 1997 that approximately 3% of

children in schools have statements of special educational needs. The percentage in Scotland is slightly lower at 2% of the school population. These figures do not identify dyslexia as a specific condition, and therefore it is not known what proportion of these figures relates to that group. It is interesting to note that the English statistics also include the percentage of pupils with special educational needs without a statement. In 2001 the percentage was 18.4% of primary and secondary school population. Again there is no specific identification of individuals classed as dyslexic in these figures.

Following recommendation by the Audit Commission, the DfES intends to change the way it collects information about pupils in schools. The current Pupil Level Annual Schools Census asks whether pupils with special educational needs have a statement. From January 2004 information will also be sought about the type of special need that each pupil has, plus the pupil's greatest/primary and secondary needs. One of the categories is specific learning difficulty (SpLD), which includes dyslexia, dyspraxia and dyscalculia. This revised census will give a more accurate picture of the number of children identified with this type of specific educational need.

The Higher Education Statistics Agency (HESA) gathers statistics about students entering higher education in England and Wales. Here, information about individuals with statements of special educational need in relation to dyslexia, is identified as a category – the information relates to students who chose to declare their disability. In the academic years 2002/03, 2003/04 and 2004/2005, between 5.8 - 6% of the students entering Higher Education (HE) in England and Wales on to first degree or other undergraduate programmes were classified as having a disability. The largest group of students with a disability, accounting for 2.3 - 2.6% of the student population, had statements in relation to dyslexia. In comparison with the 2004/05 figures, the figures from a decade earlier show lower percentages of both disabled students overall (3.1% in 1994/95) and of students who are dyslexic (0.46% in 1994/95) (HESA, WWW, 2006). This could indicate that institutions are taking more students with disabilities, either because more students are requesting places or that admissions policies are being altered in line

with the Disability Discrimination Act (1995). It could also mean that more people are being diagnosed as dyslexic or choosing to disclose the diagnosis.

The statistics for 2000/2001 compared entry to HE via an Access to Higher Education programme (programmes specially designed for adults who do not have the necessary academic qualifications to enter HE) with other entry qualifications. See table 2.1 for the comparison by level and entry qualification.

Table 2.1 Entrants to undergraduate programmes by level, entry qualification and disability 2000/2001 (HESA, WWW, 2003)

Level	First degree		Other undergraduate course		Total
	Access	Other	Access	Other	
Entry qualification	Access	Other	Access	Other	
No known disability	89.6%	93.5%	93.8%	90.4%	92.0%
Dyslexia	3.5%	2.0%	1.6%	0.8%	1.5%
All other disabilities	6.0%	2.7%	2.9%	2.5%	2.7%
Not known	0.9%	1.8%	1.7%	6.3%	3.8%
TOTAL	100%	100%	100%	100%	100%

It is interesting to note that a higher proportion of individuals who are dyslexic are using the Access to Higher Education programmes than other routes as a means of entry to HE. This may suggest that adults with dyslexia have developed sufficient coping strategies to enable them to benefit from the structured educational programmes aimed at adult learners.

During the time of this study, pre-registration nursing courses were offered at both undergraduate diploma level and first degree level in Wales. Typically at least a third of each intake was from mature students who had completed an Access to Higher Education programme. This was in line with the Government's policy on social inclusion and widening the entry gate to higher education. It is possible that adults who are dyslexic who did not achieve sufficient academic qualifications in school would use this route as an entry to nurse education. Unfortunately, there are no reliable national statistics that identify how many individuals enter nurse education in the UK, who are known to be dyslexic. Additionally many individuals may not realise they are dyslexic, believing that they are 'just poor spellers'.

Taylor and Walter (2003) considered the strengths and weaknesses of individuals and their subsequent choice of career. They found that adults with symptomatic development dyslexia were less likely to choose professions such as science, computing, management and finance and more likely to choose people-orientated professions such as nursing. One explanation might be that the positive traits attributed to individuals who are dyslexic, such as insight, verbal communication skills and problem solving are valued by professions such as nursing.

It is a widely held opinion that individuals who are dyslexic have greater artistic creativity than non-dyslexic individuals. However, there have been few objective studies into the relationship between dyslexia and creativity. Wolff and Lundberg (2002) reported on a comparison study between the prevalence of dyslexia in art academy students and students studying non-art disciplines. They pointed out that recruitment to the art academy was demanding and that students needed genuine talent to be accepted. They found the prevalence of dyslexia was far higher among the art students, supporting the claim of the artistic ability in individuals who are dyslexic.

The British Dyslexia Association (2003) and authors such as Miles and Haslum (1986) state that boys are four times more likely than girls to be dyslexic. However, there have been some challenges to this viewpoint from researchers like Shaywitz et al (1990) who state that dyslexia in girls is under reported and may be as a result of educational systems that highlight problems in boys more easily than girls. Educational practice has changed since Shaywitz et al published their study so whether this is still a reasonable argument is debatable. At present there continues to be some contention in relation to this issue.

Dyslexia has been identified across languages, cultures, socio-economic status, race and gender (British Psychological Society 1999). It is interesting to note that the journal *Dyslexia* published 16 articles in 2000 (Volume 6, issues 1 and 2) in two special issues on Multilingualism and Dyslexia. These papers were the keynote speeches for the 1999 conference on multilingualism and dyslexia, hosted by the British Dyslexia Association and attended by representatives from more than 40 countries.

The incidence of reported dyslexia in English speaking countries may be quoted as higher than in countries with languages that have a literal spelling system, like Italian, Spanish, Turkish, Greek and German. Languages with less complex orthographies (principles underlying spelling) are less likely to cause problems for individuals with dyslexia, and hence these individuals will not be detected as readily. For example, English has 1120 ways of using graphemes (letters and strings of letters) to form 40 phonemes (basic units of speech). Italian by comparison has 33 graphemes representing 25 phonemes (Martin 2001).

Studies with adults have shown that many people are not formally recognised as being dyslexic until they are in adulthood (Dale and Taylor 2001). Although pupils are now being identified in schools at an early age, it is still quite possible that some people may go through primary and secondary school and higher education without their learning difficulty being identified. It would be reasonable to conclude that some individuals will never be formally recognised as being dyslexic and so it is unlikely that an accurate picture of the prevalence of dyslexia will be known.

2.4 CAUSES OF DYSLEXIA

This section will provide an overview of the current thinking in respect of the causes of dyslexia.

There has been considerable case history evidence to support the view that dyslexia can be inherited. Ott (1997) describes a number of reported cases, the earliest being by Thomas in 1905, that supports the view that dyslexia runs in families. Anecdotal evidence over the intervening years indicated that if both parents are dyslexic, there is a high chance that their children may also be dyslexic. The Colorado Family Reading Study, started in 1973, included work with twins, identical and non-identical, which supported the concept of dyslexia as a genetically determined neurological disorder (De Fries 1991).

Researchers have found a number of different anatomical and developmental differences in the brains of individuals who are dyslexic. Increasing understanding of brain anatomy and function is assisting researchers to understand how people

develop language. Advances in genetic research are now providing evidence that dyslexia has partly or wholly distinct genetic causes. Francks et al (2002) believe that the loci of disruption are chromosomes 6 and 18, which have shown strong and replicable effects on reading abilities. More recently, Meng et al (2005) report finding a variation in one gene, DCDC2 on chromosome 6, in approximately 17% of dyslexia cases. Their study demonstrates a connection between a particular gene variant and the altered migration of neurons resulting in different structure of the brain. The altered structure disrupts normal reading circuits. The alternative circuits that then develop are less effective and hence the person experiences the difficulties associated with dyslexia.

Describing dyslexia merely in terms of a neuro-developmental syndrome has been rejected by a number of researchers on the premise that there is a gap between brain anatomy and behaviour, where external influences will complicate the clinical picture. It is for this reason that Morton and Firth (1995) put forward the three-level neutral framework in which to compare the emerging theories. Figure 2.1 illustrates this framework.

Figure 2.1 Three-level Causal Modelling Framework (Morton and Firth 1995)

Environment (includes cultural influences)	Biological
	Cognitive
	Behavioural

Firth (1999) strongly holds the view that dyslexia should not be viewed on

“a single level - biological, cognitive or behavioural - as this will always lead to paradoxes.” (p.214)

She goes on to say that for a full understanding of dyslexia the three levels should be linked together and considered within the context of cultural factors.

The Working Party of the Division of Educational and Child Psychology of the British Psychological Society (BPS) that produced a report in 1999 on its work to

develop a working definition of dyslexia, used Morton and Firth's (1995) framework to describe a number of hypotheses explaining the cause or causes of dyslexia. The following summary uses the headings identified in the 1999 BPS Working Party report:

2.4.1 Phonological delay/deficit hypothesis: In order to learn to read an individual must first listen to the sounds made in oral language and using knowledge of these sounds decode written words. This is called phonological processing skills. The most widely accepted causal hypothesis is that individuals who are dyslexic have impairment in their phonological processing ability. Research in this area has focused on phonological awareness, phonological memory and accessing phonological information from the long-term memory. At brain level it is believed that the perisylvian region of the left hemisphere, which is involved in phonological processing, is affected (Galaburda 1989; Firth 1997).

2.4.2 Temporal processing hypothesis: This hypothesis has phonological processing as a major component (Tallal et al 1997). It focusses on the speed of processing required in integrating speech and non-speech stimuli. At the brain level, differences in the magnocellular layers of the visual and auditory regions of the thalamus are thought to be the basis for the difficulties experienced (Galaburda and Livingstone 1993).

2.4.3 Skill automatisisation hypothesis: Nicolson and Fawcett's (1995) hypothesis proposes that individuals with dyslexia have difficulties across a range of skills, including phonological skills, where they are required to function in an automatic and fluent way and are prevented from using conscious compensation to overcome the difficulties. Nicolson and Fawcett's work in 1999, studying a panel of children with dyslexia, shows severe deficits on clinical and theoretical tests of cerebellar function. The cerebellum has a significant role in the acquisition of language dexterity.

2.4.4 Working memory hypothesis: This hypothesis has phonological processing as a core component. It suggests that individuals who are

dyslexic have particular problems in processing and storing information that is linguistically coded. An insufficient short-term memory is a frequently described characteristic of an individual with dyslexia.

2.4.5 Hypotheses that involve visual processing: There continues to be debate and arguments over the significance of the eyes in determining the cause of dyslexia. There is continuing interest in many aspects of visual processing. Individuals who are dyslexic often have binocular instability and visual perceptual instability. Stein's (2001) work on the visual magnocellular system, which is responsible for timing visual events when reading and ensures the eyes remain on target, supports the view that visual motion affects the development of orthographic skills.

Ott (1997) describes the work done by Helen Irlen in 1983, who claims to have discovered a new syndrome, the Scotopic Sensitivity Syndrome or Irlen Syndrome, in which individuals have difficulties with light sensitivity, visual resolution, sustained focus, sustained attention. The Irlen Institute prescribes coloured lenses to treat the problems and claims that children can read better as a result. This syndrome has been widely challenged by researchers who have suggested that the investigations into the effectiveness of the treatments proposed by the Irlen Institute are poorly controlled. Evans and Drasdo (1991) on reviewing the literature on tinted lenses and related therapies found that there was no conclusive proof that tinted lenses can help reading performances. However, some people have reported that black writing on white paper is not easy to read – blue, yellow or pink paper may be helpful to some.

2.4.6 Syndrome hypothesis: The work by Miles and Miles in the 1970s and 1980s pioneered the approach to the assessment of dyslexia as a syndrome – a distinct group of signs/symptoms that taken together form a characteristic picture (Miles 1993). This hypothesis, in common with the phonological delay/deficit hypothesis, rejects exclusionary criteria and looks for positive indicators, such as difficulties in phonological processing and

short-term memory. Both also acknowledge literacy problems in children of all levels of cognitive ability.

2.4.7 Hypotheses involving intelligence and cognitive profiles: A number of definitions of dyslexia include recognising dyslexia where there is an unexpected contrast between literacy attainment and IQ score. IQ measurement can be good as a general guide to a person's cognitive abilities, however, the use of IQ testing as a means of determining dyslexia is contentious. Some tests that rely on memory are particularly unsuitable for people with dyslexia and will not give a true impression of their intellectual ability (Singleton 1998). Stannovich (1996) states that if the basis of dyslexia is difficulty in processing language, there can be no correlation between such difficulty and IQ; he also states that the notion of 'unexpected' is irrelevant in the light of recent research into phonological development (Stanovich 1998). Siegal and Himel (1998) suggest that definitions of dyslexia based on IQ discrepancies may discriminate against older children and those from a low socio-economic background. There is also an inbuilt assumption that if a person has a low IQ score they should also be poor readers. However, research has uncovered many examples of children with low IQ who are good readers (Siegal 1988, 1992).

2.4.8 Subtype hypotheses: A number of researchers have suggested that there are subtypes of dyslexia. The British Psychological Society (1999) report lists the following:

- Linguistic (L) type/Perceptual (P) type/Mixed linguistic and perceptual type – put forward by Bakker (1979); Masutto et al (1994).
- Dysphonetic/dyseidetic/mixed – put forward by Boder (1973).
- Developmental phonological vs developmental surface dyslexia – put forward by Castles and Coltheart (1993); Manis et al (1996).
- Combinations of word attack/word recognition/reading comprehension – put forward by Morton (1994).

The conclusion drawn by the British Psychology Society (1999) report is that research on subtypes of dyslexia is inconclusive, with much of the work

not grounded in current theories in cognitive processing. They conclude that it is more appropriate to consider dimensions of individual differences in dyslexia rather than discrete subtypes.

2.4.9 Learning opportunities and social context hypothesis: Unlike the hypotheses listed above that include a biological basis, this hypothesis assumes that differences in literacy skills performance between children results primarily from the different learning opportunities and experiences they have had rather than inherent differences (Solity 1996). Different learning experiences, whether from home, school or other external sources are quite likely to produce differences in performance. However, whether this can be considered as a cause of dyslexia is debatable and contradicts the widely held views that dyslexia has a biological basis and is persistent throughout life.

2.4.10 Emotional factors: It is generally accepted that emotional difficulties can be associated with dyslexia; being a response rather than a cause that might exacerbate the learning difficulties. Emotional responses occur in the context of the individual's environment, education/instruction and interpersonal relationships. The resultant effects on performance are related to the individual's coping mechanisms and personality. Yasutake and Bryan (1995) conclude, quite logically, that positive emotion can improve a child's performance on a variety of tasks. Clinical health environments are widely accepted as complex, stressful places to work. McVicar (2003) found that workload, management style, professional conflict and the emotional aspect of caring are the main sources of distress for nurses. The 'personal cost' of caring can be significant for some nurses, particularly those involved in palliative care (Dunne et al 2005). This suggests that dyslexic nursing students could find it more difficult to cope in practice than in their normal daily life.

Reid and Kirk (2001), while agreeing with the phonological deficit hypothesis, advocate that in the case of adults, the underlying cause may be less important than other factors. They state that adults who are dyslexic should be viewed in a

functional and situational manner, with particular attention paid to communication skills, visual skills, processing speed, self-esteem and levels of literacy. This view is particularly relevant to this research study as the subjects are adults striving to achieve competencies in a new environment, that of nursing.

2.5 SUMMARY

A number of important points emerge from this review of the literature. At a fundamental level, while many scholars agree that there is a group of specific learning needs, which includes dyslexia, there is not a consensus on the cause(s) and therefore no agreement on a definition of 'dyslexia'. For scholars who agree with the concept of dyslexia, it is accepted across disciplines that individuals diagnosed as dyslexic have characteristic difficulties in learning to read, write and spell and that this difficulty persists throughout a person's life, although teaching and other support to assist the individual to cope can ameliorate the effects.

Accurately determining the prevalence of dyslexia in the population is impossible to do in the absence of an agreed definition with unequivocal identification criteria. Rice and Brooks argue that for teaching adults, prevalence of dyslexia in the general population is unhelpful as you would

"not expect to find the same rate among the students, nor is it likely that any student rate would be stable over place, time and first-language status"
(2004, p20).

The information from HESA suggests 2.3 – 3.5% of students in higher education are dyslexic (the higher range relating to adults entering through Access to HE courses). This figure fluctuates year on year. However, it is also clear that many individuals are not identified until adulthood and some people pass through the educational system undiagnosed. This means that a true picture is likely to be greater than this. There are dyslexic individuals entering nurse education and the number appears to be growing each year. This may be attributed to greater diagnosis in schools or a more open culture about disability in general.

The next chapter will consider the wider political and social context issues that affect dyslexic individuals. It will also consider the changing view of disability in

Western society from the predominant 'medical model of disability' and views of disability as 'personal tragedy' to that of the 'social model of disability'.

CHAPTER 3: SOCIAL AND POLITICAL PERSPECTIVES OF DISABILITY

3.1 INTRODUCTION

Chapter two began the literature review by considering the definitions and characteristics of 'dyslexia' as a specific learning difficulty. This chapter will examine the wider sociological and political context of how disability is perceived in the UK, and what this might mean for nurse education. Also provided in this chapter is a brief overview of the models of disability and a discussion on whether there is a prevailing model within the nursing profession that affects the recruitment and education of nurses. The chapter concludes with a review of the legislative and regulatory changes that affect nurse education.

3.2 CHANGING VIEWS OF DISABILITY IN WESTERN SOCIETY

Since the Second World War, there has been rapid and extensive social change in the world – economic, cultural and political. One important change has been the development of social movements initiated by groups of individuals who feel marginalised in society, e.g. civil rights movement, women's rights movement, racial equality and the disabled people's movement.

In Britain, the idea that disability was a form of social oppression rather than a medical or welfare issue began in the 1970s. One founding organisation of disabled individuals was the Union of the Physically Impaired Against Segregation (UPIAS). UPIAS led the work on interpreting disability as one of oppression by society. In their *Fundamental Principles of Disability* they wrote:

"In our view, it is society which disables physically impaired people. Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society" (1976, p14)

Impairment is the term used to describe a physical characteristic and disability is reconstructed as a social and political process. Oliver (1983) conceptualises UPIAS's interpretation of disability into the 'social model of disability'. This model describes disability as being created by societies organised around the needs of the non-disabled majority and which ignores the needs of the disabled minority. In

other words it suggests that disability is something that is done to the person rather than being something the person has. Swain et al (2003, p1) describe this paradigm shift from

“...thinking of disability as a condition of the individual, to understanding disability as a condition of a society in which people with impairments are discriminated against, segregated and denied full participative citizenship. It is a shift from ‘disabled’ being seen as a personal tragedy, to ‘disabled’ as a positive identity. It is a shift from dependency and passivity, to the rights of disabled people to control decision-making processes that shape their lives.”

Swain et al's definition is interesting in that it includes reference to disability as a 'personal tragedy', which they have coupled, albeit indirectly, with passivity and dependency, suggesting that it is an inappropriate response to disability. However, arguably in some cases it may be appropriate to talk of personal tragedy, for example, the actor Christopher Reeve, who became a quadriplegic after a riding accident, had his career and ultimately his life curtailed by the injury, which can be described as a personal tragedy for him and his family. His 'personal tragedy' did not stop him becoming an ardent campaigner and activist. However, Swain et al's assertion that being 'disabled' should be seen as a positive identity may not be accepted by all individuals, particularly those who have lost independence and mobility due to their disability.

Barnes et al (1999) observe the speed by which the social interpretation of disability has gained credibility and legitimacy. Their view of the social model is that it does not deny the significance of impairment to people's lives but focuses attention on those social barriers that are constructed on top of impairment. The anti-discrimination element of the social model has been accepted at Government level and change is being initiated through legislation (see section 3.4 page 32).

Conceptually, the social model is strong. It is relatively easy to accept that a disabled person can be constrained by their environment. However, as Lee (2002) points out, it is politically dangerous to dismiss a disabled person's differences and simply adapt the environment because it could trivialise the social and medical care needs and accommodation the disabled person require. Lee also makes the

point that adopting the social model does not mean that every person with an impairment can be enabled to take on any role provided there are modifications to the person's environment, as this would be unrealistic.

Although the emergence of the 'social model of disability' has challenged many to reconsider the issues around disability and impairment, the 'medical model of disability' still predominates in much of society, and is still accepted by many disabled people. The central focus of the 'medical model' is that disability is an individual problem related to the functional limitations of the body. The impairment is the disability, in other words. Biomedical science is focussed on eradicating or treating illness and disability with the goal of restoring 'normal function'. Over the last century huge advances have been made in this area. In reality many disabled people need medical diagnoses and interventions as part of the ongoing management of some disabling conditions and to access services and benefits.

In many ways the medical model reflects how Western culture values individuality and self-determination. Oliver (1990) and Gleeson (1997) argue that the origins of present day 'disability' are in industrialisation in the nineteenth century. New factory based production valued workers who were 'able-bodied', who could work quickly, efficiently and with minimal supervision. Anyone not fitting this norm was labelled sick or incapable and people with impairments were increasingly separated out from the rest of society and housed in workhouses and other institutions. Thus the development of communities, in everything from transport to education, was not designed for people with impairments as it was expected their needs would be met elsewhere. It could be argued that the nursing profession as a deliverer of a service has this ethos of valuing 'fit and able' workers.

In 1878, Charles West, a fellow of the Royal College of Physicians, described nursing as:

"It entails on those who pursue it much fatigue of body, it calls for nimbleness of hand, as well as for gentleness and patience". (Crowther 2002)

This view that nursing is a physical occupation requiring fit and healthy individuals is well entrenched within the nursing profession. During the twentieth century there were times when the nursing profession excluded individuals unless they were a certain height and weight, if they were married or became pregnant, if they had illnesses such as diabetes and epilepsy. While not being quite so draconian, current requirements of the Nursing and Midwifery Council (2004b) are for individuals to make good health and good character declarations at the beginning of training and on entry to the professional register.

An example of the difficulties facing individuals who have a disability in gaining access to training is reported on the Disability Rights Council website (DRC, WWW, 2005). Here they report on Nikki Heazell who had her left arm amputated below the elbow as a baby, and the difficulty she had in persuading a school to take her on as a student nurse. She was ultimately successful and qualified as a nurse in 2002. The schools that rejected her felt she would be unable to carry out the role and functions of a nurse. This suggests that in many schools of nursing their selection decisions are grounded in the 'individual' or 'medical model' of disability. The advent of the Special Educational Needs and Disability Act (2001) regulations, which requires education institutions to make anticipatory adjustments, has meant a shift towards the 'social' model of disability, as the focus moves to the learning environment and away from the individual.

It is interesting to note that while the nursing profession in respect of dealing with its members could be viewed from the 'medical model' perspective, care delivery by nurses is often approached from the 'social model' perspective. The biggest change can be seen in the approaches to care in the mental health and learning disability fields. Since the 1960s there has been a move away from institutionalised, medically dominated care to community based services where the individual is helped to lead an independent life with support from the multi-professional team. There is an acceptance that patients are not dependent recipients of care but should, wherever possible, be active partners in determining what should happen to them.

3.3 WHAT'S IN A NAME?

Terms like 'disability' or 'learning difficulty' have, since the 1970s, been recast in socio-political terms, 'disability' in particular is often referred to a form of social oppression or discrimination as opposed to a purely medical or welfare concern (Thomas 2002). Disabilism is now listed alongside other discriminatory practices such as racism or sexism. Tackling discrimination of disabled members of UK society is now well established on the political agenda.

In the beginning of chapter two (page 8), it was briefly explained that the use of terms and labels for individuals with specific impairments was controversial. Whether or not to use terms like 'dyslexic', 'learning difficulty' or 'disability' is open to debate and can vary by individual, organisation and country, for example, in the UK people diagnosed as dyslexic are commonly referred to as having a 'specific learning difficulty', in the USA the term 'specific learning disability' would be used. The names or labels ascribed to people can imply superiority or inferiority, or be marks of exclusion or inclusion and reflect the way society is organised and the prevailing values it holds. Names and labels are often associated with, usually negative, stereotypes that lead people to make value judgements about individuals. Swain et al (2003, p12) contest that there is a central role in the location of power in relation to naming or labelling:

“...on the one hand, it can be an exercise of power and part of the process of control but, on the other hand, be an expression of personal or group identity and part of a process of liberation.”

In terms of this study, authority and power were vested in the university, health service and with professionals such as the educational psychologist or occupational health doctor and not with the students.

The use of labels can be seen in both positive and negative terms. In relation to a specific learning difficulty, being labelled can have a stigmatising effect. The individual may be discriminated against during the initial selection for the course if the admissions lecturer believes the individual poses a threat to the patients. Alternatively if a person declares they have a specific learning need this may open up several means of support. Dale and Taylor's (2001) study into dyslexic adult

learners identified that many of their fears about being labelled as dyslexic relate to what they consider is society's stereotyping of dyslexia as a spelling problem. One participant observed, "*Spelling is like a thermometer for intelligence*" (p1003). She worried that being labelled dyslexic would make some people think she was stupid. As shown in the previous chapter (page 11 and page 23) there is no clear evidence linking dyslexia with intelligence.

The purpose of naming something is to impart meaning to others, however, poor understanding of the terms used, as in the case cited above, or prejudicial views about someone seen as different, can turn a simple descriptive term into a source of discrimination. Galambos' (1998) study into disclosure decisions in teacher training students in higher education found that fear of being stigmatised or discriminated against had a direct relationship to a person's decision to disclose information in an educational setting.

Inevitably there are situations where a term or label has to be used. One common debate relevant to this study is the ordering of terms, for example, whether to use the phrase 'disabled people' or 'people with disabilities'. The argument goes that the latter phrase humanizes disabled people by putting the person before the disability. Oliver and Barnes (1998) took a different view and suggest that by placing the word 'people' before 'disability', means that the disability is the property of the person and not of society. They said it ignores the political nature of disability in terms of societal and environmental change that is needed to address discrimination. Putting 'disabled' before 'person', emphasises that disability is something that is done to the person rather than being something they have. Both arguments appear reasonable and show clearly the difficulty when using labels to describe characteristics about people. As there is no consensus, both arrangements of words will be used in the thesis.

3.4 LEGISLATION AND REGULATION

This section explores the various legislative changes that have occurred in the UK starting with the establishment of the Disability Discrimination Act in 1995 and formation of the Disability Rights Commission. It goes on to examine subsequent changes to the Act and the implications for the regulation of nurse education.

In the thirty years since the beginnings of the disabled people's movement, there has been a growing recognition at Government level of the need to tackle discrimination of this section of society. The Disability Discrimination Act (DDA) was passed in 1995 to end the discrimination that many disabled people faced, for the first time enshrining some civil rights for people with disabilities within law. The Labour Government's 1997 manifesto committed the Government to establish comprehensive and enforceable civil rights for disabled people, recognising that there were limitations to the DDA (1995). To take its work forward, a Disability Rights Task Force (DRTF) was established in December 1997 to advise the Government on how to deliver its manifesto promise, in particular, to recommend the role and functions of a Disability Rights Commission. In 1999, the DRTF published *From Exclusion to Inclusion*, which listed 156 recommendations across all areas of disabled people's lives. The Disability Rights Commission (DRC) Act was passed in 1999 and led to the establishment of the DRC in April 2000. The Act sets out the DRC's statutory duties as:

- To work to eliminate discrimination against disabled people.
- To promote equal opportunities for disabled people.
- To encourage good practice in the treatment of disabled people.
- To advise the Government on the working of the Disability Discrimination Act

In May 2004, a White Paper was put forward entitled *Fairness for all: a new commission for equality and human rights* (Department of Trade and Industry 2004). This was followed by a 3 month consultation on the Government's plans for implementing the disability, sexual orientation and religion provisions of the Employment Directive brought forward under Article 13 of the EU Treaty and the provisions of the Article 13 Race Directive. The result was that the DRC would be incorporated into the new Commission for Equality and Human Rights to be established in 2006, which would address discrimination in a number of areas in the context of human rights.

Since its introduction in 1995, the DDA has been amended, with a fully revised Disability Discrimination Act receiving Royal Assent in April 2005. The revised

DDA (2005) has a number of new areas of protection and it widens the definition of disability, for the purposes of the Act, to include people with mental illnesses, people with HIV infection, Multiple Sclerosis or cancer.

In respect of education providers, one of the amendments to the original 1995 Act led to the introduction of new duties in September 2002. These changes came under Part IV of the Disability Discrimination Act (1995) amended by the Special Educational Needs and Disability Act (SENDA) (2001). These require education providers such as universities to ensure that they do not discriminate against disabled people. The Act stipulates that higher education institutions (HEIs), as responsible bodies, have an 'anticipatory duty' towards the requirements of all disabled people and to make 'reasonable adjustments' for those who might otherwise be substantially disadvantaged. As half of a nursing student's pre-registration programme is taught within clinical practice and their ultimate employment was likely to be in the health service, it is not clear how 'reasonable adjustments' in the clinical practice element of the course should or could be made.

In response to the disability legislation the Quality Assurance Agency (QAA) issued the *Code of practice for the assurance of academic quality and standards in higher education: Section 3: Students with disabilities* (1999), which set out, for the first time, good practice for the higher education sector. The precepts within section 3 include the following which relate specifically to the delivery of courses:

Precept 10:

The delivery of programmes should take into account the needs of disabled people or, where appropriate, be adapted to accommodate their individual requirements.

All of the actions described under this precept refer specifically to what assistance should be provided during the theoretical element of the course and gives no guidance on the delivery of the programme in clinical practice.

Precept 11:

Institutions should ensure that, wherever possible, disabled students have access to academic and vocational placements including field trips and study abroad.

The actions under this precept include the need for course providers to seek placements that are accessible, and also that course providers should work with the placement providers to determine accessibility. The emphasis of this section is accessibility for physical disability rather than how individuals with specific learning needs should be accommodated. Both precepts provide little additional guidance for the admissions lecturer for a nursing programme when presented with an applicant with specific learning difficulties.

The introduction of the *QAA Code of practice for the assurance of academic quality and standards in higher education* (1999) and SENDA (2001) regulations have raised the profile of supporting students with disabilities and specific learning difficulties within higher education. All pre-registration nurse education is now offered through higher education and therefore comes under the SENDA legislation and QAA code of practice.

Self-regulation of the nursing profession was introduced through the Nurses Act in 1919. Self-regulation is currently carried out through the Nursing and Midwifery Council (NMC), as determined by the Nursing and Midwifery Order (2001). The NMC's primary purpose is to protect the public by ensuring that nurses and midwives provide high standards of care to their patients and clients, in other words that they are 'fit for practice'. The NMC controls who can use the title 'registered nurse' and who is permitted to practise in the UK by maintaining a three-part register listing all nurses, midwives and specialist community public health nurses, e.g. health visitors. It also sets out the standards for education, practice and conduct, considers allegations of misconduct or unfitness to practise due to ill health. The terms 'registered nurse' and 'registered midwife' are protected in law.

In order to be registered as a nurse or midwife and to subsequently re-register to remain on the professional register, the NMC requires review by the Criminal Records Bureau and evidence of the individual's good health and good character. This latter requirement was introduced in the Nursing and Midwifery Order (2001).

The NMC guidance 06/04 (2004b) *Requirements for evidence of good health and good character* recognises that a registrant may have a disability, such as impaired hearing or a health condition such as diabetes and yet be perfectly capable of safe effective practice, and therefore can meet the good health requirement. The NMC recognises that the term “good health” in this context is a relative concept. In the document *Standards of proficiency for pre-registration nursing education* (NMC 2004c) the limited guidance in obtaining evidence of the applicant’s good health and good character states that applicants are required to submit self-assessment health questionnaires which would be reviewed by the institution’s occupational health department and may require routine health screening or full occupational health assessment. It also includes a section describing what should happen when a student declares they have a disability:

“Students who declare on application that they have a disability should submit a formal assessment of their condition and specific needs, from a GP or other medical or recognised authority, to the relevant Occupational Health department. The programme providers should apply local policy in accordance with the Disability Discrimination Act (1995) (amended by SENDA 2001), for the selection and recruitment of students/employees with disabilities.” (NMC 2004c)

It would appear from the guidance that the NMC expects that a student with a disability would be screened through the occupational health service in the same way as a health condition would be screened, thus there is little difference in the way disability is being viewed by the NMC to that of ill health. This may suggest a ‘medical’ view of disability, in that the problem sits with the individual and it must be determined if the individual can conform to the requirements of nursing practice. There is little to suggest from the guidelines that there is a requirement on the health service as an employer to work towards accommodating the needs of individuals with impairments, as stipulated in the Disability Discrimination Act (1995).

The NMC responded to the disability legislation by publishing a single page position statement in relation to the Disability Discrimination Act (NMC 2004d). While this statement shows the NMC’s willingness to register any individual who has achieved the required competencies, it has placed the responsibility on the universities to determine how students with disabilities could be accommodated.

“Discussions about how the [student’s] requirements could be met, through making ‘reasonable adjustments’ within the scope of the Act, enables both the potential applicant and the university to come to a realistic decision about progressing an application. Where the decision is to proceed with the application, the university will be expected to comply with their responsibilities under the Disability Discrimination Act and related Codes of practice.” (NMC 2004d, p1)

The NMC, by referring universities to the Disability Discrimination Act (1995), SENDA (2001) and QAA codes of practice for their responsibilities, has in essence avoided giving practical guidance, which could be useful to schools of nursing in making ‘reasonable adjustments’.

The introduction by the NMC of the new professional register in 2004, with revised proficiency standards, marked a major change in the regulator’s stance on entry to the profession. This change did not come from within the profession, rather, it is a result of pressures exerted on it, e.g. politically through legislation and through societal changes. Political pressure is being exerted on the health regulators, including the NMC, to widen the entry gate to the professions. This is part of the ‘New Labour’ Government’s drive to tackle social exclusion. Since Labour came into power there has been increasing legislation introduced related to tackling equality and diversity issues within society, which includes the Disability Discrimination Act (1995), to back up the government’s policies.

Commissioning of pre-registration education programmes is directly affected by Government policy. For example, in Wales the National Assembly for Wales’ strategic plan 2003-07 *Wales: A Better Country* has social justice and tackling social exclusion as a core theme. In terms of nurse education, the five higher education institutions that offer nurse education in Wales are encouraged to recruit locally and to consider issues around accepting individuals from socially deprived backgrounds; this can obviously include disabled individuals. The Welsh Assembly Government requires reports from institutions on a regular basis on the make up of the student population on all its courses to monitor how its targets are being met.

The political drivers and societal changes are challenging the nursing profession to consider who its members should be and how these members should be

supported and enabled to work within the health service. Unfortunately rather than being led by the UK regulator or professional associations like the Royal College of Nursing, it is left to the schools and frequently individual lecturers within the schools, working with service colleagues, to determine the best way forward in respect of students with disabilities or specific learning needs. Decisions based on the staff's own values and beliefs inevitably lead to subjectivity creeping in to the decision making process, which may lead to a subtle form of discrimination. For schools of nursing it is increasingly difficult to answer the question about who should enter nursing, and it poses a new question about how less 'traditional' students should be supported through their training.

3.5 SUMMARY

This chapter highlighted some of the wider sociological, legislative and regulatory issues in order to provide context for this study, as it was important not to consider nurse education or the individual dyslexic nursing student in isolation. Chapter 4 will complete the literature review by exploring the specific issues affecting pre-registration nursing students who are dyslexic.

CHAPTER 4: DYSLEXIA AND THE NURSING PROFESSION

4.1 INTRODUCTION

The review in chapter three considered the wider context of disability in society and reviewed the political, legislative and regulatory controls that drive change. In this the third and final chapter of the literature review, the discussion will be focussed at the nursing profession and will explore issues that affect dyslexic individuals who are seeking to become registered nurses. The review indicates some of the difficulties the profession has in ensuring that registrants are selected and educated appropriately so that they are able to provide safe, high quality nursing care and are 'fit for practice'.

The review in this chapter considers the issues from two perspectives, firstly from the dyslexic students' position, particularly the problems they may face in the theoretical and clinical practice elements of the pre-registration course; and secondly from the education providers' perspective. Education providers in this context refer to all those involved in the selection, support, supervision, teaching and assessment of the students in the higher education and clinical practice environments. The review from the educators' perspective will consider the admissions process, principally the role and attitude of admissions officers, screening and assessment to diagnose dyslexia; followed by consideration of the sources of support available to students, including formal support systems in higher education and clinical placements, the Disabled Student's Allowance and published guidance. Finally consideration is given to the importance of preparing teachers and mentors for their role in supporting students with specific learning difficulties.

4.2 PROBLEMS FACING DYSLEXIC STUDENTS

Individuals with dyslexia do not uniformly exhibit the same range or level of difficulty. Some researchers have tried to categorise levels of dyslexia, for example, Pumfrey (1994, cited by Ott 1997) uses the categories severe, moderate or mild with associated reading and spelling ages. Although this approach has not been widely accepted it should be borne in mind that when talking about the problems individuals who are dyslexic may experience in the workplace (in this

study the practice of nursing) there would be individual differences both in the person's strengths and weaknesses.

Programmes leading to registration as a nurse in the UK comprise of 50% theory and 50% clinical practice and are normally completed in a minimum of 3 years full time study in approved Higher Education (HE) institutions (NMC 2004c).

Therefore, dyslexic nursing students must deal with the challenges of academic study in a HE environment as well as develop clinical competencies in a diverse number of clinical practice areas, e.g. acute care areas in hospitals and primary care in the community.

4.2.1 Problems in Higher Education

Although individuals who are dyslexic may have developed a range of coping strategies by the time they reach adulthood, the enduring nature of dyslexia means that the adult learner in university may still experience cognitive difficulties that affect their ability to study. Hatcher et al (2002) compared the cognitive skills of dyslexic students studying a range of arts and science subjects at university with those of their non-dyslexic peers, to determine the impact of cognitive difficulties on their study skills. They found that although there were varying levels of difficulty experienced across subject areas and between individual students there was strong evidence that students had problems in writing, a key skill in HE. There was clear evidence that students need advice on structuring and organising written work in order to manipulate information and demonstrate knowledge effectively. The study found that students who were dyslexic took on average 24% longer than non-dyslexic students (controls) to write a précis and 64% longer to read a passage containing novel words.

Simmons and Singleton (2000) compared the reading comprehension abilities of a group of dyslexic university students with a group of non-dyslexic university students. Each group was given a 655-word passage, followed by literal and inferential questions to measure comprehension. The students who were dyslexic were significantly impaired when constructing inferences from a complex text. The authors conclude that their problems could not be accounted for by an inability to decode individual words which may indicate poor lexical automaticity and an

impaired working memory. Nursing students are required to address a wide range of subjects, e.g. biology, psychology, sociology, ethics, nursing theory, and apply the knowledge to individual patient situations. Simmons and Singleton's (2000) research implies that nursing students who are dyslexic would need more guidance than non-dyslexic students in order to do this.

Universities with student support units normally provide advice to students who are dyslexic and for the lecturers and tutors who will be involved in teaching and supporting them. The guides produced normally describe the types of difficulties the student may encounter with their academic study. A typical example of a guide is one produced by the University of Wales Swansea. The authors, Ryan et al, (WWW, 2002) list the types of problem that may be observed:

- *“Discrepancy between verbal and written performance [individuals tend to be good verbal communicators]*
- *Misreading or mis-copying, difficulty seeing errors, omitting words*
- *Problems with spelling, poorly constructed handwriting and immature use of language in relation to the ideas being expressed*
- *An inability to listen and to write simultaneously – note taking in lectures almost impossible*
- *Lack of organisational skills, causing difficulty in planning and writing essays, work schedule, etc*
- *Difficulty in being specific when reading for assignments and writing notes; there may be a tendency to write too much*
- *Forgetting a series of instructions or carrying them out in the wrong order*
- *A tendency to talk rather than listen as a strategy for restricting the input of information” (p.2).*

It could be argued that some of the items listed in this example are difficult initially for many students entering higher education, particularly those with limited study skills, as would be the case for some mature students, e.g. ability to listen and write notes during the lecture, or to plan essays and other academic assignments. However, with guidance most students develop the study skills required, whereas the dyslexic student is likely to experience ongoing difficulties because of the nature of their learning difficulty.

4.2.2 Problems in clinical practice

Moody (1999) relates the typical problems experienced by individuals who were dyslexic to potential effects on efficiency at work. The following list includes

clinical nursing practice examples as well as Moody's original workplace examples in order to provide appropriate context for this study:

- *Literacy skills*: reading and writing reports. In the nursing context this would include nursing care plans, drug charts and test requests/results
- *Memory*: remembering telephone numbers, recalling what was said at meetings (content and/or originator of the information). In the nursing context this would include ward handover, doctor's round and case conferences.
- *Sequencing ability*: filing and looking up entries in dictionaries and directories. Nurses are required to retrieve information from a variety of sources such as the patient's record.
- *Visual orientation*: poor sense of direction, find map reading difficult. Nurses working in the primary care setting may face challenges in finding client's addresses. Confusing left and right or up and down may also cause problems when carrying out some aspects of care.
- *Hand/eye co-ordination*: may result in poor presentation of written work. Many roles undertaken by nurses particularly in the critical care/high dependency field require a high level of technical skill. Nursing records are legal documents and must be clearly presented.
- *Speech*: may talk in a disorganised way, especially at meetings or on the telephone. Good communication skills are fundamental to functioning as a nurse.
- *Organisational skills*: poor time management and work environment can look disorganised. Many nursing tasks are time dependent, for example, administration of drugs, recording of vital signs, completing nursing records to hand over to the next shift of nurses and maintaining patient's records in a neat and orderly fashion.
- *Emotional factors*: may display anger, embarrassment and anxieties. Nursing can be challenging and stressful at times, for example patients and their relatives may become abusive, there may be conflicting demands on the nurse's time, some patients will be extremely ill and some will die. Nurses need to be able to deal appropriately with their own emotions in a wide variety of situations.

Findings by researchers examining nursing students who are dyslexic performing in clinical practice, lend further support to some of the areas listed by Moody:

- Tumminia and Weinfield (1983) found that students had difficulty articulating instructions given to them by others.
- Shuler (1990) found a disparity between classroom performance and clinical performance (performance in practice being far better than performance in class); students were disorganised and had difficulty meeting deadlines for academic assignments; and had difficulty in following directions.
- Shellenbarger (1993) found that students had difficulty following directions and may get items in an incorrect order, especially if there was a list of instructions; difficulty carrying out procedures where lengthy lists are involved, e.g. catheterisation; got confused with directions (e.g. up, down, left and right); care plans were completed late and deadlines were missed; and there were errors in charting and writing patient records.

One area that does not appear on Moody's list is the extent to which being dyslexic affects an individual's self-esteem, anxiety in a learning environment and patterns of behaviour. Self-concept and self-esteem are important in developing a positive attitude to learning and to overcoming any learning difficulties (Rogers 1996). Self-concept can be described as the resilient personal view an individual has about themselves in terms of their capabilities, limitations and worth. Self-esteem or self-worth is the subjective evaluation or feelings held about oneself, which can be positive or negative. Threats to a person's self-concept through personal failure, stressors or inconsistencies that challenge how the individual sees themselves, can have detrimental effect on the individual's sense of self-worth (Hogg and Vaughan 2002) and contribute to physical illness (Salovey et al 1998).

An individual who frequently experiences failure will come to anticipate failure in future endeavours. Failure becomes self-fulfilling, as the experience is both reciprocal and reinforcing. Riddick et al (1999) compared self-esteem and anxiety in 16 dyslexic university students matched to 16 non-dyslexic control subjects.

Their findings show that the dyslexic group had significantly lower self-esteem than the control group and reported themselves to be more anxious and less competent in their written work and academic achievements.

4.2.3 External factors affecting performance

Morgan and Klein (2000) consider that external factors will influence the individual's perception of the significance of being dyslexic. The most important being the stage at which dyslexia is first diagnosed and the type of support, emotional and academic, they receive. Adults who are not recognised as having a specific problem as a child or receive inappropriate intervention in their education or have poor support may carry 'deep scars' resulting from feelings of inadequacy, frustration, anger and resentment as a child. They may have been labelled as 'lazy' or 'stupid', terms they internalised and accepted. Educational psychologists have argued for years that an individual's past experiences in a learning environment and their self-concept of their abilities and performance will affect any future education (Rogers 1996).

Given past experiences, nursing students who are dyslexic may be sensitive to the attitude of their lecturers, clinical mentors and peers during their course. The law of averages would suggest that during their 3 year course they would encounter negative attitudes to their learning difficulty. There are a number of anecdotal reports made by students and qualified nurses that attest to the problems they have experienced arising from other peoples' negative attitudes towards their learning difficulty (Anonymous 1994; Stephenson 1999; Wiles 2001; Allen 2002; Shepherd 2002). Blankfield (2002) believes that the

"biggest 'problem' for a nurse with dyslexia is the attitude of non-dyslexic employers, placement tutors and colleagues, who tend to react either with horror or sympathy when dyslexia is disclosed. This is not appropriate or helpful. Trainee nurses with dyslexia need practical discussions about what strategies they can use in the workplace, if any, to ensure they manage any difficulties that may arise." (p.31)

It is not clear from these accounts whether the negative or discriminatory attitudes expressed by others have a detrimental effect on students' ability to gain the clinical competencies needed to register as a nurse, or indeed whether it acts as a motivator for the nurse to prove they can do it.

4.2.4 Positive attributes

Although this section has dealt mainly with the difficulties experienced by individuals who are dyslexic, in order to give a balanced picture it is worth noting the positive attributes often ascribed to individuals with dyslexia, which include the ability to process information holistically resulting in creative and innovative problem solving in the workplace, enhanced intuition and increased imagination and curiosity (Davis and Braun 1994). Gilroy and Miles (1996) summarise the strengths often exhibited by people who are dyslexic as being strong on logic, making individuals good at evaluating arguments, weighing up evidence and reaching appropriate decisions. Riddick (2003) studied the experiences of trainee lecturers who were dyslexic, who reported that they felt the positive traits of empathy and understanding outweighed the negative aspects of their condition. My personal experience as a nurse supports Riddick's findings. Nurses I have encountered who are disabled or who have had serious illness often demonstrate greater understanding and empathy with their patients, as they are able to relate to their own experiences when providing care.

4.3 ADMISSION TO THE COURSE

This section considers various aspects of the admissions process and how these may have a bearing on the selection and enrolment of an individual who is dyslexic on to the pre-registration nursing course.

4.3.1 Attitude of Admission staff

Although discrimination legislation is in place in the UK and USA, there is some evidence to suggest that the beliefs and knowledge base of the admissions lecturers may adversely affect the recruitment of disabled students. Two studies in 1995 in the USA (Magilvy and Mitchell 1995; Watson 1995) found that approximately 50% of nursing programmes admitted students with any kind of disability, including dyslexia. Sowers and Smith (2002), commenting on students with disabilities studying health science programmes (including nursing, dental, medical, and allied health professions) in the USA, observe that health professions faculties often assume that disabled students pose a greater safety risk, an

assumption that still affects admissions policies to many programmes, even though the 'Americans With Disabilities Act' was in place to prohibit discrimination. Wright (2000) found in his study of UK HE institutions offering nursing courses that 24% of respondents feared that dyslexic individuals pose a safety risk in practice.

Some examples of comments made include:

- *“Concerns are continually being expressed in treading the balance between anti-discriminatory practice and patient safety. This relates to those students whose dyslexia includes a delay in mentally transcribing verbal instructions or accurately reading and interpreting information at speed.*
- *Potential to confuse medical terminology or drug names. The situation is quite worrying.*
- *Staff have expressed some concern about that need for a specific assessment for nursing and midwifery students, given their role in patient care.”* (p.39)

Senior members of the profession have voiced concern over the possible risk nurses who are dyslexic may pose in clinical practice. Duffin (2001) reported on a UKCC meeting in which Professor Paul Lewis, the (then) vice chair of the UKCC's Joint Education Committee, described how a nurse dispensed drugs using the colours of the drugs and size of the bottles as a guide to judge which medicine to give to patients. He stated that there was an inherent danger when numbers can be misread resulting in mistakes in dosage. Professor Lewis suggested that while universities generally provide good support for students with specific learning difficulties, this level of support was not available in the clinical practice setting. Although he did not call for barring individuals who are dyslexic from becoming nurses, Professor Lewis' remarks reflect many of the fears expressed by members of the nursing profession.

Corlett (1999, cited by Konur 2002) stated that SKILL, the National Bureau for Students with Disabilities, has received an increasing number of calls from would-be nurses, who had been rejected because they were dyslexic or had other disabilities, before being asked whether their dyslexia or other disability would have any real affect on working or training as a nurse.

Unfortunately, there is also some anecdotal evidence to suggest that even after students have successfully completed the pre-registration course and become

registered as nurses, they find that employers refuse to offer them a job fearing they pose a risk to patients because they are dyslexic (May 1999).

There is currently little factual evidence to support or refute the fears expressed by admissions lecturers and other nurses. For example, it is estimated that there are 850,000 incidents and errors occurring every year in the NHS, with a third of adverse incidents leading to disability or death (National Patient Safety Agency, WWW, 2003). National statistics on errors or near misses have, until recently, not been gathered; therefore it is impossible to substantiate the claim that nurses who are dyslexic make more errors than non-dyslexic nurses. In June 2000, the Government accepted all recommendations made in the report of an expert group, led by Professor Sir Liam Donaldson, Chief Medical Officer, called *An Organisation with a Memory*. This resulted in the establishment of the National Patient Safety Agency (NPSA) in 2001. Its purpose is to administer a national system for identifying adverse events and near misses in health care, to gather information on causes and to learn and act to reduce risk and prevent similar events occurring in future. An example of their work: in September 2005 the NPSA launched a campaign to raise awareness among doctors in training about what can be done to improve patient safety. However, it is too early to suggest that the work of this agency will shed any light on the potential risk posed by health care staff who are dyslexic.

Sowers and Smith (2002) conclude that there is no data currently available in the USA to support the premise that health professionals with disabilities pose any greater safety risk to patients. They suggest that conversely, through their experiences of living with a disability, these people may offer a new perspective to patient care.

The requirements to become a registered nurse in the UK are determined by the Nursing and Midwifery Council and are set out in terms of competencies to practise. These standards do not refer to the physical or mental status of the nurse but imply a level of ability in order to demonstrate the required competencies. A number of researchers (Shellenburger 1993; Magilvy and Mitchell 1995; Sowers and Smith 2002; Persaud and Leedom 2002) have

commented that schools of nursing should focus on essential nursing functions and the reasonable accommodations they can make rather than focussing on the individual student's limitations. One article gave an example to illustrate this point: if an essential nursing function was to 'detect a heart murmur' a student who is hard of hearing could use an amplified stethoscope, whereas a deaf student could use a stethoscope with a visual display. Both students could not 'hear' but they could perform the stipulated essential function when reasonable accommodations are made (Sowers and Smith 2002). The argument put forward is that unless there is a shift in focus, academically able students who have a learning difficulty or other disability would continue to be excluded from the nursing profession.

One area that has not been determined at a national level is who is responsible for making the 'reasonable accommodations' for students in practice; once qualified it is their employer who will be responsible. In the example in the previous paragraph, it was the school who provided the amplified stethoscope, as this was a piece of equipment the student could take with them to each placement during their training. However, if the accommodation needed was more fundamental to the working of a clinical area, such as a need for the student to complete records electronically in an environment where hand written reports only were used, this raises the question about who should pay. It may be an unpalatable reality, that in many clinical environments accommodations made for disabled students will, in future, be those that are 'affordable' rather than 'reasonable' in nature.

Admissions lecturers act as 'gatekeepers' to nurse education programmes. Their personal views as well as the prevailing culture within the higher education institution, irrespective of legislation, determine who enters the nursing profession. The notion that a person must be physically and mentally fit to be a nurse is still one that persists, making it hard for those individuals with a disability or specific learning need to access nurse education and hence the profession. This clearly points to a need to educate and inform nurse educators and to challenge accepted beliefs about who is suitable to be nurse.

4.3.2 Screening

Wright's (2000) review of universities in England that offer pre-registration nursing programmes found that dyslexic students were identified in a number of ways:

- Before the course, e.g. on the application form
- By documented evidence or educational psychologist report, either with the application form, presented at interview or post acceptance onto the course
- Self declaration on admission
- Referral by their personal lecturer (pastoral role) for assessment
- Self-referral for assessment
- Screening
- Referral by the university student support centre for assessment

Wright notes that 50% of dyslexic students were identified after they had started the course. He also observes that in some cases, students actively hid their learning difficulty from the institution at some point. 'Passing' or hiding a disability was frequently seen in the behaviour of individuals where they feared stigmatisation or discrimination (Goffman 1963).

With only 50% of dyslexic students recognised during the admissions process it could be argued that students should be screened to help determine who should be referred for full assessment. This screening could be done as part of the admissions process or as part of the registration procedure with the university. There are a number of self-assessment checklists available, e.g. Adult Dyslexia Checklist or the Checklist for Dyslexia, which provide an indication only that the person may have a specific problem. Compelling individuals to be screened during the admissions process may be seen as a move to exclude individuals with learning difficulties, which is expressly forbidden under the Special Educational Needs and Disability Act (2001), as well as being an infringement on their human rights. It is more appropriate to consider offering prospective students the opportunity to be screened once admitted to the course, either through their personal tutor or the university's Special Needs Officers, and cited in the prospectus as a positive service for its students.

Universities may consider screening in future as a means to protect themselves from lawsuits from failed students who went undiagnosed by the university.

Although this has not happened in higher education yet, there was a Lord's test case (BBC News 27th July 2000), which upheld an appeal for a pupil, Rhiannon Anderton, of Bryn Coch Primary School who sued the education authority for damages, claiming her head teacher failed to recognise that she suffered from dyslexia.

4.3.3 Assessment and diagnosis

Some prospective nursing students will have been assessed during their formal schooling. Strategies for assessing children focus on defining the child's learning and cognitive profile, as well as the process and context within which learning takes place. The result ought to provide a guide to assist the teacher to develop an effective teaching programme for the child. It is unlikely that assessments carried out on the individual as a child can be used as a guide to whether the individual as an adult will be successful in a particular job or work environment. By the age of 16 most individuals with dyslexia have learnt coping strategies/compensatory mechanisms that ameliorate their difficulties (Reid and Kirk 2001). Ideally all that should be concluded from assessments conducted in childhood is that the person has a specific learning need, the implications of which should be explored fully with the applicant.

Those students who present themselves as having a specific learning difficulty during the admissions process must produce a 'statement' normally from an educational psychologist. In Wales all prospective nursing students are interviewed and provide supporting material and references with their application form. The admissions lecturer must consider all of the information gathered and judge whether the person with a specific learning difficulty will be capable of successfully completing the requirements to become a registered nurse. The admissions lecturers may not readily understand the large number of tests used in screening and assessing students. This suggests that Universities should ensure that as part of a lecturer's induction to the role as admissions officer they are provided with information about test results they might encounter and a contact point where they can seek advice. To illustrate this point, table 4.1 lists a wide

range of assessment approaches, strategies and tools, any one of which could be presented to the admissions lecturers.

Table 4.1 Assessment approaches and strategies

<p>Standardised</p> <ul style="list-style-type: none"> • Weschler Intelligence Scale (WISC III) • Weschler Objective Language Dimensions (WOLD) • Weschler Objective Number Dimensions (WOND) • British Ability Scales • New McMillan • Neale Analysis • Aston Index <p>Diagnostic</p> <ul style="list-style-type: none"> • As above • Miscue Analysis • Bury Infant Check • Reading Assessment for Teachers (RAT Pack) <p>Diagnostic Spelling Test</p> <ul style="list-style-type: none"> • Boder Test of Reading and Spelling Patterns • Slingerland • Adult Assessment <p>Observational</p> <ul style="list-style-type: none"> • Observational Survey/Running Record • Observational Framework 	<p>Screening</p> <ul style="list-style-type: none"> • Cognitive Profiling System (COPS) • Dyslexia Screening Test • Quest Reading and Number Screening Tests • Bangor Dyslexia Test • Checklists <p>Phonological</p> <ul style="list-style-type: none"> • Phonological Assessment battery • Sound Linkage • Phonological Awareness Procedures • Lindamond Auditory Conceptualisation Test (LAC Test) • Phonological Abilities Test <p>Components Approach</p> <ul style="list-style-type: none"> • Decoding/listening comprehension • Non-word Reading <p>Metacognitive</p> <ul style="list-style-type: none"> • Assisted Assessment • Pass Model • Portfolio Assessment • Multiple Intelligences Approaches
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(Source: Reid 1998, p35)

Some prospective students would not have been formally assessed as children and may be assessed as adults independent of their application to the course, referred for assessment during the admission process or once they are on the course. Unlike assessments with children, there is a lack of consensus on which assessment strategy to use with adults. What is agreed is the need to consider implications for the workplace, as problems experienced by the adult dyslexic are likely to be situational. Morgan and Klein (2000) also point out that the commonly accepted ways of determining dyslexia, e.g. a discrepancy between reading age and chronological age and/or cognitive ability, needs to be rethought. This begs the question "At university what reading age is acceptable?" However high the reading age, a student who reads slowly will be disadvantaged, for example, in timed examinations or in handing work in to a deadline. There is no evidence that

the nursing schools in Wales require that the assessment for dyslexia be related to the situational context of nursing.

If a student is referred for assessment of their specific learning needs, it is important that support is available if the diagnosis is positive. Individuals could have various responses to being told they are dyslexic. Some may feel greatly relieved that they have a recognised problem and are not just 'thick', others have reported fear of being labelled and hence treated differently to their peers (Riddick 2000; Dale and Taylor 2001). It is unclear what effect receiving formal recognition of a specific learning difficulty has on adults training to become nurses. It is reasonable to suggest that provided it is treated sensitively and the student receives support, it should result in a positive learning experience for the individual.

Being recognised by the higher education system through having the 'label' specific learning difficulty opens the door to support and funding for students, including additional time in examinations, typically 25%. It is perhaps a difficult choice for the student to make, disclose their learning difficulty and risk being turned down from the course, or hide their problem and lose out on the assistance they are entitled to (Reid and Kirk 2001).

4.4 SUPPORT

In order to access support and funding a student must first undergo formal assessment, usually by an educational psychologist, who will produce a 'statement' about the individual's specific learning difficulties. As previously discussed in section 4.3.3, this assessment either takes place before the student starts the course, during the admissions process or at some point during the course. Once it has been confirmed that a student may access resources to support their study, the first steps involve determining the level and type of support the student needs. As the student is the best source of information when determining what assistance they require, arrangements should be determined following discussion and agreement with the individual student (Magilvy and Mitchell 1995).

4.4.1 Individual learning needs

The challenge for schools of nursing comes from assessing the individual needs of the student in terms of their specific learning need and then developing creative and flexible teaching and learning strategies without unfairly advantaging these students over the rest of the student population taking the course (Selekman 2002). Students who are dyslexic are not 'typical' learners and lecturers should not treat them as such. Unfortunately, the Nursing and Midwifery Council (2004e) standards for the initial preparation of nurse lecturers does not include preparing teachers to work with learners who have specific needs. Some postgraduate certificates in education (PGCE) will include preparation for new teachers but without the standard this is by no means guaranteed. Because of the need for creative learning strategies, Morgan and Klein (2000) advocate the adoption of a 'learning-styles' model approach, where the individual student is encouraged to identify their preferred modes of learning in order to develop an effective learning strategy.

It has long been accepted that multi-sensory approaches work best with dyslexic learners, although anyone can use this approach. The advantage being that by accessing information through different senses there is a greater chance for the information to be transmitted to the long term memory. Morgan and Klein (2000) include an example from a student who used a multi-sensory approach to revising for an examination:

"When I was revising, I read into a Dictaphone a lot and played back what I had read. At the same time, I put some aromatherapy oils under my nose so that I could associate what I was revising with a smell. Then in the exam I had a tissue with the essential oil relating to that exam. It really helped me remember what I'd learnt." (p.169)

This example indicates that although support can be provided for the student, they must also take an active role in developing a range of study skills to help them determine how they learn best.

Sowers and Smith (2002) suggest that if schools of nursing adopt 'universal' teaching strategies aimed at students with diverse learning styles and needs, there would be less need for 'special' accommodations for students with disabilities.

They refer to the need to make programmes 'universally accessible' to optimise the extent to which all students are able to learn and perform. Although Sowers and Smith are referring to nurse education in the USA, the opinions they express fit squarely with the UK Government's social inclusion agenda and drive for widening access to higher education.

4.4.2 Formal support structures in higher education

Support for nursing students with specific learning needs can come from a variety of formal and informal sources. Within the HE Institution, support could come from: student support services who would have designated support staff; counselling services; study skills courses; provision of computer and audiotape equipment; web based information; and examination policies. These would be generic services offered institution wide. Within the nursing school, support might come from designated support lecturers or through a personal tutor system. During the student's placement in clinical practice support might be offered through clinical mentors or link arrangements with the university. This means that the officers involved must have received specific preparation in supporting students with specific learning needs, which does not necessarily happen at present. Crucially, the NMC standards (2004e) for the preparation of mentors do not refer to supporting students with specific learning needs. Students, as members of the public, can access external support agencies, e.g. British Dyslexia Association. Support could also come from peers, friends and family on an informal basis.

Wright's (2000) review of educational support offered in 28 English Universities found that only 32% of institutions offered institution wide support. The forms of support offered across institutions included:

- *A disability officer to advise staff and students*
- *Dyslexia support personnel – guidance and advice on request*
- *Extended library services for students – access to specific books on dyslexia*
- *A support for learning project*
- *Learning support unit*
- *Special needs adviser*
- *Study skills adviser to assist students with academic writing*
- *Central unit for screening and advice to staff and students*

- *Extra study skills courses*
- *Use of specialist tutors*
- *Learning services – specialist support for coursework*
- *Teaching and learning support unit (Wright 2000 p.38)*

Wright also found that 49% of institutions offered academic, examination and assessment support, however, in only 27% of these respondents was extra time during examinations reported. The additional support included:

- *A separate room if required*
- *Consideration for assignments/specific advice*
- *One-to-one support*
- *Support packages for individual needs*
- *Staff training to give support*
- *Additional tutorial time*
- *Readers/scribes/computers (arranged through the university)*
- *Individual assessment process*
- *Academic writing training*
- *Laptop computers/word processing if approved (for examinations/assignments)*
- *Copies of handouts, overheads and tape recorders*
- *Drop-in sessions for students*
- *Guidelines for students (Wright 2000 p.38)*

Wright's study indicates that provision could vary quite widely from institution to institution. His study includes evidence that some dyslexic students receive little or no help or accommodation during their course. It is interesting reviewing the examples of support described in Wright's study as the emphasis was clearly on supporting students through the academic element of the programme. There was little mention of the support offered during the clinical practice element, which made up 50% of pre-registration nursing programmes.

4.4.3 Support in clinical practice

Only a small number of researchers have examined the type of support that should be offered to nursing students in practice. Their work will be reviewed in this section.

Tumminia and Weinfield (1983) suggest that students in clinical practice be advised to:

- Repeat back instructions to avoid any misunderstandings

- Write instructions down in sequence
- Note priorities for the shift
- Keep a pocket book for notes

These suggestions constitute sensible advice for any nursing student entering clinical practice.

Eliason (1992) reflects on the problems with mathematics that may be experienced by many individuals who have a learning difficulty and the consequences this might have on calculating drug dosages and intravenous drip rate. She suggests that students be encouraged to take a calculator with them and to always check their answers with someone. This is sound advice that fits with UK policy in many hospitals where two people, one of whom must be a registered nurse, should conduct all drug administration. Eliason also notes that some individuals had difficulty estimating how long a procedure or care activity may take. Being poor time managers is a frequently reported problem for individuals who are dyslexic. Eliason's suggestion to compensate was that students should be encouraged to time themselves while practising procedures. In the last few years in the UK there has been an emergence of clinical skills laboratories, which offer a highly suitable environment to practise skills away from clinical practice.

Shellenbarger (1993) advocates that where possible, a dyslexic student be paired with another student who does not have learning difficulties. This has benefits for both students as they can discuss material, assignments and practice related activities, which should aid understanding for them both. In the clinical setting, Shellenbarger suggests students proof read each other's notes written in the nursing charts to double check for mistakes which also teaches them skills of evaluation and feedback. Shellenbarger's other suggestion of asking the dyslexic student to write notes on a scrap of paper and having the content checked before writing in the nursing charts has its limitations, especially in busy clinical areas, nor would it be practical to continue this practice once qualified, as in many situations the qualified nurse may be working alone. Her view that clear descriptions should be given about clinical expectations and that clinical procedures should be broken

down into small specific steps, is useful advice for all nursing students, however there is no evaluative evidence that this advice proved useful to the student.

Selekman (2002) echoes the suggestions made by previous researchers in terms of ensuring students know what is expected of them in clinical practice, helping them to prioritise their work by making lists, and writing draft notes for checking prior to entering them into the nursing charts. Selekman is keen to point out that while students with specific learning needs should receive additional support and close monitoring while they are in clinical practice, educators must make sure the attention the student receives is not misconstrued as 'picking on' the student or of being capricious or discriminating, as this could be grounds for a grievance. As with Shellenberger's (1993) suggestions, there is no evidence from students indicating whether this approach helped them.

4.4.4 Guidance and other sources of information

Many universities offer generic guidance on dyslexia, normally through their student support services and can be accessed via the Internet. A 'dyslexia support programme' was set up in the School of Nursing and Midwifery, University of Sheffield to provide information for nursing students, placement mentors and lecturers. The programme began with two paper-based guides issued in 1999 (Wright 1999a and 1999b). The 'Dyslexia Information Site' on the web superseded these paper-based guides in 2000 (Wright et al 2000). The information in relation to helping students on placement includes:

The student can (depending on personal needs):

- *Let the placement provider and mentor know of the student's particular problems, in that way they will be prepared to assist in the student's development and they will be aware that they need to:*
 - *provide clear instructions and expectations*
 - *double check for mistakes, if the student and mentor agree that this is the case.*

The student may want to use all or some of the following ideas:

- *Note priorities for the shift*
- *Repeat instructions to avoid any misunderstandings*
- *Write instructions in sequence*
- *Jot notes on scrap paper and have them checked before committing them to charts*
- *Discuss notes with other students and staff*

- *Keep a pocket book for notes*
- *Practise skills, before meeting patients, under observation to ensure safe practice.* (University of Sheffield, WWW, 2003)

The first point made in the above quote referred to informing the clinical practice area of the student's particular problems. It quite rightly states that it is the student's decision whether to inform other people about their learning difficulty. However, Selekman (2002) suggests that students should be encouraged to use support and accept their differences in order to progress through the course. This may be difficult for some students who have had poor responses or negative attitudes expressed to them about their dyslexia in the past and they may therefore fear discrimination.

4.4.5 Disabled Student Allowance

The use of information technology (IT) in the form of personal computers, scanners, spell checkers, audiotape recorders and Dictaphones, 'reading pens' which when run over a word, will say the word out loud or through an ear piece, palmtop computers and other electronic equipment, could make tasks easier for the individual with dyslexia. Unfortunately, much of this equipment is expensive and access to funding for nursing students has only recently become available. In England and Wales funding (Disabled Students' Allowance - DSA) for nursing students with disabilities (including dyslexia) only became available from September 2002. (See appendix i. for examples of items bought with the DSA in 2002/03.) The exemption of nursing students from this allowance was primarily because nursing students received non-means tested bursaries unlike other university students. The allowances are described in the NHS Wales booklet *Financial help for healthcare students in Wales*, which is updated each year. In respect of this study, the second year students who took part in stage one and the four students who took part in stage two were eligible for the DSA. (See table 4.2 for the allowances available in the years relevant to the students in this study: 2002/03, 2003/04 and 2004/05.)

Table 4.2 Disabled Students' Allowance for the academic sessions 2002/03, 2003/04 and 2004/05 (NHS (Wales) Student Award Unit 2005).

	2002/03	2003/04	2004/05
1. Helper	£11,015	£11,280	£11,550
2. Equipment	£4,355 (for the duration of the course)	£4,460 (for the duration of the course)	£4,567 (for the duration of the course)
3. Travel	Actual, reasonably and necessarily incurred	Actual, reasonably and necessarily incurred	Actual, reasonably and necessarily incurred
4. Other costs	£1,455	£1,490	£1,525

Prior to the introduction of the DSA, the lack of funding to support the purchase of IT and other equipment had been reported as a particular problem for nursing students with specific learning needs (Wright 2000). In order to redress what many people saw as a discriminatory policy, the Welsh Assembly Government provided additional funds to the HE Institutions that offered nurse education in the two years prior to the formal introduction of the DSA. This additional funding was not available in the other UK countries.

The Student Awards Unit, which was sited within Health Professions Wales, conducted the allocation of the DSA in Wales on a student-by-student basis during the time of this study. In order to be eligible for the allowance the student must first be reviewed by an educational psychologist who would confirm that the student had a problem. The individual would then be referred to a Needs Assessment Centre where it would be determined what type of equipment would be appropriate to assist the student during the course. Students were at liberty to ask for funding for equipment to take to the clinical areas if they wished, e.g. palmtop computer or reading pen.

Table 4.3 [data supplied on request from Students Award Unit 2005] shows the number of students in non-medical health professional courses who applied to the Student Awards Unit at Health Professions Wales for the DSA in the academic session 2002/03. It is interesting to note the percentage of applications from nursing (3.3%), which are slightly higher than the overall figures quoted by HESA for the percentage of all students who are dyslexic studying in undergraduate programmes in 2002/03 in England and Wales (2.3%). Some of the other groups

listed show significantly more students requesting DSA, particularly occupational therapy and dental hygiene/therapists. However, the total student population is significantly smaller than that of nursing, which may give rise to a misleading picture.

Table 4.3 Application for Disabled Students' Allowance 2002/03 for non-medical health professions taught in Wales. (NHS (Wales) Student Awards Unit 2005)

PROFESSION	Number of applications for DSA	Number of students in training in Wales	% Students applying for DSA
Nursing	42	1291	3.3%
Occupational Therapy	11	79	13.9%
Physiotherapy	4	115	3.5%
Radiography	7	75	9.3%
Dietetics	2	28	7.1%
Podiatry	0	28	0
Speech and Language Therapy	2	38	5.3%
Dental Hygiene/Therapy	4	15	26.7%

4.5 PREPARING LECTURERS AND MENTORS

Nurse lecturers are expected to obtain a recordable teaching qualification with the Nursing and Midwifery Council. The regulations stipulate that the registered first level nurse must meet a specific set of entry criteria. These standards include: have completed post registration education to first degree level and have worked as a qualified first level nurse for a minimum of 3 years in the last 10 years. The individual must then undertake an approved initial nurse lecturer training programme, which meets the learning outcomes determined by the NMC (NMC 2004e). The learning outcomes do not refer to identifying specific educational needs of the student, or refer to developing strategies to assist students with specific learning difficulties. It is reasonable to suggest that as this area is not a core requirement of the course many nurse lecturers would have limited knowledge in this area, which has implications for both the recruitment of students and their subsequent education and support on the course.

In addition to there being little information during initial lecturer preparation, there also appears to be a low level of interest in the subject in staff development programmes. Wright's (2000) study into educational support for nursing and

midwifery students with dyslexia in English universities found that only 12% of institutions identified staff development as an issue. Five per cent identified policy awareness, and one institution provided faculty wide leaflets and lecturer resource packs. One school provided training for a lecturer to undertake assessment and to provide guidance and support to other staff. It is reasonable to anticipate that the introduction of revised legislation, Special Educational Needs and Disability Act 2001, and the guidance from the Quality Assurance Agency may result in this subject being included in more staff development programmes in future.

In 1999 the UKCC published a report, entitled *Fitness for Practice* (Peach Report), which recommended changes to the pre-registration nursing programme. The Welsh Assembly Government determined that in Wales these changes to the curriculum would be introduced en masse in the spring of 2002. The Assembly also decided that an All Wales approach would be adopted towards nine aspects of the programmes, i.e. entry criteria, accreditation of prior learning, clinical educational audit, research content, assessment strategy, clinical assessment tool, preparation of clinical mentors, portfolio production, and evaluation (All Wales Fitness for Practice Document 2002). The All Wales project team set out the content for the preparation of clinical mentors/ preceptors. However, this content did not include information about teaching and supporting nursing students with specific learning difficulties. As with the preparation of nurse lecturers, this subject was not a requirement of the preparation programme.

As observed earlier (section 4.2.3 page 44), one of the challenges facing dyslexic students is the negative attitude expressed by lecturers, mentors and other clinical staff they encounter. These negative attitudes might be the result of ignorance about the condition, which could be addressed through formal education. It is important that students are taught in a positive, constructive learning environment. This would be of particular importance if the student has had poor learning experiences in the past.

4.6 SUMMARY

The literature review shows that there are only a limited number of studies exploring the experiences of dyslexic nursing students. However, some evidence

from studies on higher education students and adults with dyslexia in the workplace provide likely indicators of the problems nursing students might face. Students with dyslexia in higher education experience problems with structuring and organising written work, manipulating information, demonstrating knowledge effectively, and took longer to précis and read passages containing novel words (Simmons and Singleton 2000; Hatcher et al 2002). Moody (1999) identifies eight areas of difficulty for dyslexic adults in the workplace: literary skills, memory, sequencing ability, visual orientation, hand-eye co-ordination, disorganised speech, organisation skills, and emotional factors. There is limited supporting evidence from studies on dyslexic nursing students in clinical practice (Tumminia and Weinfield 1983; Shuler 1990; Shellenberger 1993), however, it is not clear whether all eight areas identified by Moody apply to the nursing context.

The diagnosis of dyslexia appears to have had an impact on an individual's self-esteem (Riddick et al 1999). Timing of diagnosis and experiences related to being labelled as dyslexic may also influence a person's behaviour in later life (Riddick 2000; Dale and Taylor 2001). Again these are not nursing studies. Therefore, there is little evidence available about the effect of diagnosis as dyslexic on the behaviour of nursing students, their self-esteem, performance or confidence.

There is evidence of negative attitudes being expressed by nursing professionals through anecdotal reports from individuals (Anonymous 1994; Stephenson 1999; Wiles 2001; Allen 2002; Shepherd 2002; Blankfield 2002). Some articles report expressed fears that dyslexic individuals pose a risk to patients/clients (Wright 2000; Duffin 2001). While there is no evidence available to support or refute these expressed fears, patient safety is of paramount concern to educators, employers and regulators and will guide their policies and procedures in determining nurses' 'fitness for practice'.

Some authors (Shellenberger 1993; Magilvy and Mitchell 1995; Sowers and Smith 2002; Persaud and Leedon 2002) propose that more accommodation should be made for disabled individuals entering nursing. The examples cited relate to physical disability rather than specific learning needs so it is not clear what accommodations would be suitable or practical for individuals who are dyslexic.

Evidence of support available in HE institutions for nursing students relate mainly to the theoretical element of their programme (Wright 2000). Some suggestions of practical tips for dyslexic nursing students to adopt in practice were put forward. However, there is no evidence as to the effectiveness of the suggestions (Shellenberger 1993; Eliason 1992; Selekman 2002). There was one example of on-line support available to dyslexic nursing students; again the effectiveness of this type of support was not available (Wright et al 2000).

Students have only been entitled to the Disabled Student Allowance since September 2002. It is therefore too soon to fully judge how effective the IT and other equipment bought with this allowance is to the student during the theory and practice element of their nursing course.

There is no evidence to indicate that lecturers or clinical mentors routinely receive preparation for teaching and supporting nursing students who are dyslexic, particularly in the practice setting.

There is limited guidance from the UK regulator, the Nursing and Midwifery Council, on how students with disabilities or specific learning needs should be selected, supported or taught during their nursing programme. Decisions are left to the university and the individual admissions lecturers. As 'gatekeepers' to the profession, admissions lecturers must determine who is suitable to enter the nursing profession and therefore who has the potential to achieve the competencies required by the regulator in order to register as a nurse. It is not clear from the literature how admissions lecturers view the tensions around ensuring open access to higher education for all individuals who have the potential, weighed against any potential risk an individual might pose to the patient/client.

Students face a number of choices about if and when to disclose the diagnosis of dyslexia. In order to access additional support and the DSA they must present evidence of formal diagnosis. However, this opens them up to the risk of being turned down for the course and receiving negative or discriminatory comments,

attitudes and behaviours from their peers and lecturers/mentors. There is little written about how individual nursing students make the decision to disclose or not.

4.7 RESEARCH QUESTIONS

The review of the literature on specific learning needs (chapter two) indicates that individuals diagnosed as dyslexic have difficulties relating primarily to reading, writing and short-term memory. What is not clear from the review in this chapter is how dyslexic individuals cope with these difficulties in developing the competencies to become a registered nurse. Much of the reported literature is anecdotal and subjective in nature. It is difficult to say with any certainty how schools of nursing and their associated clinical mentors should select, teach and support nursing students who are dyslexic during the clinical element of the pre-registration nursing course.

Following the literature review, a number of research questions were developed, namely:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their disability in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

The next chapter sets out a description of the research methodology employed to address the above questions.

CHAPTER 5: METHODOLOGY

5.1 INTRODUCTION

The review of the literature suggests that dyslexic individuals might have specific problems when developing the competencies to complete nurse registration. However, much of the literature is anecdotal or subjective in nature and does not provide a clear picture about the experiences of dyslexic nursing students in developing coping strategies and the role the school and clinical mentors should play in supporting and teaching them. Therefore, three research questions were developed to be addressed in this study, namely:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their disability in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

This chapter describes the research method selected to address these questions and explain the rationale for choosing this method. Specifically this chapter includes: the data collection strategy, which describes how and why the schools, clinical areas and participants were selected; the ethical considerations pertinent to the study, including issues around consent, confidentiality and risk management; an outline of how the data was analysed; and the issues around trustworthiness, credibility and generalisability.

5.2 RESEARCH DESIGN

Approaches to conducting research are usually described as being either quantitative or qualitative. These approaches are also known respectively as 'experimental', 'hypothetico-deductive' or 'positivistic' (more recently 'postpositivistic') and 'naturalistic', 'contextual', 'inductive' or 'interpretative'. These two research approaches are often described as being from opposing epistemological positions, each of which is associated with particular approaches to data collection and research strategy. The positivistic position contends that

there is a reality there to be studied and understood, whereas postpositivists argue that reality can never fully be apprehended, only approximated (Guba 1990). Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between researcher and what is being studied and the situational constraints imposed on the study (Denzin and Lincoln 1998). Historically, qualitative research was defined within the positivist paradigm and has only come into its own in the last century.

Henwood and Pidgeon (1993) describe the dominant paradigm in the experimental quantitative approach as being concerned with universal laws of cause and effect based on a belief that reality consists of a world of objectively defined facts. The deductive, hypothesis testing method is used to establish causal relationships. Findings should be replicable and generalisable, and quantification of results predominates. In comparison, the naturalistic paradigm is described as having a number of characteristics: commitment to constructivistic epistemologies, (in ethnographic studies), an emphasis on description rather than explanation, the representation of reality through the eyes of participants, the importance of viewing the meaning of experience both in complexity and in context, and an assumption that concepts and theory emerge from the data.

The label 'qualitative research' is a collective term for a range of approaches that differ in theoretical assumptions, the understanding of the subject under investigation and their methodological focus. Mason (1996), while avoiding the temptation to define qualitative research, did suggest some common elements, namely that qualitative research was:

- *“Concerned with how the social world is interpreted, understood, experienced or produced.*
- *Based on methods of data generation which are flexible and sensitive to the social context in which data are produced (rather than rigidly standardised or structured, or removed from ‘real life’ or ‘natural’ social context, as in some forms of experimental method.)*
- *Based on methods of analysis and explanation building, which involve understanding of complexity, detail and context. Qualitative research aims to produce rounded understandings on the basis of rich, contextual, and detailed data.”* (Mason 1996, p4)

As can be seen from Mason's description above, in the second bullet point, she is making direct comparisons between the two research traditions. Her description of the experimental method as '*rigid*' and '*removed from real life*' indicates perhaps her negative feelings towards this approach. This subtle expression of feeling was quite common in the literature as it is likely most authors would favour one approach over another, depending on their own ontological and epistemological standpoint.

The notion of opposition between qualitative and quantitative research approaches has been challenged by a number of authors. Bryman (1999), while agreeing that there are differences between the two research traditions, states that these differences are not as rigid as descriptions imply. One of the fundamental differences normally purported is between the epistemological positions of the two traditions and their relationship with research strategy and data collection. Bryman gives some examples where the relationship between epistemology and data collection could be questioned, e.g. survey researchers (quantitative research) frequently claim to be looking at the social world from their respondents' perspective (qualitative viewpoint); and participant observation (typically qualitative research data collection method) could be deployed within a theory testing framework (usually associated with quantitative research). Bryman is not sure if the argument is that there is a link between epistemology and data collection or that there ought to be a link. His conclusion is that:

"the tendency to associate particular methods with particular epistemologies is little more than a convention (which took root in the 1960s), and it has little to recommend it, either as a description of the research process or as a prescriptive view of how research should be done." (Bryman 1999, p64)

Hammersley (1999) builds on this argument that distinguishing between qualitative and quantitative research is of little value and comments that it is of '*limited use and... carried some danger*' (p70). Through a critique of the seven most commonly viewed distinguishing issues between the two traditions he concludes that rather than reverting from two paradigms to one, he argues that due to the diversity within social research, there are in fact more than two paradigms. As with Bryman, Hammersley considers that philosophical and political assumptions should not

determine the method chosen, rather, the method should fit the demands of the inquiry.

Combining qualitative and quantitative methods is almost by definition an issue of across-method triangulation. This idea of combining research approaches appears to be growing in favour with some researchers (Mayring 2001), however Witt (2001) cautions against the indiscriminate combination of the two methods. He argues that the research approaches are designed for different research goals, and accommodate different kinds of data and different sample types. He argues that the outcome of combining the two research methods would not necessarily achieve the best from both worlds.

There is an increasing tendency for researchers to view the distinction between qualitative and quantitative research in terms of complementary rather than opposing approaches. There are an increasing number of research designs that incorporate both approaches in the context of a single study. Hammersley (1996) identifies three forms of study where qualitative and quantitative methods are used:

1. Methodological triangulation (using one method to verify or validate the findings from another method).
2. Facilitation (where one method is used as groundwork for another method).
3. Complementary (where two methods are used together to explore different aspects of a research question).

While recognising and appreciating the tenets within specific research traditions, I support the notion that there could be instances where the use of a combination of approaches was suitable. The primary purpose of any research design is to enable the researcher to address the research questions or hypothesis under study. Ignoring the potential that cross method triangulation may offer could restrict or diminish the outcome of the study.

5.3 RATIONALE FOR THE CHOSEN RESEARCH DESIGN

According to Field and Morse (1991) the main determinant when choosing the research design is the nature of the research questions to be answered. However, the final selection of the design depended on the individual beliefs and values of the researcher, their experience in doing research, the resources and time available, practicalities such as the accessibility of potential respondents and whether the research is ethically sound.

The research questions I posed for this study involved exploration of the experiences of individuals and the support they required in their journey to become registered nurses, in other words I was interested in the real life experiences of people within a specific situational context. I concluded that a qualitative research approach should be considered.

My perspective on the social world, in other words my ontological position, is that I believe people create many and (sometimes) conflicting 'social realities', and that these realities may change as their constructors become more informed. This meant that in undertaking this study I wanted to explore the 'social realities' of the students and other individuals who played key roles in enabling a person who is dyslexic to become a registered nurse, i.e. the nursing students who were dyslexic, their lecturers, special needs support staff and clinical mentors. As a person's viewpoint can change over time through maturity and experience, at the outset I was determined to include a longitudinal study element as part of this research strategy, to cover, in part, the three years of preparation nurses undergo to become registered practitioners.

The field of qualitative research covers a rich variety of strategies and techniques for generating data. I considered a number of ways to collect data to answer the research questions, before determining which approach to take for this study. This review is set out in the following paragraphs.

I considered doing a survey of a large number of schools of nursing (there were around 100 schools offering pre-registration nursing in the UK in 2002 when this

study commenced) using a questionnaire to ask dyslexic nursing students a range of semi-structured and open-ended questions about their experiences on the course. Parahoo (1997) identifies a number of advantages with the survey questionnaires: it is a quick and cheap way to reach a large number of respondents spread across a wide geographical area (as compared to approaches such as face-to-face interviews and observations); and is relatively confidential and anonymous. He reports that information on "*facts, attitudes, knowledge, beliefs, opinions, perceptions, expectations, experiences and the behaviour of clients and staff*" (p249) has been collected and reported on in the nursing literature using this method. Structured questions have an inherent degree of reliability, they allow respondents to take time to consider their responses and the anonymity might make individuals more predisposed to answer questions on sensitive or personal issues (Burton 2000).

On initial inspection this appeared to be a useful way for this study to progress, however, there were a number of disadvantages, which I felt outweighed the advantages. The most obvious disadvantage was that dyslexic individuals have difficulty with the written word and I would be selecting a method that relied on them reading and responding in a written format. Even if I was careful in constructing the questions to reduce the requirements for large sections of free text, I was likely to get a limited response, with short and potentially superficial information. Burton (2000) rightly observes that, "*there has to be a good match between data collection methods and the abilities of respondents*" (p321). If responses were sent anonymously, there would not be any opportunity to follow up individuals unless they gave express permission to speak to me and supplied contact details. Identifying and approaching students to take part in this study had to take into account the requirements for confidentiality, especially about who knew they had a specific learning difficulty. (See page 100 for a more detailed discussion.) A one-off questionnaire would also not allow me to undertake any type of longitudinal study, to see how perceptions change over time and to track the development of coping strategies.

Wright's (2000) study illustrates some of the disadvantages of conducting a questionnaire survey. In this study, Wright used a questionnaire, emailed to 61

schools of nursing in England, with the aim *“to begin the process of discussing and investigating the support of nursing and midwifery students with dyslexia”* (p35). He had a 46% (28) response rate from a variety of education staff working within each of the institutions and was provided with factual descriptions of the support available. The responses also included observations from respondents about issues such as the potential risk an individual who is dyslexic may pose to patients. Analysis tended to be quantitative in nature with lists of supporting processes offered to students. Wright used descriptive statistics to help summarise the support available and he lamented the fact that institutions had provided very little information about what support there was for students in clinical practice (50% of the programme is in clinical practice). The superficiality of the information returned and with the researcher choosing not to do follow-up activities to further probe issues, such as: why institutions employed particular supporting processes, how, if at all, they supported students in clinical practice, and about the attitudes of staff to individuals who are dyslexic entering nursing, meant that there were many unanswered questions. Wright recognised the shortcomings and lists a number of questions at the end of his study that he felt needed to be investigated. Specifically Wright suggests research to consider how to support nursing and midwifery students' accessing courses, staff attitudes to students, the assessment of risk, and how qualified staff who are dyslexic should be supported in practice.

The limitations of the questionnaire only approach are evident in this study and clearly did not allow Wright to fully address the aim of the study. The study does, however, identify the range of support currently offered to students in English universities and highlights the need for dedicated funding for additional study aids, such as computers, which at the time of the study were unavailable.

The outcome of Wright's study suggested to me that to focus solely on one group (Wright focussed on higher education staff) might not be sufficient in dealing with this area of study, where there were many factors that come into play, e.g. staff attitudes (in school and in practice), funding issues, institution policies, student expectations and experiences.

I next considered using an interview-based strategy. Interviewing can produce a rich data set as it allows access to an individual's attitudes and opinions (Stroh 2000). There are a number of different approaches:

- one-to-one interviews either in person or via telephone or video link; and
- group interviews or focus group discussions.

While each approach varies in the conduct of the interaction, they have in common the personal, verbal expression of views by the individual, which are context free and content specific, that the interviewer can choose to pursue with the participant to increase understanding. Group interviews and focus group discussions have the added dimension of interaction between participants; ideas and insights could be sparked by another's comments. As these are verbal exchanges it may avoid the problems encountered with written responses to a questionnaire. Questions could be rephrased if the student was unsure of what information was being sought. Interviews could be repeated so it would be possible to undertake a longitudinal study.

Interviewing either on a one-to-one or in a group basis is not without some drawbacks. Interviewing is costly in terms of time and resources, and typically generates a large volume of material that has to be managed effectively. There is also a potential problem of "interviewer bias" creeping into the interactions (Spradley 1979). All interviewers should strive to be neutral in the way the phrase and pose questions, and avoid verbal and non-verbal communication to the respondent's comments that might influence what they say (Polit and Hungler 1999). However, as I wished to include a longitudinal element to assess how the students progress through the programme, there would be a need for me to establish a rapport with the students. The danger here would be an over identification with the students and a loss of perspective (Fontana and Frey 2000). Common to all data collection where individuals are invited to offer their views, there is also the possibility that the interviewees would report what they thought the interviewer wanted to hear, a phenomenon sometimes referred to as 'social desirability' (Parahoo 1997).

Using interviews to elicit information from the students appeared to be a suitable way to proceed, even with the potential problems highlighted in the previous paragraph, as these can be guarded against. I reflected on one of the studies I had reviewed for this study, which used a series of focus group interviews (Dale and Taylor 2001). Dale and Taylor recruited for their study, seven adult learners who were taking evening classes designed for adult dyslexic students. They held a series of three focus group discussions with the students and their two teachers with a two months gap between each event. A number of themes emerged that related to: how the individual students had been diagnosed as dyslexic; the effect this diagnosis had on them as individuals; and how their particular difficulties had coloured their previous experiences in education. What I found of equal interest were the themes related to the teachers' model of teaching. They shared the responsibility for teaching and opened a dialogue with the students to try to redress the balance of power and control in the classroom. The themes to do with the teachers greatly enhanced my understanding of these students' experience as adult dyslexic learners. My conclusion was that it was probably as important to obtain the views of the lecturers and other key individuals who support nursing students who are dyslexic as it was to acquire the views of the students themselves. It reinforced my earlier conclusions, drawn from the review of Wright's (2000) study, of the need to gather a range of data from a number of related sources to achieve as full a picture as possible and be faithful to the research questions.

Having determined that individuals who supported students should be included as well as nursing students who were dyslexic, I next considered using observation as a means of data collection. Participant observation is used by a range of different social scientists and has its roots in social and cultural anthropology. Jorgensen (1989, p14) describes the ultimate aim of participant observation as "*to generate practical and theoretical truths about human life grounded in the realities of daily existence.*" This method had the potential to allow me to observe the students' behaviour, actions and interactions with others while on placement, thus enabling me to gather data about a range of key players. Taking this approach as the principle data collection method would mean spending significant periods of time with students in clinical practice, watching their performance in carrying out

direct and indirect patient/client care and recording careful field notes and interpretations of behaviours.

Although this approach would ensure I gathered rich data about the reality of how dyslexic nurse students behave in clinical practice, I felt it raised a number of ethical issues. I agreed with Mason's (1996) view that even overt observation carried ethical implications, specifically how a researcher built and maintained relationships in the field, the power dynamics that would operate, and the issue of informed consent. Although well reported (Jorgensen 1989; Bogdewic 1999) that as time passed in the field, observed participants accepted and accommodated the researcher, I felt that closely observing the students while they were practising would be an unacceptable intrusion and could affect their ability to learn. Having an external observer present in a clinical area was potentially disruptive to the other staff in the area and posed significant confidentiality problems in respect of the patients/clients the students were caring for. The process could also make it difficult to maintain confidentiality and privacy of the student's diagnosis as dyslexic, which ran contra to my views that the student must be able to maintain control over who knew about their diagnosis. I therefore discounted as unacceptable any notion of covert observation.

From an epistemological perspective, I did not feel that it was imperative to observe the students and their interactions with others in order to answer the questions. I felt that for this study I could gain greater understanding by asking key players to reflect on experiences and so explore why actions were taken, rather than just observe what actions did take place. I did identify that some carefully targeted observations could add richness to the data gathered when coupled with interviewing, provided the ethical issues identified above were managed effectively.

I concluded, therefore, that data should be gathered from a range of sources, including: dyslexic nursing students and individuals who were involved in the selection, teaching and support of these students; and by using a range of data collection methods. I continued to feel that the inclusion of a longitudinal study following a group of dyslexic nursing students through their training would add

greater understanding of how coping strategies were developed over time. The review of the literature on dyslexia indicated that how students develop coping strategies might be (in part) dependent on the context of the environment in which they are studying. For example, as previously mentioned, Dale and Taylor's (2001) study showed that the teachers' model of delivery, in other words the learning context, was important for the development of study skills for adult dyslexic learners. Therefore, the research design needed to include contextual information and the interaction between the dyslexic nursing students and their environment. These parameters suggested to me that a case study research strategy was the most appropriate way to proceed. Yin's (1994) description of a case study as an empirical inquiry neatly summarised the research design I needed. A case study inquiry:

- *“investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident...”*

And

- *“copes with the technically distinctive situation in which there will be many more variables of interest than data points,*
- *relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and*
- *benefits from the prior development of theoretical propositions to guide data collection and analysis.” (p13)*

Yin's position is that research questions that ask the 'how' or 'why' questions are particularly well suited to case study methodology. The questions for this study revolved around 'how' students develop coping strategies, 'why' they chose specific coping strategies in certain situations, 'how' external factors influenced the development of coping strategies and 'how' the students could be supported. Yin's suggestion of using other theoretical propositions to guide data collection and analysis is viewed with some caution, as I did not want to dictate or narrow the field of inquiry from the outset.

5.4 THE CASE STUDY

There were a number of ways to classify types of case study. For example, in Mitchell's (1999) review he included illustrations from Gluckman's (1961) essay, which listed three types of case study on a continuum from simple to complex: “the apt illustration”, “analysis of a social situation” and “the extended case study”.

Stake (1994) identifies three types of case study, which depend on the different purposes researchers may have. These are:

- *Intrinsic* case study – which is a study carried out because the researcher wants to gain a better understanding of that particular case. The case itself is of interest rather than being representative.
- *Instrumental* case study – which is a particular case that provides insight into an issue or offers a refinement of a theory. The case is of secondary interest as it is a means for the researcher to gain insight into something else. Yin (1994) calls a single case study of this nature a *revealing* case study as it offers the investigator the opportunity to observe and analyse a phenomenon previously inaccessible to scientific investigation.
- *Collective* case study – which is the study of a number of cases jointly in order to inquire into a phenomenon, population or condition. This is the same in many ways to the instrumental case study but involves a number of cases.

Stake (1995) points out that the fundamental difference between an intrinsic study and an instrumental study is the focus. Intrinsic case studies focus on the particular case, whereas the instrumental study focus on the issues being explored, the case is of secondary importance.

In this study I was not interested in investigating a particular person or place, rather I was interested in the *issues* around how an individual with a specific learning difficulty could develop the competencies of a registered nurse. All pre-registration nursing programmes in the UK must contain 50% theory, taught in higher education institutions, and 50% clinical practice. Students go to a wide range of clinical areas during the three years and encounter university lecturers and support officers, as well as clinical mentors, practice educators and a multi-professional team of carers and support staff. Each student, the higher education institution where they were studying and each clinical placement they attend would in effect be an *instrumental* case study. As I intended to include more than one student and more than one clinical placement area, this study is what Stake (1994) would describe as a *collective case study*. Both instrumental and collective case

studies enable theory building and thereby widen and deepen understanding about particular phenomena or set of issues.

The selection of the case/s from a given population is very important because the set of subjects or entities available in the selected case/s defines the research sample to be used (Eisenhardt 1999). The population in respect of this study was all the institutions, encompassing the lecturers and learning needs support staff, approved by the Nursing and Midwifery Council to offer pre-registration nurse education, all of the pre-registration nursing students who have specific learning needs, i.e. dyslexia, and all of the clinical areas used in pre-registration nurse education. As the Nursing and Midwifery Council sets UK standards for pre-registration nursing programmes and for the role and function of clinical mentors, with which all institutions must comply, the key decision I had to make was in respect of which institution to pick rather than which students or clinical mentors to include in the study. Stake (1995) comments that selecting case studies, even collective case studies,

“by sampling of attributes should not be the highest priority. Balance and variety are important; opportunity to learn is of primary importance” (p6).

To assist me in selecting the school of nursing to be used in the study, I set out four criteria, namely:

1. The school must offer all four branches of nursing: adult nursing, children's nursing, learning disability nursing and mental health nursing.
2. The school must offer a wide range of clinical practice placements.
3. The school must be close enough to where I live to make it practical for me to carry out the study.
4. There must be dyslexic nursing student studying at the school.

I selected the School of Nursing, University of Glynrith, which appeared to meet the criteria listed above, around which to focus the study. It should be noted that when I initially approached them, the School was prepared to confirm that they had some students who were dyslexic studying on the course, but I was not permitted to know any detail about the number or distribution of students who were

dyslexic on the branch programmes until after I had secured ethical permission. (See section 5.9, page 95 on ethical considerations.)

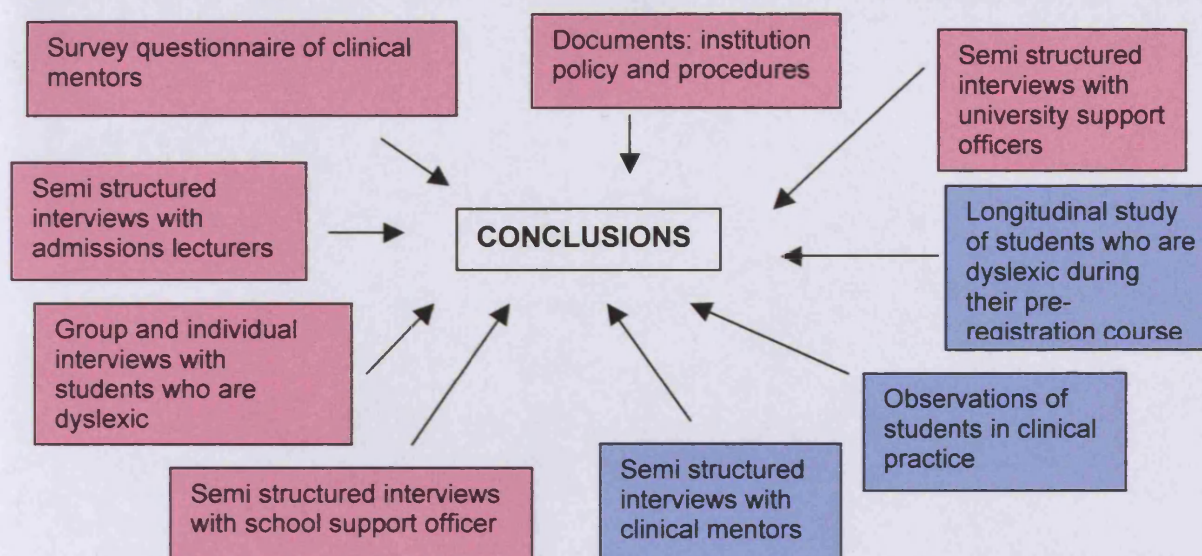
The School of Nursing, University of Glynrith, used the clinical areas in three NHS Trusts, namely: Beacontop NHS Trust, Glynrith NHS Trust and Harrowend NHS Trust, as well as a small number of independent sector institutions for students studying on the child health and learning disability branches. The School annually audited all clinical areas to ensure they had appropriate facilities for the nursing students, as required by the Nursing and Midwifery Council. The School also provided training for the clinical mentors who provided support for the students and who assessed the students' clinical competencies.

The University of Glynrith had well established student support services, including dedicated support for students who had specific learning needs like dyslexia. In addition to this, the School of Nursing also offered dedicated support to students with specific learning needs and had their own student counselling service.

5.5 DATA COLLECTION

One of the main strengths of conducting a case study is the use of multiple sources of evidence, and the triangulation of evidence. Yin (1994) states that the most important advantage of using multiple sources of evidence is the development of converging lines of inquiry, making any finding or conclusion more likely to be convincing and accurate. The following figure adapted from Yin (1994) demonstrates the convergence of multiple sources of evidence in this study.

Figure 5.1: Convergence of multiple sources of evidence. (Adapted from Yin 1994)



Key to figure 5.1: Red boxes = data collected in stage 1
Blue boxes = data collected in stage 2

As I wanted to include a longitudinal study element in this study I decided to organise the data collection into two stages. In the paragraphs below I have set out the data collected for both stages of the research process. I have chosen to present the information on data collection and subsequent analysis collectively in this chapter rather than describing the data analysis after each stage because the two stages are so closely interrelated.

5.5.1 Stage One

The focus of stage one of the study was to develop an understanding of the context and nature of the problems faced by nursing students who are dyslexic within pre-registration nurse training, and to begin to understand how they may be supported to develop clinical competencies. Analysis of data gathered in stage one was used to inform the data collection undertaken in stage two. From my review of the literature and examination of the structure and arrangements within the University of Glynrith, I identified a number of sources from which to gather data, listed below.

- Admissions lecturers

Purpose: to determine how students were selected, and to examine the lecturers' views on individuals with specific learning needs training to become registered nurses.

All nurse lecturers, (approximately 70 during the period of this study) in the School of Nursing, University of Glynrith, played an active admissions role in selecting new students to study on the pre-registration nursing course. This meant that I could make an open invitation to all of the lecturers to participate in the study, rather than restrict or target recruitment. The invitation and accompanying information sheet describing the study (see appendix ii.) were circulated via email, as this was deemed the most effective way of reaching all staff. From the twelve responses, I randomly selected two nurse lecturers who taught on each of the four branch programmes, eight lecturers in total.

This group consisted of three men and five women, who had varying degrees of experience in nurse education. All taught on the pre-registration diploma and degree nursing programmes and three individuals had specific administrative or managerial roles within the School:

- Team Leader of a teaching team for a branch programme,
- Liaison role with the School's admission office and University registry
- Module Leader.

The individual interviews were conducted either in a quiet interview room close to the lecturer's office or within their office or in an empty classroom. As office space was at a premium in this School, the lecturers normally shared office accommodation. On one occasion an interview had to be suspended and moved to an empty classroom as the lecturer sharing the office returned earlier than expected.

One area of difficulty with the data collected from this group was encountered when transcribing the taped interviews. One of the admissions lecturers spoke English as a second language and had a very strong accent making the transcription process very demanding. I overcame this problem by repeatedly playing back the recordings to get my 'ear' used to the accent.

To ensure consistency during the interviews, I developed an interview question sheet to act as an aide-mémoire (see appendix iii.). Staff signed a consent form (see appendix iv.).

- School designated lecturer responsible for students with specific needs

Purpose: to explore the role in supporting students with specific learning needs.

The lecturer undertook this supporting role on a part-time basis and for the remainder of the time was a nurse lecturer on the adult branch of nursing. At the time of the data collection phase of the study, the lecturer was the only one fulfilling this role within the School. My initial approach was via the telephone, followed by a meeting to discuss the study in person. An information sheet about the study was provided (see appendix v) and a consent form (appendix iv.). In addition to exploring the role in supporting students with specific needs, I also needed her to act as the initial contact person with the nursing students who were dyslexic in order to recruit them to both stages of the study. She was the only officer with information about which students were dyslexic and who had a close relationship with the students, making her a key 'gatekeeper' for the study. Using an intermediary ensured that I only spoke to students who had granted permission for me to know they had been diagnosed as dyslexic. (See the section 5.9, page 95, ethical considerations for more details.) Burton (2000) highlighted the importance of developing a relationship with key gatekeepers in gaining access. I made special effort to meet this lecturer in person to discuss the study and kept close contact during the initial stages of data collection. In respect of the data collected about her role, I conducted a taped-recorded, semi-structured interview using an interview schedule as an aide-mémoire (see appendix vi.).

- University Special Needs Officer

Purpose: to examine support systems for students with specific needs studying at the University.

There were two Special Needs Officers working in the University's Student Support Services, one of who had responsibility for the students within the School of Nursing. The previous Special Needs Officer who had worked closely with the School in the preceding few years had been promoted a few months before the interview for this study. Her new role was as manager of the Student Support Services and she was heavily involved in reorganisation activities going on in the University at that time. I initially approached the Manager by telephone and then sent a copy of the information sheet outlining the study. Although initially agreeing to be interviewed, after much rescheduling on the day of the interview, she sent the newly appointed Special Needs Officer who had just taken over responsibility for the School as a replacement. She subsequently declined to be interviewed citing pressure of work. The interview with the newly appointed Special Needs Officer took place. However, the information gathered was restricted to University policy and procedures generally to do with any students with disabilities and specific learning needs within the University, as she had not yet had any contact with nursing students. The semi-structured interview was tape-recorded and transcribed verbatim. I used an interview schedule as an aide-mémoire. (See appendix vii. for the information sheet, appendix vi. for the interview sheet and appendix iv. for the consent form.)

- University Dyslexia Tutor

Purpose: to examine her role in supporting nursing students with specific learning needs during their studies at the University.

The University's Student Support Services department employed a number of Dyslexia Tutors. I approached the officer who had the most experience of supporting students from the School of Nursing. Initial contact was through the manager of the department, who identified the appropriate officer to approach. Subsequently I spoke to the Dyslexia Tutor by telephone and sent her a copy of the information sheet (see appendix viii.). I conducted a tape-recorded, semi-structured interview, using an interview schedule as an

aide-mémoire (see appendix vi.). She also signed a consent form (appendix iv.).

- Trust, University and School written policies

Purpose: to review the guidance and standards for the selection and support of students who are disabled or who have specific learning needs.

I gathered documents from the University and Trusts' websites, and was provided with policy documents and other literature by the Student Support Services department and the School designated lecturer responsible for students with specific needs. All information obtained was in the public domain.

- Second and third year nursing students who are dyslexic.

(Selecting students well into their programme ensured they had been exposed to a variety of clinical placements.)

Purpose: to identify the areas where they experienced problems and how they overcame them.

I asked the School designated lecturer responsible for students with specific needs to approach all of the students in the second and third years of the pre-registration nursing programme, who were dyslexic, requesting that they take part in a group interview. The lecturer described the study to the students and gave them the information sheet (see appendix ix.). I decided to use a group interview because I hoped the interaction between the students and the sharing of experiences would spark ideas and reflections in the other group members. There were four students diagnosed as dyslexic who were known to the lecturer, three agreed to take part in the group interview, the fourth declined saying the experience would be too stressful as she had health and family problems. The students were made aware that this would be a group interview with other dyslexic students. All gave their consent to share their diagnosis with their colleagues (see appendix x. for the consent form). This event was tape-

recorded and again I used an interview sheet as an aide-mémoire (see appendix xi.).

Due to the small number of students available to interview at the University of Glynrith, I decided to approach the neighbouring School of Nursing at the University of Pimbury to recruit further students to the study. The University of Pimbury shared a number of clinical areas with the University of Glynrith and had very similar support structures for students with specific needs. I sought and was granted ethical permission from the University of Pimbury to recruit nursing students (see ethics section on page 95 below for more details). Five students out of a possible forty dyslexic students agreed to take part in the study.

- Clinical mentors who have supported nursing students who are dyslexic during the last two years

Purpose: to identify what problems they observed/experienced and how they supported the student in practice.

Mentors for pre-registration nursing students are qualified nurses, with a minimum of 1 year's experience, working in the clinical area the student has been placed to gain experience in order to develop clinical competence. The clinical mentors used by the school had all undergone preparation for their role that met the standards laid down by the NMC (2004e). The role of the mentor was to provide support and supervision of the student as well as assessment of their clinical competency.

The Allocation Office in the School of Nursing, University of Glynrith, identified ten clinical areas where nursing students, who had declared that they were dyslexic, had been placed in the last two years. I was not informed of the students' names to preserve confidentiality. I telephoned the clinical areas to identify a key person such as the clinical mentor or ward manager who would complete a questionnaire about their experiences. All areas agreed to take part. I enclosed an information sheet (see appendix xii.) and a consent form (appendix xiii.) with the

questionnaire, which gave further information about the study. The questionnaire contained a combination of open and closed questions about the observed problems experienced by the students and the strategies the mentor employed to enable the student to develop clinical competencies (see appendix xiv. for the questionnaire posted to the clinical mentors.) I chose this method of data collection for pragmatic reasons, namely it was easy to distribute and did not require significant amounts of time as compared to conducting interviews. The data gathered in stage one was primarily to help build up a picture as part of the case study and to focus the data collection in stage two, where I planned to interview a number of clinical mentors. Therefore, I did not feel that using this approach restricted the information I was gathering. I received nine responses to the questionnaire.

5.5.2 Stage 2

Stage two involved a longitudinal study of four dyslexic nursing students (this was the total number of students at the University of Glynrith who met the criteria, see page 86 'note about the students') during the two years branch element of their three years pre-registration nursing programme, plus a sample of the clinical mentors who supported them. Pre-registration nursing programmes were made up of a one year Common Foundation Programme (CFP) followed by a two years Branch Programme. There are four possible branch programmes from which to choose: Adult nursing, Children's nursing, Mental Health nursing and Learning Disability nursing. During the CFP, students spend much of their time in practice observing care; they develop clinical competencies more actively once in the branch programme, hence data collection focussed on students studying on the branch programmes.

- The group included two male and two female students, who were studying on the Adult nursing branch (2), Mental Health nursing branch (1) and Learning Disability nursing branch (1). The students were recruited to the study through the School designated lecturer responsible for students with specific needs. (See appendix xv. for the information sheet and appendix xvi. for the consent form.)

Data were collected in a number of ways:

- At the commencement of the students' branch programme a life history in relation to each individual student's specific learning need was recorded. This was via a tape-recorded, semi-structured interview.
- The students were interviewed following each placement to a clinical area throughout the duration of the branch programme. In particular they were asked to report on critical or significant incidents related to problems experienced in clinical practice and/or strategies employed to overcome difficulties experienced in clinical practice. The students met with me individually after five separate clinical placements, three times during the first year of the branch programme and twice in the final year of their course. These meetings sometimes took place in the clinical area especially if the student wished to demonstrate a particular problem area or useful strategy for coping with a problem. I also had telephone conversations with one of the students, at his instigation, between visits. This student also provided some brief written accounts of critical/significant incidents. Unfortunately one student left the study part way through to go on maternity leave. In addition to the initial life history interview, I interviewed her after one clinical placement only. I included the data gathered from this student in the analysis.
- I interviewed seven clinical mentors who had supported the students in clinical placement to discuss the mentor's observations about the student's performance and strategies they employed to support the student. I had originally planned to interview two mentors for each student, one from each of the two years of their branch programme. However, as one of the students left the study in the first year of the branch programme, I only interviewed one of her clinical mentors. All of the interviews took place in the mentors' area of work; this helped give realism and credibility to the study by focussing on the real world of work. Mentors were initially approached by telephone and a copy of the information sheet was sent to them by post prior to the interview. (See appendix xvii. for a copy of the information sheet and appendix xviii. for a copy of the consent form.)

5.5.3 A note about the students

Legislation such as the Data Protection Act (1998) protects information about an individual and enables a person, to a degree, to control how and to whom information about them is shared. Primarily important in this study was that it was not compulsory for a nursing student to declare that they have a specific learning need, nor was it compulsory for a person to be screened for a specific learning need before admission on to the course. The voluntary nature of disclosure meant that access to students who are dyslexic for this study was restricted. To illustrate this point, a typology of the dyslexic nursing students was developed using the following broad categories:

- Diagnosed as dyslexic and willing to disclose
- Diagnosed as dyslexic but not willing to disclose
- Believed to be dyslexic but not formally diagnosed and willing to disclose
- Believed to be dyslexic but not formally diagnosed but not willing to disclose

Only the first category of nursing students was included in the study. This meant that this study had limited information about students who chose not to disclose to the staff involved with the course and no information about the hidden population of undiagnosed individuals.

5.6 DATA ORGANISATION

The interviews were tape-recorded and transcribed; the field notes, telephone interviews and observations were typed up; copies of documents from the school and university were procured and relevant sections highlighted; and responses to the questionnaire were collated into one document. Each piece of information was labelled with details of the respondent, and where and when the data were gathered, and stored electronically and in hard copy to ensure a clear audit trail. All information was stored in my personal computer and a locked filing cabinet at my home (See the section 5.9.2 page 99 on confidentiality for further details on data storage).

In respect of typing up of notes from the telephone interviews, field notes and observations, this was conducted within 24 hours of the event to ensure that a full,

contemporaneous account of each encounter could be recorded. Where notes related to interviews with participants, I sent a copy of the notes to be verified by the participant, and where requested, the notes were amended. I completed transcription of tape-recorded interviews within 5 days of each meeting. To ensure accuracy of transcription I played back the tape and compared it to the printed transcription. Amendments were made where required. This process was helpful in that it enabled me to become familiar with the information, begin the process of analysis and helped ensure validity (Parahoo 1997).

In addition, I kept a diary of personal observations during the data collection stages, which I used to record my feelings and reflections of events. This proved particularly useful when problems occurred during the data collection process as it tracked my decisions and subsequent actions. I saved correspondence and feedback from my supervisor, particularly where it related to discussions we had had about the insights and personal theories I had developed during the various stages of the study and examination of the literature. Morse and Field (1996) refer to the importance of an audit trail in understanding why the researcher made certain choices or gained insights, particularly if it affected how future data were collected. Keeping a diary also provided a good source of information about the observed behaviour of the participants, particularly for the tape-recorded interviews, as transcription cannot convey behaviour or personal observations during the events (Mason 1996).

5.7 STRATEGY FOR DATA ANALYSIS

Typically, qualitative studies tend to generate large volumes of data, which need to be organised and analysed systematically. This section sets out the principles and processes for analysing the data gathered.

The study was conducted in two stages and correspondingly data analysis was undertaken at two specific points. Analysis of data gathered in stage one was used to inform the data gathered from the nursing students and clinical mentors involved in stage two. This two-stage approach was designed so that I would gain an understanding of the learning environment ie, university, school and clinical

areas; information about the difficulties nursing students who are dyslexic may have in developing clinical competencies; indications of the support available to nursing students with specific learning needs; and information about how nursing students who are dyslexic develop coping strategies in clinical practice. Table 5.1 illustrates how data collection and analysis was timed to enable the findings from stage one to help inform the data collection of stage two.

Table 5.1 – Data collection and analysis stages

Activity	2003	2004	2005	2006
Data collection stage 1 July 2003 – Nov 2003				
Analysis of data and write up of stage 1 completed end Dec 2003				
Recruitment of students for stage 2 Sept – Nov 2003. Life history recorded				
Data collection for stage 2 commenced mid Jan 2004. Ended July 2005				
Analysis of data and write up of stage 2. Ended April 2006				

As can be noted from table 5.1, data collection and analysis were carried out almost simultaneously, with analysis continuing for some time after the last datum was gathered. Polit and Hungler (1999) note that unlike quantitative research where analysis begins once all data are collected, in qualitative research analysis the “*search for important themes and concepts begins from the moment data collection begins*” (p573). In this way as each item of data was gathered, careful consideration of its meaning informed how I collected the next item.

Eisenhardt (1999) sets out a number of activities within an overall strategy for analysis to enable a researcher to build theories from case study research. Her approach is useful in dealing with complex case studies or collective case studies. She emphasises the iterative and dynamic nature of this process. The stages identified by Eisenhardt include:

1. Theoretical not random selection of cases
2. Use multiple data collection methods
3. Overlap data collection and analysis, be opportunistic when gathering data
4. Conduct within-case analysis
5. Look for cross-case patterns through divergent techniques

6. Search for evidence for the “why” behind relationships
7. Compare with conflicting and similar literature.

I felt that this approach had much to offer to the development of this study.

I identified in section 5.4 (see page 75) that this was a collective case study made up of numerous individual cases, e.g. each student, each lecturer, each clinical mentor was in essence a case. In point 4 above, Eisenhardt (1999) suggests that analysis should begin through ‘within-case’ analysis. She proposes that each case study should be reviewed to identify themes and patterns. To enable this thematic analysis to occur, all data gathered in stage one were rendered into printed form, ie interviews were transcribed verbatim, information from the completed mentor questionnaires was typed up and copies of the policies and procedures obtained from the University and Trusts. The data related to each case were reviewed and coded by my supervisor and myself to improve consistency of the coding, enabling themes and categories to be identified. Details of the coding process and emergent themes for stage one are described in full in chapter 6.

After reviewing the data for each case, I compared the themes and patterns generated to the data from the next case in that series, e.g. I began by thematically reviewing and comparing all data gathered from the eight admissions teachers. Next I compared the themes generated from one category of cases with another, e.g. I compared the themes generated from the admissions teachers’ data with the themes identified from data gathered from the three special needs officers (University and School). In essence I was looking for, what Eisenhardt (1999, p136) describes as, “*cross-case patterns*”. This process enabled me to identify areas of similarity and contrast, and led to the identification of further themes and patterns, which I then reapplied to the data. This iterative process continued until I had exhausted all of the data gathered and resulted in the identification of 17 themes derived from all data gathered in stage one.

Eisenhardt (1999) suggests that a descriptive account should be made of each section. The account in respect of stage one is presented as chapter 6 of this thesis and began the process of explaining the “why” behind relationships and

behaviours identified from the cases. At this point I returned to the literature to compare the emerging ideas with other reported research. The outcome of this stage of analysis was the identification of areas that should be pursued in the data collection in stage two (see chapter 6, section 6.6, page 152 for detail).

Analysis of data from stage two also followed the steps proposed by Eisenhardt (1999). The data for each student were gathered through a series of meetings during the two year branch programme – six episodes in total. The notes from the interviews with the students and mentors, plus additional material from one student about critical and significant incidents were typed up to allow thematic review. Due to the volume of data to be analysed for this stage of the study, I decided to use NVIVO, a computer-assisted qualitative data analysis software package. Unlike its predecessor NUD*ST, which is good at broad-brush and large-scale analysis, NVIVO is good at fine-grained and intensive analysis of large data sets (Gibbs 2002).

The 17 coded themes from stage one formed the initial code tree established within the NVIVO programme. The codes were applied to the student and mentor data sets in a constant comparative approach as followed in stage one. Additional themes emerged during this process and six themes from stage one were found not to be applicable, e.g. no views on screening students for dyslexia were expressed during stage two. A total of 28 themes and sub themes were eventually identified.

Having identified the emerging concepts and relationships I returned to the literature in order to see how well they fitted or contrasted with previous work. (See chapter 7 for the account of the analysis and discussion).

I returned to the literature again in the preparation for chapter 8 where I considered the broader implications of the findings from this study for policy makers, education providers and health service involved in the support of dyslexic students. Eisenhardt (1999, p152) states that this final stage is important because

“tying the emergent theory to existing literature enhances the internal validity, generalisability, and theoretical level of theory of case study research.”

5.8 TRUSTWORTHINESS, CREDIBILITY and GENERALISABILITY

Concepts of 'validity' and 'reliability' originated in the quantifiable, scientific paradigm and many researchers have challenged their use in qualitative research (Parahoo 1997; Janesick 2000; Gergen and Gergen 2000). However, this does not mean that qualitative research is less rigorous in its approach. The issue lies with the underlying beliefs of many qualitative researchers, in other words, that many interpretations are possible when researching the complexities of human experience and actions, there is no one right answer. Denzin and Lincoln (1994) refer to this as the 'crisis of validity'. Janesick's (2000, p392) view is that

"Validity in qualitative research has to do with description and explanation and whether or not the explanation fits the description... Is the explanation credible? Qualitative researchers do not claim that there is only one way of interpreting an event. There is no one "correct" interpretation."

Qualitative researchers commonly use alternative terminology to validity and reliability, e.g. Streubert and Carpenter (1999) use *trustworthiness* instead of validity and reliability. They said that qualitative research is trustworthy when it accurately represents the experience of the study participants. They use the related term *credibility* to describe the recognition by participants of the research findings in relation to their own experiences. They also highlight the importance of *auditability*, the detailing of the research process to enable another researcher to follow the methods and conclusion.

Yin (1994) while not rejecting the terms validity and reliability instead puts forward 'case study tactics'. He covers four specific areas: construct validity, internal validity, external validity and reliability, each of which is discussed below.

In dealing with construct validity, which is usually defined as the process to ensure the lines of inquiry 'measures' a particular construct, e.g. coping strategy (Parahoo 1997), Yin suggests:

1. Using multiple sources of evidence used in convergent lines of inquiry.
2. Establishing a chain of evidence
3. Having key participants review the report to ensure they identify with the content.

In essence these tactics help establish the trustworthiness and credibility of the data and the conclusions drawn.

In this study I used a wide range of data collection methods from a number of sources, and established an auditable trail through the data collection process, i.e. each piece of data is clearly labelled in respect of the source, time collected, location and with indications if there was related material. During stage two of the study I sent draft notes at each data collection point to the students and clinical mentors seeking confirmation that I had captured their views and feelings accurately.

In terms of internal validity, which is usually defined as the unwanted effects of internal factors on the relationship between two variables in an experiment (Parahoo 1997), Yin suggests that an analytic tactic of 'pattern-matching' is a way of addressing this issue in a case study. This tactic supports the trustworthiness of the conclusions drawn. In the strategy for the analysis of the data, outlined above, I used an iterative process to ensure themes and patterns identified from one data set were compared and contrasted with the other data sets, thus reinforcing the conclusions I was drawing. I also used the analysis of the data from stage one to inform both the data collection and analysis in stage two.

External validity relates to knowing whether a study's findings are generalisable to other similar populations and settings. Yin (1994) takes the stance that critics of case study methodology are erroneous when

"contrasting the situation [of case studies] to survey research, in which a 'sample' (if selected correctly) readily generalises to a larger universe. This analogy to samples and universes is incorrect when dealing with case studies" (p36).

His view is that the purpose should be *"to generalise a particular set of results to a broader theory"* (p36). Bryman and Burgess (1999) support this position and point out that although case study methodology has been used widely by social scientists for many years there is a degree of controversy associated with it. This controversy is concerned with whether findings from one or more case study can be generalised. Their view is that the point of case studies is that it allowed for

generalisation to theory to occur (p. xiv). Yin does not believe generalisation is automatic and that any theory should be tested, he describes this as “replication logic”. I was not proposing to repeat the study to test any emergent theory. However, I would contrast the findings from this study to those that had already been reported in the literature.

Finally, Yin outlines the tactics to deal with reliability. Reliability usually refers to how consistent the method is in measuring a specific phenomenon. Yin points out that in case study methodology this should mean repeating the case study in the same place and not replicating the results by doing another case study. The tactic Yin proposes involves setting out the procedures to be followed to act as a template for another researcher to repeat the approach taken. This was clearly what Streubert and Carpenter (1999) are referring to as auditability. To address the issue of reliability, I have set out in this chapter and in chapters 6 (pages 106 - 110) and 7 (pages 166-174) details of the steps I took when conducting the study. The appendices include all of the tools I used, i.e. consent forms, information sheets, questionnaire and interview schedules.

5.9 ETHICAL CONSIDERATIONS

In 2001 the National Assembly for Wales, Scottish Executive and Department of Health, England, each published a document setting out the model for the governance of research in health and social care within the respective countries. In 2002 the Department of Health and Social Services in Northern Ireland also published its version of this research governance framework. These four documents are country specific but were developed in collaboration and set out a consistent model for the UK. The following is an example of the underpinning principles that were found in each document:

“All research which involves patients, service users or care professionals or their organs, tissues or data, is referred to independent review to safeguard the dignity, rights, safety and well-being of the participants.” (Research Governance Framework for Health and Social Care in Wales 2001, p17)

The documents state that all studies must set out the measures to be taken to ensure informed consent is obtained from participants. They also state that there must be a system for ensuring confidentiality of personal information gathered,

and that participants should be provided with information about the study, e.g. potential risks in taking part, study design, conduct, analysis and reporting of the research findings. Researchers are reminded that they should respect the “*diversity of human culture and conditions*” (Research Governance Framework for Health and Social Care in Wales 2001, p12).

As this study involved gathering data from ‘*care professionals*’, i.e. qualified nurses (clinical mentors), and data gathered from higher education staff and students, i.e. nursing students, admissions lecturers and university support staff, it was necessary to seek ethical approval from the relevant research ethics committees.

Initially I had planned to gather data from the teaching, support staff, clinical mentors and students associated with one school of nursing (University of Glynrith). However, as there were only three students who had disclosed they were dyslexic in the second and third years of the nursing course and who were willing to take part in stage one of the study, it became necessary to involve nursing students from another school of nursing (University of Pimbury), who shared the same clinical placements. This meant that I sought and received ethical approval from two Local Research Ethics Committees (LRECs), who had responsibility for the NHS Trusts and community care placements where the clinical mentors were employed, and two School Research Ethics Committees, one from each of the schools of nursing.

I also wrote to the Directors of Nursing in the three Trusts, who had responsibility for the acute and community care staff, for permission to access the clinical mentors and students during their clinical placement. Permission for access was sought following ethical approval by the LRECs. Copies of the information approved by the LRECs were included with the letters of request, i.e. participant information sheets, clinical mentor questionnaire and consent forms. When I sought permission to access the clinical mentors in one of the Trusts, I was informed that I must also seek ethical approval from the Trust Research and Development Committee, even though I had previously had approval from the LREC that covered that Trust. This committee formed part of the Trust’s research governance infrastructure and had been introduced following publication of the



research governance framework documents (2001) and is cited as good practice in *Implementing the Research Governance Framework for Health and Social Care: A Review of NHS Trusts* (2003). One of the conditions of approval was that I had to submit six monthly reports on progress of the study to the committee for monitoring purposes.

The time-period when ethical approval and access permission was sought for this study is set out in the table 5.2. As can be seen, this process took six months to complete.

Table 5.2 Ethical committee approval and access permission granted.

2003	January	February	March	April	May	June	July
LREC 1	27.1.03						
LREC 2			24.3.03				
School Ethics Committee approval and access granted (University of Glynrith)				9.4.03			
Beacontop NHS Trust - access granted					14.5.03		
Harrowend NHS Trust – access granted					23.5.03		
Glynrith NHS Trust – R&D Committee approval and access granted						13.6.03	
School Ethics Committee approval and access granted. (University of Pimbury)							2.7.03

5.9.1 Informed consent

A key step in ensuring research participants are dealt with in an ethical manner is to provide them with sufficient information to make an informed decision about whether to take part in the study. Participants need to be fully informed of the nature of the research and the potential costs and benefits, which might occur from taking part (Polit and Hungler 1999). They also need to be reassured that their contributions or their identities will not be abused.

While achieving informed consent was required for all participants in this study, it had particular importance for the nursing students, as I would be asking them personal questions about being dyslexic and talking about their performance with clinical mentors. As previously stated in chapter four (page 43), there is some evidence from the literature that dyslexic adult students have lower self-esteem than non-dyslexic students (Riddick et al 1999), and that disclosing a diagnosis of dyslexia opens them up to other peoples' negative attitudes towards their learning difficulty (Anonymous 1994; Stephenson 1999; Wiles 2001; Allen 2002; Shepherd 2002; Blankfield 2002). As the students were on a training programme they might also feel that taking part in such a study could affect their ability to qualify as a nurse. In an attempt to allay any concerns, I felt it was very important that at all times the students felt in control of who knew they were dyslexic. I informed the students that I would be questioning them about their specific learning needs within a nursing context, how I would ensure that information was kept confidential and that their contribution would be anonymous in the final report.

The educational institutions also had a duty to ensure that information about their students is kept confidential. Therefore, I agreed with the ethical committee in both schools that a designated officer in each school would approach the students on my behalf to seek their initial agreement to speak to me about the study. These officers were important 'gatekeepers' for this study as it was through them that I sought to recruit the students into the study. Their role was to impart information about the study to the students and deal with any initial queries that arose. As they were acting as recruiters on my behalf, I needed the officers to present participation in the study in an appealing way to the students so that they would consider taking part.

In the University of Glynrith, the school designated special needs officer, who supported the students and knew them well, acted as intermediary. In the University of Pimbury, the deputy head of school took on this role, as there was no equivalent support officer in the school. The deputy head did not know the students well before approaching them.

The consequence of approaching the students through another person was that I became reliant on their abilities to explain the study with sufficient enthusiasm to ensure the students sought me out to know more. In the University of Glynrith the special needs lecturer recruited three out of four available students for stage one, (the fourth wrote and said she had family problems and would find taking part too stressful) and all available students (four in total) for stage two. This officer approached the students on an individual basis to explain the study. She was enthusiastic about the research I was undertaking and was keen that the students be involved.

The deputy head of school at the University of Pimbury was less successful and only recruited five out of a possible forty students for stage one. She had decided to present my request to whole cohorts of students at the beginning of a lecture, rather than targeting individuals. While the information about the study in written form was consistent the two approaches to recruitment were not. The relationship the special needs lecturer had with the students and her evident enthusiasm for my study appeared to play a significant part in her ability to recruit the students to the study.

Information was communicated to all participants in two ways, verbally (either from me personally or, in the case of the students, by designated officers from within the schools) and via written information sheets. The information sheets were designed for each participant group so that only relevant information was presented, e.g. admissions lecturers.

The layout of the information sheets was dictated by the LRECs and was based on the *Guidelines for Good Clinical Practice* (1996, section 4.8.10 pages 16-17) developed by the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) and Multi-centre Research Ethics Committee, General Guidance for Researchers (WWW, 2004). The information sheets included:

- The nature and purpose of the study
- The reason why the participant was chosen

- That taking part is a voluntary decision and that the participant could withdraw at any time and without giving a reason
- A description of what will happen to the participant during the study and what the participant will be asked to do, e.g. being interviewed.
- Potential benefits or risks – the only potential risks were to the students through the disclosure of information about them being dyslexic. As explained above I took great care to ensure they remained in control of this information throughout the study. These safety measures were described in the student information sheet.
- My contact details

Once the participants had agreed verbally to take part in the study, having had the opportunity to hear me describe what was involved, I asked them to sign a consent form. As with the information sheet the consent forms were designed for the specific groups in the two stages of the study.

During the time I recruited subjects for the study and throughout the data collection phase, I was employed in a quality assurance role to the nurse education sector. I was conscious that my job carried with it a degree of authority and power, which may have inappropriately influenced any of the participants to take part in the study. I therefore made a point of explaining that my activity in respect of this study was separate from my employment and that taking part in the study would have no effect on either the individual's future employment or continuation of the course.

5.9.2 Confidentiality

To provide anonymity for all participants, pseudonyms have been used in this thesis for individuals' names, universities and clinical areas.

The Research Governance Frameworks each state that:

“Particular attention must be given to systems for ensuring confidentiality of personal information and to the security of these systems.” (Research Governance Framework for Health and Social Care in Wales 2001, p12)

This was in line with the Data Protection Act (1998), which sets out the terms for protecting personal information held about an individual against potential misuse.

The Act covers data held about living individuals stored manually or by computer. The Act stipulates a number of criteria including that all personal data held should be:

- Fairly and lawfully processed
- Processed for a specific purpose
- Adequate, relevant and not excessive
- Accurate
- Not kept longer than necessary
- Processed in accordance with the data subject's rights
- Secure

As previously described in section 5.5.1, pages 79-85, data for this study were recorded in a number of ways. The word-processed documents were held on my personal computer at my home address, with backup CD versions stored in a home safe. Paper copies of the computer files, notes and questionnaires were held in a locked filing cabinet in my home study. The audio-tapes were also held in the locked filing cabinet in my home study. Raw data will not be kept beyond the needs for the completion of this study and subsequent dissemination of results.

In order to protect the identity of the subjects, participation in the study was kept confidential. For example, in the case of the students in stage two, the school special needs officer was the only officer within the school, outside of the ethics committee who knew I was seeking to recruit students for this study. The students' subsequent decision to participate and remain on the study was only known to my supervisors and I; the school and its officers were not involved after the initial contact stage.

As stated above I was anxious that the students remained in control of who knew they were diagnosed as being dyslexic. Therefore, I only approached mentors with the expressed permission of the students. Future employers will not be told that the students participated in this study.

The only potential area of difficulty I identified before starting this study was what I should do if I was told or observed unsafe practice. As a professionally qualified nurse I have a duty to act in the best interests of the patient/client. I agreed with the ethics committees that I would assess each case carefully, weighing the rights of student confidentiality against patient safety. If I felt I had to act I would inform the student before doing so.

5.9.3 Risk management

In preparing to undertake this research study I assessed the possible risk to the individual participants. For the mentors and university personnel, by ensuring confidentiality about their participation in the study, I could not identify any specific risk to either the individual or their employment.

However, when I considered the possible effects on the students, even with the maintenance of confidentiality, I did identify that the process of reflection on their experiences during the pre-registration programme may make the student feel uncomfortable or bring back unhappy past memories. The universities involved in this study both had student counselling services. I discussed this potential risk with the ethics committees and proposed that if I thought it appropriate, one action I could take would be to suggest to the student that they seek advice from the counselling service. I also determined that should participation in the study appear to be harming the student in anyway I would ask the individual to withdraw. These proposed actions were agreed as an appropriate means of offering support and reducing further harm.

In chapter 7 (see pages 220-221), I described how the students reflected on their experiences during stage two of the study. One student (Steve) found that reflecting on his experiences brought up unresolved issues from his past. He was sufficiently affected that he chose, with my support, to seek counselling to deal with the issues raised. I did not feel the need to ask him to withdraw from the study.

5.10 SUMMARY

This chapter explains the rationale for selecting case study methodology as a means to address the three research questions developed following the literature review. The strength of case study methodology is that it requires multiple sources of evidence and the development of converging lines of inquiry. This approach makes any finding or conclusion more likely to be convincing and accurate (Yin 1994).

The key reasons for selecting this method came from the belief that dyslexic individuals seeking to develop the clinical competencies required for nurse registration are affected by their relationships with others, the context in which they are studying and that coping strategies would develop over time. This stance fits in the 'contextual' theoretical perspective of developmental psychology.

The chapter provides an explanation of the arrangement of the study into two discrete stages. It also set out the methods used to gather and analyse the data and provides the criteria for the selection of the study participants. The chapter ends with the careful consideration of the ethical implications of the study.

The next chapter describes in detail the gathering and analysis of the data for stage one of the study. At the end of that chapter the key observations are examined. These findings focussed the data collection conducted in stage two.

CHAPTER 6: ANALYSIS OF STAGE ONE AND IMPLICATIONS FOR STAGE TWO OF THE STUDY

6.1 INTRODUCTION

The purpose of stage one was to develop an understanding of the context and nature of the problems faced by dyslexic nursing students within pre-registration nurse training, and to begin to understand how they might be supported to develop clinical competencies.

This chapter begins with a summary of the data collected (described in full in chapter 5, pages 79-85), followed by a description of the responses to the clinical mentor questionnaire and commentary on the events surrounding data collection from the interviews with the students. This is followed by an explanation of the steps undertaken in the thematic analysis of the data. A descriptive account is then presented under the identified themes, illustrated by examples drawn from the data. The chapter concludes with a discussion of the findings and the implications for the data collection strategy to be employed in stage two.

6.2 DATA COLLECTED FOR STAGE ONE

Data were gathered from a number of sources in stage one, summarised below. (Note: pseudonyms were allocated to the lecturers and students to aid clarity in the write up of this thesis.)

- a) Eight lecturers involved in the pre-admission selection of students - semi structured interviews were conducted.

Table 6.1 Pseudonyms and branches the lecturers taught on, interviewed in stage 1

Name	Branch of Nursing
Nicola	Mental Health
Youseff	Mental Health
Susan	Child
Douglas	Child
Gareth	Learning Disability
Elizabeth	Learning Disability
Angharad	Adult
Sarah	Adult

- b) Three Special Needs Officers – semi structured interviews were conducted with each individually.

- University Dyslexia Tutor
 - University Special Needs Officer
 - School Specific Needs Officer
- c) Seven dyslexic student nurses on years 2 or 3 of the pre-registration programme. Three students who studied at the University of Glynrith were interviewed as a group. The four students who studied at the University of Pimbury – one was interviewed face to face, the remainder had individual telephone interviews (see section 6.2.2, page 105 for more details).

Table 6.2 Pseudonyms and university of the students interviewed in stage 1

Name	University
Matthew	University of Glynrith
Lisa	University of Glynrith
Michelle	University of Glynrith
Anne	University of Pimbury
Beth	University of Pimbury
Jane	University of Pimbury
Vicky	University of Pimbury

- d) Policies and procedures documents
- e) Ten areas used for student placements received a copy of the clinical mentor postal questionnaire – nine responded.

6.2.1 Responses from the clinical mentor questionnaire

The following is a summary of the nine responses received from the ten postal questionnaires sent to placement areas that had previously been allocated a dyslexic student nurse.

- Five questionnaires were completed by the clinical mentor, who had worked directly with a student who had disclosed they were dyslexic;
- One questionnaire was completed by the sister responsible for students during placement on the ward, who recalled a student who was dyslexic being placed on the ward; and
- Three responses, one by a staff nurse who normally acted as a clinical mentor and two from ward sisters responsible for arranging mentorship of students during the placement, stating that none of the students placed with them had disclosed during the placement and were therefore unknown to them. This

meant they were unable to comment on the specific questions within the questionnaire.

6.2.2 Commentary on interviews with the nursing students

The group of three students from the University of Glynrith consisted of one male student, Matthew, and two female students, Lisa and Michelle. Matthew and Michelle were diagnosed as dyslexic while on the nursing course. Lisa was diagnosed as a child. The group interview was conducted in a quiet interview room within the School at the end of one of their theory days in School. The students asked for and received a copy of the interview after transcription, this was important for validation of the information gathered. None of the students subsequently added to the comments made in the interview.

The three students who took part in the group interview had had quite different experiences while studying on the course. These experiences to some extent affected their behaviour during the interview. Matthew who had been diagnosed as part of the admissions procedures and was now in his third year, stated that he had not been well supported during the course, had received negative comments from lecturers and clinical mentors and had experienced lecturers actively trying to dissuade him from pursuing nursing as a career choice. In contrast, Lisa and Michelle reported mainly positive and supportive experiences during the course.

During the interview Matthew was open about his experiences and wanted to tell his story. I noted that he arrived early and was the first to speak, giving what appeared to be a rehearsed story of his experiences. I had the impression that Matthew was a little suspicious of my motives for doing the study. To some extent this was understandable from his negative experiences on the course to date. On two occasions he challenged me during the interview. The first time he said that he felt I was focussing on the difficulties students with dyslexia had on the course rather than on what 'good things' they could bring to the profession, e.g. a heightened ability to empathise. On the second occasion he asked me about my knowledge base and appeared to be testing out my assertion that I was interested in determining how to support nursing students who are dyslexic. The atmosphere

in the interview remained friendly throughout however and he did not dominate the discussion and willingly allowed the other students to speak.

In respect of Lisa and Michelle, during the interview there were noticeable differences in their levels of confidence. They were roughly the same age, being in their early twenties, and were both in the second year of the course. However, Lisa had been diagnosed as dyslexic as a child, whereas Michelle had only found out a few months previously, when she had failed some of her course work. Lisa seemed relaxed and happy to talk about her problems and how she had developed ways of coping. Her body language was open, gave eye contact when she spoke and was attentive to the discussion. This was in contrast to the demeanour exhibited by Michelle. She wore a baseball cap pulled down over her eyes and she kept her head down and rarely made eye contact with me. She sat back a little from the rest of the group with folded arms and crossed legs throughout the interview. She did express opinions and shared her experiences when asked but did not volunteer any information otherwise. As Michelle began the interview in this way I feel sure it was not because of the opinions put forward by Matthew. She told me at the end that she had only agreed to come when she knew that Lisa was going to be there. This implied her lack of confidence or uncertainty about her dyslexia. I did notice that by the end of the interview Michelle had relaxed somewhat as the three students got to know one another and shared experiences.

It is important to note that as student confidentiality is strictly adhered to throughout the University of Glynrith, the students rarely knew of others with dyslexia studying at the School. The opportunities for peer support were therefore minimal. Most support is from the School or University staff in a formalised way and on a one to one basis.

Due to the small number of dyslexic students at Glynrith, a second group interview with five students from a nearby School of Nursing at the University of Pimbury that shared the clinical placements was planned. Unfortunately, this proved to be difficult to arrange. Although all five students agreed verbally to attend the meeting set up in their School, details of which were then confirmed in writing, on the day

of the interview only one student, Anne, attended. I was able to contact three of the four students who had not attended. Beth and Vicky said that they had not been able to get off duty on time to attend the interview, while Jane said she had a terrible memory and had forgotten (poor memory is a feature of dyslexia). Therefore, four semi-structured interviews were conducted, of which one was face-to-face and three were conducted over the telephone. Sturges and Hanrahan (2004) compare face-to-face interviewing with telephone interviewing in a qualitative study. The interview transcripts revealed no significant differences in the interviews and they therefore conclude that telephone interviews could be as productive as face-to-face interviews. Information gained through the face-to-face interviews and telephone interviews are therefore seen as equally valid and therefore this data collection method was used in this study.

Anne and Vicky were diagnosed as dyslexic when they were children, and Beth and Jane were diagnosed while studying on the course. Notes from the three telephone interviews were transcribed immediately after the interviews and sent to the students for confirmation; no changes were made.

6.3 DATA MANAGEMENT

Thematic analysis of the data, as described by Polit and Hungler (1999), began with the interview transcripts from the semi-structured interviews with the eight admissions senior lecturers/principal lecturers. My supervisor and I independently read the first transcript and each identified a number of separate themes. These we refined and agreed as a set of fifteen headings. Each theme was allocated a colour from the palette available on the computer, so that coding could be done easily on screen, removing the need to print out hardcopies of the text.

My supervisor and I then separately applied the fifteen theme headings to the first admission lecturer's transcript to test out whether all emerging ideas had been captured and to ensure a degree of consistency in the application of the theme headings. One area that proved difficult in this first application of the themes was to do with the categories labelled 'Support of staff/University network' and 'Student support'. We had assumed that it would be easy to distinguish between support given to members of staff, to that given to students. However, this proved not to be

the case and we agreed reluctantly to combine these two sections into 'Support of staff and students/ University networks'.

We also had some discussion around the use of the terms 'Fit for Practice' and 'Fit for Purpose'. We agreed that this concept of a nurse needing to be fit or able to do the job of a registered nurse cropped up in a number of our categories, namely:

- during selection of a candidate the admissions lecturer needed to make a judgement about whether the person at the end of the course would be able to do the role of registered nurse;
- there are statutory requirements that a person must meet in order to register as a nurse, these requirements are set out by the Nursing and Midwifery Council; and
- the broader debate about the need for a nurse to be physically and mentally fit and whether some disability/illness of registered members can be accommodated within nursing as a profession.

To aid clarity when my supervisor and I independently coded the data, I added a description to each theme heading. The revised themes, backed up by the descriptions, were reapplied to transcript one and applied to two other transcripts of interviews with admissions lecturers. This time there was a consistent applications of the themes agreed by both parties.

I continued to code the rest of the admissions lecturers' transcripts using the now fourteen themes, without need for further change to any of them. Next I coded the interviews with the School Specific Needs Officer, University Dyslexia Tutor and University Special Needs Officer, then the data from the clinical mentors questionnaires and finally the interviews with the students. During this phase of the coding it became necessary to add three further theme headings, namely: effect of staff attitude on students (feelings or behaviour); student's strategies/experiences in clinical practice; and positive attributes (exhibited by the student). To ensure consistency the final version of seventeen themes and colour coding was reapplied to the admissions lecturer's transcripts.

The final version of the seventeen themes and colour coding used in stage one is set out on table 6.3

Table 6.3: Themes and colour coding utilised in stage one of the study.

1. SELECTION PROCESS	BROWN
<p>Anything to do with the selection of students and includes: what criteria are used to select a person (references, experience, academic experience, do they know what they are letting themselves in for) and the process (interview, application form). The interviewers must be sure that they are selecting students who are 'fit for purpose'.</p>	
2. DISCLOSURE/CONFIDENTIALITY	OLIVE GREEN
<p>Student disclosing they have dyslexia or special need or being encouraged to disclose, whether it is on forms or to people. Any mention of further exploration of the extent of their disabilities or needs. Would include staff attitude to whether students should disclose and any related policies in this area. Keeping records/info about student confidential.</p>	
3. TRAINING OF STAFF/CONFIDENCE OR NOT IN UNDERSTANDING DYSLEXIA	DARK GREEN
<p>Any training or preparation on dyslexia and dealing with students with special needs. Includes any evidence that demonstrates that the interviewee understands what is meant by the term dyslexia or special educational needs, and what their responsibilities are.</p>	
4. SUPPORT OF STAFF AND STUDENTS/ UNIVERSITY NETWORK	DARK BLUE
<p>The University Student Support Services and arrangements within the School to have support officers. This categorisation applies when it is talking about how students or staff access these services to provide them support in their role. It also includes officer involvement in specific activities such as interview selection panels, and the Special Needs Officers' roles. It relates to activities staff mentors do to support students, e.g. allow them to tape record lectures. Equipment provided to support the students.</p>	
5. STUDENT REACTION TO DIAGNOSIS OF DYSLEXIA	INDIGO
<p>Any expressed feelings by students to the diagnosis of dyslexia or being dyslexic.</p>	
6. ASSESSMENT OF STUDENTS FOR DYSLEXIA	ORANGE
<p>This relates to any activity undertaken to assess whether the student is dyslexic or has a specific learning need, e.g. refer to educational psychologist.</p>	

7.	PROBLEMS RELATED TO ACHIEVING CLINICAL COMPETENCIES	RED
<p>Any problems the student may have in conducting activities in the clinical area, which would normally be expected of a nurse, e.g. reading a drug chart, handover, write patients' notes.</p>		
8.	STATUTORY REQUIREMENTS INCLUDING SCHOOL AND UNIVERSITY POLICY	PINK
<p>The requirements of the Nursing and Midwifery Council and disability legislation. It includes the School and University policies developed on the back of legislation. It also relates to the requirement on lecturing staff and mentors to ensure the students meet the standards for registration and are 'fit for practice' and 'fit for purpose' on qualifying. There will be some crossover to the 'Selection' section in the responsibility of admissions lecturers to select students they think will be 'fit for purpose'.</p>		
9.	THEORY VERSUS PRACTICE SUPPORT	YELLOW
<p>The debate around the level of support offered in the theoretical part of the course as compared to the clinical practice element of the course. It should also include the fears that staff have about enabling students to pass the course who are then unable to function without this support once qualified. Expect to see it jointly categorised with 'Student Support'.</p>		
10.	SCREENING	TURQUOISE
<p>Issue around whether students should be routinely screened for dyslexia on admission and the debate arising from this. There may be cross over to the 'Selection' category.</p>		
11.	DEMAND/INCREASING STUDENT NUMBERS	PLUM
<p>Any perceived change in the number of students coming through the course who are diagnosed with dyslexia.</p>		
12.	NATURE OF NURSING/DO YOU NEED TO BE FIT?	BLUE
<p>The argument around whether a person has to be physically and mentally fit to be a nurse, or whether the diversity of nursing means that a person with a disability or who is affected by disease may still be able to nurse in some capacity. May relate back to historical practices that barred people who, for example, were diabetic or had epilepsy, from training to be a nurse.</p>		
13.	ATTITUDES OF OTHERS TO A STUDENT WHO IS DYSLEXIC	GREY
<p>Any expressed view (positive and negative) on whether a person who is dyslexic should be a nurse or should receive special treatment.</p>		

14.	REPEATED STORIES/NURSING MYTHS	LAVENDER
	A repeated story – look out for the story of the deaf student nurse who did not hear a colleague call for help.	
15.	EFFECT OF STAFF ATTITUDE ON STUDENTS	BRIGHT GREEN
	The effects of staff attitudes to dyslexia on the student's expressed feelings or behaviour.	
16.	STUDENT'S STRATEGIES/EXPERIENCES IN CLINICAL PRACTICE	LIME
	Any reported coping strategies developed to deal with activities in clinical practice. It also reports on their experiences in practice – some will report no problems.	
17.	POSITIVE ATTRIBUTES	ROSE
	Any positive attributes expressed about students with dyslexia. Includes what individuals who are dyslexic can bring to nursing. Includes comments about strengths, abilities and ability to empathise.	

The data were then sorted electronically by theme so that information for each theme could be viewed collectively. However, I decided to set up four separate correlated themed documents so that I could triangulate comments made by the lecturers, by the dedicated support officers, by the clinical mentors and by the students. This division was useful when comparing responses from the different data groups and in formulating conceptual theories. Each item of data had recorded next to it a means to track it back to the raw data. (See appendix xix. for example of transcribed interview with colour coding.)

6.4 DATA ANALYSIS

A review of the data by theme revealed a number of strong categories and associations, which have been arranged under five major headings:

1. Staff knowledge base
2. Selection decisions
3. The student experience
4. Disclosure or non-disclosure?
5. Support provision.

In this section each of these main categories will be explored in depth with reference to the source material.

6.4.1 Staff knowledge base

Analysis of the data under this category heading identified two sub-themes, namely: 'training and knowledge base' and 'seeking help'. These sub-themes are described in the two following sections.

6.4.1.1 Training and knowledge base

The University of Glynrith regularly provided training sessions for members of teaching staff on how to support students with specific learning needs and disabilities. More recently with the introduction of the Special Education Needs and Disability Act (2001) and the Quality Assurance Agency Codes of Practice (1999) the University had been offering a series of study days.

Most of the admissions lecturers and the School Specific Needs Officer had accessed training sessions run by Student Support Services. However, not one of the lecturers expressed confidence in their knowledge base and all had a number of concerns about dealing with students. For example, one observation was that the gap between attending the training sessions and actually having a student who needed specific support may be so great that the lecturer will have forgotten most of the good practices that had been recommended to them. There were opportunities for staff to update themselves but this did not lead to any degree of confidence, as one lecturer put it he did not feel knowledgeable, he felt "aware".

At the time of conducting the interviews it was not compulsory for teaching staff to attend training in supporting students with specific learning needs or disability, it was left to the individual lecturer to determine if and when to attend. The School Specific Needs Officer, who had a liaison role between the Student Support Services department and the staff within the School, lamented the fact that some staff seemed resistant to suggestions to attend training, resulting in the inappropriate referral of students to her for help.

"I have to say at this point that some staff, despite all the efforts you might make to get staff to go to training sessions, it is really difficult with some staff. And certain staff continually delete my emails, whatever I send they delete. They might well be the ones that will refer a student who isn't able to express themselves well in English to me, which of course is nothing to do with me." (School Specific Needs Officer)

This view was shared by one of the admissions lecturers.

“Because sometimes the people who make decisions are the last people to undertake training.” (Youseff, lecturer mental health branch)

The admissions lecturers, while accepting that their knowledge base could be better also stated that there should be firmer guidelines to support their decisions about selecting students for nursing. There was a suggestion that a standard test should be developed to support their decisions. Some other lecturers indicated that the UK regulator, the Nursing and Midwifery Council, should provide guidance. At the time of data collection the Nursing and Midwifery Council’s position was to leave the selection decision to the University; nor did it issue guidance in relation to registering individuals with a specific learning need or disability.

With the introduction of the Special Education Needs and Disability Act (2001) the University stated that it would be introducing a new policy to make disability training compulsory for all staff. It was not clear how this policy would be introduced or what the nature and frequency of updating would be, post the initial training. Part of the problem, as far as many of the lecturers were concerned, was the infrequency in which they encountered students who were dyslexic. However, this picture may change as support officers and lecturers commented that there seem to be more students in the system who are dyslexic.

The clinical mentors’ questionnaire showed that none of the respondents had received any training on how to support students who are dyslexic. They were all able to give a limited definition for the term dyslexia that showed some understanding of the problems students have with reading, writing and spelling. However, no one mentioned the other types of problems that are common such as poor short-term memory and difficulties with prioritisation of activities. The admissions lecturer responsible for the mentor preparation for the School acknowledged that information on supporting students with specific learning needs, needed to be included in the mentor training day and information pack.

6.4.1.2 Seeking help

The admissions lecturers were all very clear about where they could seek help and support from, in relation to dealing with students who have disabilities or specific learning needs. All of the lecturers were aware of the role of the School Specific Needs Officer and how to reach her. They were also aware of the role of the Student Support Services within the University. However, for some admissions lecturers the level of information provided did not always answer their questions.

“Yes, we’ve got a special needs co-ordinator and there’s Student Services. I have sought advice on a number of occasions, but I’m not sure that because of the advice I received or that the information is vague, as I’m still not 100% sure how to proceed. There’re still a lot of grey areas.” (Gareth, lecturer learning disability branch)

The University Dyslexia Tutor recognised that dealing with students following a course leading to a professional qualification rather than studying a purely academic course did raise some issues and she was unsure of the advice she should give.

“I kind of had worries about...because I read somewhere that nursing and teaching were probably the only two kinds of courses that still had as part of their admissions policies that they didn’t take dyslexic students. I was kind of conscious that we were quite clear on what our policy was and I even remember a whole circle of emails with various kinds of nursing staff in other universities just trying to kind of ascertain what safe practice was...” (University Dyslexia Tutor)

At the time of data collection, the UK regulators for health professions (Nursing and Midwifery Council, Health Professions Council and General Medical Council) had not issued specific guidance in respect of disabled students. As a result there remained a degree of uncertainty when dealing with dyslexic students who were studying on the nursing courses.

6.4.2 **Selection decisions**

There were a number of stages in the selection process employed by the University and the School and included standard checks of police records and health. The purpose of the selection process was to ensure that only individuals who were academically able, were physically and mentally fit to do a nursing role

and who exhibited appropriate attitudes and behavioural attributes, such as the ability to communicate clearly, were offered places on the nursing courses. The judgement to do with anticipated academic performance on the course was generally based on previous formal academic achievements. The decision about the general suitability of the person otherwise was more subjective and was left to the discretion of the admissions tutors and any accompanying representatives from clinical practice. As one admissions tutor put it:

“... we really need to be sure that they may be fit for the course, but also, at the end of the day, we’ve got to be sure that they are fit for the purpose, which is to be a qualified nurse.” (Nicola, lecturer mental health branch)

Information about the selection process was gathered from a number of sources, specifically the admissions tutors, the School Specific Needs Officer, the University Special Needs Officer and the published information on the University website. Throughout the selection process the applicant could disclose that they had been diagnosed as dyslexic or that they had specific problems, which might mean that they were dyslexic. The stages of the selection process were:

- The completion and submission of an application form (UCAS form if it was for the degree in nursing) by the candidate. A candidate could declare they had a disability or specific learning need on the form.
- The admissions office supported by the lead admissions tutor reviewed the application forms to ensure the academic entry requirements had been achieved. References and any criminal record were reviewed at this point. The self-declaration health form was sent to the occupational health doctor.
- If the candidate had declared on the application form that they were dyslexic, a copy of their application form was sent with a standard request form to the Student Support Services. The Student Support Services contacted the candidate directly and asked for a copy of the educational psychologist report and asked them to sign a Data Protection Form which would allow limited sharing of information about the student, e.g. with specific officers in the School. If they had not been assessed in the last three years a new educational psychologist report was requested.

- If the candidate had not previously been diagnosed but thought they might have a problem, they were invited to attend an interview with the University's Dyslexia Tutor who conducted preliminary tests. If she discovered that the candidate had a problem she referred the candidate for formal review by an educational psychologist.
- If the person met the academic entry criteria and there were no other problems identified at the initial screening they were invited to attend a selection interview. Either a principal or senior lecturer from the branch speciality the candidate was seeking to join conducted the interview. A clinical representative, usually of senior nurse status or a second lecturer, might accompany this lecturer. A candidate could choose at this point to disclose a diagnosis of dyslexia or raise the possibility that they might be dyslexic. If this happened they were referred to the Student Support Services as described above.
- If a candidate was successful at the selection interview and had at some point disclosed they are dyslexic, the Student Support Services would set up an advisory interview with members of senior staff from the School and with the candidate to review the candidate's needs and discuss how they might be supported on the programme.
- Once these processes had been completed the candidate was either offered the next available date to start the course, or offered a delayed start date (if there is anything outstanding such as results from a course), or rejected.

Successful applicants received enrolment information about a month before they started the programme. Details of the Student Support Services were included in this enrolment pack. This was a further opportunity before the student began the nursing programme to disclose their specific learning need.

Students could be referred to the Student Support Services at anytime during the course. This could be self-referral or through members of the teaching staff in the School. In stage one of the study four of the seven students either self referred or were referred by their lecturers during the first year of the course.

From the University's point of view it was desirable for students to disclose any disability or specific learning need so that additional resources and support could be put in place to assist the student. In doing this, the University was complying with the disability legislation and met the Quality Assurance Agency's Code of Practice for students with disabilities (1999). Providing additional support and resources should increase the chances of students being successful in their studies and thus improve student retention and hence retain funding for the University.

The situation for the admissions lecturers who were required to make decisions about an individual applicant's suitability was a little more complicated. From the interviews conducted with the eight admissions lecturers it was apparent that the lecturers were struggling to come to terms with what they saw as conflicting priorities - the rights of the individual to undertake nurse training and to receive support and accommodations to meet their needs, against the potential risk the individual may pose to patient care and whether they would be 'fit for purpose', i.e. able to function as a qualified nurse.

"Some people with very severe dyslexia it's whether we could put stuff in place to ensure safety of patients and that has still got to be our first priority. It they really can't write and if there are other things going on as well that we need to look into...so I don't think it should be automatic that because they've got dyslexia we have to put all these support things in place. It has to be the whole package, are they suitable to be a nurse, can they sustain all the other things that we require. And are they competent at the end of the programme. And if they become ward managers, can they do the job? Are they fit for practice and purpose." (Angharad, lecturer adult branch)

"I think people who are dyslexic should have the chance to become a nurse. But I'm also mindful that the public need protecting and if there is a difficulty with dyslexia... I'm mindful that there is a potential for danger in a sense. If I was on the other side of the coin and I was a patient and there was a student who had difficulties with dyslexia in terms of writing reports and missing information, I'm not sure if I'd be comfortable with that." (Gareth, lecturer learning disability branch)

This second quote illustrated the fear that the admissions lecturers had about the potential risk to patient safety from poor record keeping, which is a legal responsibility of all nurses. The interviewees did not cite evidence of the danger in terms of researched facts or statistics, it was couched more in terms of a general underlying feeling the person had.

The admission lecturers viewed themselves to be 'gatekeepers' for entry into the profession and were aware of their professional responsibilities when selecting candidates. Reluctance or a sense of caution on the part of admission lecturers to select someone with a learning difficulty reflects historically the nursing profession's resistance to the idea of accepting individuals into the profession with long-term problems, illnesses or disabilities. As one of the admissions lecturers observed, it was only recently that someone who is a well controlled epileptic or diabetic had been allowed to enter training. The lecturers agreed that a person must be 'fit for purpose' and 'fit for practice', i.e. able to meet the requirements for registration and carry out the role and functions of a nurse. What seemed to be debated was whether 'fit for purpose' and 'fit for practice' meant the person must be free from illness and disability. There was some confusion about making accommodations to a person's work environment, whether accommodations should be made at all and at what point do you stop.

"I think it would be useful to know at what point we... the cut off point with disability really, in terms of nursing, within the profession where people have to be fit for purpose... Because we are becoming too precious as a profession and we really don't want people with disabilities and we really have to have a proper open debate about what disabilities can be accommodated in nursing..." (Nicola, lecturer mental health branch)

In trying to work through this tension of individual rights, regulator requirements and potential risk to patient safety, one view put forward was that in making selection decisions about students who have learning difficulties or disabilities the focus should be on the person's potential with support, rather than what they cannot do. In the following quote the admission lecturer refers to moving from a medical model of disability, that sees the disabled person as the problem, to a social model of disability that focuses on potential, as the underpinning philosophy that should be adopted in selection.

"So sometimes the person with a specific need we focus far too much on what the person cannot do, as opposed to... the social model. You know

you have the medical model where the person has got some deficit and you could argue that the social model where OK let's optimise what the person, if provided with a level of support, can do." (Youseff, lecturer mental health branch)

Youseff's argument was that part of the problem for individuals entering the nursing profession was that they were being subjected to discrimination because the majority of nurses were thinking within a medical model, rather than a social model of disability. The student nurse who was dyslexic was not being seen as an individual with potential with specific needs to be met, but as a problem and a potential threat, which some felt should bar them from entering the profession.

It should be noted at this point that the eight admissions lecturers and the School and University support officers all referred to the fact that students should not be barred from becoming a nurse purely on the grounds that they are dyslexic. However, comments by some of the students suggested that some other lecturers they had encountered did think that individuals who are dyslexic should not enter nursing as a profession.

"When I was diagnosed I brought back my results to my personal tutor and to the co-ordinator, and I was called into the office asking...well the first question they asked was, how I got on the course. So I said I done my Access course, was Student of the Year in XX College. So I was asked then to reconsider my position on nursing because they don't encourage...um...well, admitting nurses with disabilities. I was told I could end up killing somebody, actually being in nursing with dyslexia because through problems that dyslexics have got, reading and writing I suppose, d and b back to front..." (Matthew)

This was another example of viewing dyslexia through a medical model of disability and consequently as a problem and threat. Emotive language was used to try to persuade the student not to enter the nursing profession probably because legislation to prevent discrimination is stopping the institution from being able to bar them. It appeared that although the School and University had an open and supportive policy towards students with disabilities and specific learning needs, the message received might not be so clear as it was subject to individual interpretation. In the interview with the University Dyslexia Tutor she commented she had not been able to make sense of the mixed messages from the students

and staff about whether individuals who were dyslexic should be entering nurse training.

“And it seemed very blurred because there seemed to be people saying that there’s no reason why a dyslexic person is any more dangerous than someone without it. And whereas there were other members of staff saying ‘Well it’s a bit worrying isn’t it?’ ... So I definitely feel it is a puzzle.”
(University Dyslexia Tutor)

She wondered how the students made sense of it. From the student’s point of view withholding information about their diagnosis at this stage removed any danger of this information affecting the selection decision.

During the interview with the University Dyslexia Tutor she reported that a pilot study using a screening test for specific learning needs would begin in two schools within the University at the beginning of the academic year 2003/04. The Nursing School was not one of the pilot sites. It was compulsory for all students in the two chosen schools to complete the screening test and be followed up by the Student Support Services Unit. The test was a modified (to make it relevant to Glynrith) version of one used at another University. If the pilot proved successful and sufficient resources could be found to sustain the resulting demand on resources the University planned to roll the test out to all schools. In future the student or applicant might have less choice in whether to disclose if they had a specific learning need, which raised certain questions about the rights to confidentiality of personal information. It was not clear whether the University was planning to impose a penalty if the student had withheld information about a specific learning need or disability. This was a human rights issue as it affected the equality of treatment of the students. It was also likely to increase the number of people diagnosed.

The data reviewed in this section showed that the University and School had considered the needs of students with specific learning needs and had in place clear processes for support, as required by legislation and the Quality Assurance Agency’s Code of Practice (1999). However, interpretation of policy and determination of who was offered a place on the nursing course was at the discretion of the admission lecturers and the clinical representatives involved in

the selection process. It was clear from the comments made that these individuals experienced a tension between the rights of the student with a learning difficulty to be offered an opportunity to study nursing against the possible risk they might pose to the patient/client set in the context of the requirements of the UK regulator. Another way of expressing this tension was that viewing dyslexia through the lens of the medical model of disability or the social model of disability profoundly affected how dyslexia was seen – either as a problem or something to be accommodated by the profession.

6.4.3 The student experience

Analysis of the data under this category heading identified four sub-themes, namely: 'finding out', 'being diagnosed', 'what students find difficult in clinical practice and their coping strategies' and 'learning strategies'. These sub-themes are described in the following sections.

6.4.3.1 Finding out

Three of the students (Lisa, Anne and Vicky) interviewed for stage one had been diagnosed as dyslexic when they were in formal education as children. Vicky was aged seven when she was diagnosed. Lisa stated her parents realised she was dyslexic when she was nine years old but the School refused to have her tested, she was finally diagnosed aged seventeen. Anne was diagnosed when she was fourteen but said that her parents were aware she had specific problems from an early age. Like Lisa, Anne's teachers at school had been "very negative". Lisa and Anne had been diagnosed as having Scotopic Sensitivity Syndrome (Irlen Syndrome) (Ott 1997) at the same time as being diagnosed as dyslexic.

"when I looked at paper, especially white paper the letters would lift up off the pages and move around." (Anne)

To help her cope with this problem Anne had orange tinted glasses that she used in class and in clinical placements. Coloured glasses were a very conspicuous sign that there was something different about her and made her "stand out like a sore thumb". Anne was very comfortable with her diagnosis, she appeared to be a confident person who had no problem telling people what she wanted and how she wanted it. Being seen to be different did not appear to cause her problems.

However, a less confident person may feel uncomfortable with such an overt sign of difference, which may inhibit the use of a supportive aid like coloured glasses. Other students did consider being seen as different as a problem. Vicky, for example, said she felt embarrassed to be seen as different from her peers.

The remaining four students had been diagnosed as adults while on the nursing course. They had all received comments from their lecturers or examiners about their spelling, grammar, structure and organisation of their written work. For Matthew and Michelle, the trigger to seek help was the recommendation of their personal lecturer during the early part of the first year. In Beth's case she self-referred to the Student Support Services after she had failed her psychology essay assessment twice with similar comments about her spelling and grammar and was in danger of being asked to leave the course due to academic failure. Jane was referred for testing early in the second year after failing one of her end of first year nursing examination papers. In this case, the marker of the nursing paper recommended that she be tested for dyslexia.

It appeared from these accounts that there was a degree of chance associated with the referral to the Student Support Services, e.g. the chance that the marker of a piece of work recognised that there might be a problem. In one example, the student's personal tutor shared a room with the School's Specific Needs Officer who overheard the discussion about the student's work. The overhearing of a conversation has implications for confidentiality when students receive supervision or support from lecturers who share accommodation. The implication of this lack of confidentiality may be inhibitory to the student and influence what they share with their lecturer, although, as in this case, there may be a positive outcome.

Chance referral to Student Support Services suggested that some students would pass through the system without detection and therefore not be offered additional support. It could be argued that this was only a problem if the student failed to develop strategies to cope with the course work and/or development of clinical competencies.

6.4.3.2 Being diagnosed

The students' reaction to diagnosis varied greatly. The students who had been diagnosed when they were children had time to come to terms with the diagnosis and to work out how to deal with the difficulties compared to those newly diagnosed as adults. Vicky said that as she has struggled with dyslexia from the age of seven this had meant she had developed many strategies, which enabled her to hide her dyslexia.

The responses from those students diagnosed as adults indicated that to some extent there was relief in the diagnosis. The individuals had always known that they had problems with the written word; the diagnosis gave some explanation to the cause.

"I feel much happier. I just thought I wasn't very good. You know, I didn't know the reason why. I just thought I wasn't very good academically. I now know why. And I can get extra help." (Michelle)

However, not all students expressed positive views about the diagnosis. Beth reflected back to her 'A' levels and said that perhaps if she had received help she would have achieved better grades. She expressed feelings of anger about what opportunities may have been lost to her through the lack of diagnosis and subsequent access to assistance.

As previously noted, one of the unwanted consequences of being diagnosed as dyslexic as an adult is the effect it can have on self-esteem and levels of self-confidence. Jane stated that the diagnosis of dyslexia had undermined her self-confidence and had significantly altered her self-image. Before her diagnosis Jane described herself as confident and outgoing but since her diagnosis she said she was unsure of her abilities and had "*the diagnosis in the back of my mind all of the time*". For all of the students the diagnosis of dyslexia had the unwanted result of a label being attached to them.

"It's like 'dyslexia', if you're labelled you carry it with you for the rest of your life." (Matthew)

Being formally diagnosed as dyslexic can be seen as a double-edged sword. It provides explanation for the difficulties the individual experiences and opens the

door to help and support. On the other side, the person is given a label by which others will judge them and may lead some people to internalise these evaluations, which could change their self image to one that is unfavourable (Hogg and Vaughan 2002), as seen by Jane who lost confidence in herself.

6.4.3.3 What students find difficult in clinical practice and their coping strategies

The students were all asked to identify which activities in clinical practice caused them difficulties that could be attributed to being dyslexic and how they coped with these difficulties. In addition the clinical mentors, admission lecturers and support officers were asked to describe observed and reported difficulties or difficulties they would expect dyslexic nursing students to have in clinical practice. The clinical mentors were asked to explain how they supported the student in practice with the areas they found difficult.

Moody (1999) identifies eight areas in which adults have difficulty in the workplace: literary skills, memory, sequencing ability, visual orientation, hand-eye co-ordination, disorganised speech, organisation skills and emotional factors. The areas of particular difficulty cited from this study relate to most of these categories, except those related to disorganised speech or emotional factors. For clarity I have grouped the examples under the following headings:

- a. Dealing with information
- b. Performing the role
- c. Co-morbidity - dyscalculia (calculations)
- dyspraxia (co-ordination)

a. *Dealing with information*

Area of difficulty

Irrespective of the branch of nursing in which the student seeks to qualify, all nurses are required to document nursing care in the patient/client's records. They might also be required to produce various reports, write transfer or discharge letters and complete a multitude of forms within their normal daily practice. Apart from the ability to write, a nurse must also be able to take a handover report from other nurses, this usually occurs verbally when there is a shift change. The staff

receiving the handover report normally make brief notes for themselves which they use as an aide-mémoire throughout the shift. This practice removes the need to constantly refer to the patient/client's notes. Similar 'dictation style' skills are required in undertaking medical rounds where changes in care are prescribed, or in taking telephone calls to note results of tests. These activities presented a challenge to the dyslexic students due to the problems they had with processing information.

The students all commented that handover and completing the paperwork had caused them the most problems in clinical practice. This was not surprising given the nature of dyslexia. This area of difficulty was corroborated by the observations made by the clinical mentors. In particular, the clinical mentors had observed students who were dyslexic experiencing difficulties with writing reports, letters and forms, and giving or receiving a handover report. The following were examples of comments made on the clinical mentor's questionnaires:

"She found writing reports and giving handover difficult. Writing transfer letters and written evaluation of care was sometimes a problem."

"Spelling and grammar needed to be checked after each entry. This was not regarded as a problem however and took only a short time."

The concerns expressed by the admissions lecturers about the problems students who were dyslexic may have in practice related directly to the actual and observed difficulties students had that are described above. However, the admissions lecturers' comments tended to be expressed as fears about possible consequences and 'worse case' scenarios. This contrasted with the views expressed by the clinical mentors who did not see it as a problem on a day-to-day basis. In the following example the adult branch admissions lecturer alluded to what might happen in the future when the student qualified and no longer had a mentor to help with documentation.

"I do foresee that there were concerns if they... the student has difficulty in writing documentation and that is not only difficult for the mentor at that time but I can see that if she can't do that now... could this be a problem in the future?" (Sarah, lecturer adult branch)

The students were able to identify specific circumstances or activities, which caused or contributed to the problems they had with handover and completing paperwork in the clinical area. These were:

- **The pressure of time to complete activities and the speed at which others do things.** This was particularly noticeable during handover report where the student needs to take down notes quickly so that their shift can begin.

"I find handover really hard work. I find a lot of the people go too fast and I can't keep up with what they are saying and writing down what they mean. And also I can't spell a lot of the words they come out with that I'm trying to write down. A lot of the time it's not the same as they said." (Anne)

The data collected from one mentor in the questionnaire showed that there was a need to allocate more time for doing written work, such as nursing notes.

- **Being distracted by things going on around them or being put off by the behaviour of others.** For example, Jane found watching the other staff writing down lots of notes during handover undermined her confidence, as she has difficulty doing dictation. While Matthew found the "*hustle and bustle*" around the office distracting when he needed to write up things like the nursing assessment document.
- **Reading, spelling or pronouncing unfamiliar terms**, such as patient's names, street names and drug names. For example, Vicky said that she frequently did not know how to pronounce drug names if she has not encountered them before. This is a common complaint by students encountering unusual drug names for the first time. However, she was embarrassed to ask for help in this area, which would identify her as having a problem. Not asking for help may lead to misunderstandings and potential errors.

Vicky was concerned with protecting her 'social identity' (Goffman 1963). Goffman postulates that

“society establishes the means of categorising persons and the complement of attributes felt to be ordinary and natural for members of each category”.(1963, p11)

When other people encounter individuals, judgements are made about the individual's 'fit' in these categories, his/her 'social identity'. Individuals exhibiting attributes that are considered shortcomings are therefore not 'normal' for the category and will tend to be stigmatised by others. The person is *“reduced in our minds from a whole and usual person to a tainted, discounted one”* (Goffman 1963, p12). The student in this example was trying to present herself as a 'normal' nursing student, in order to protect herself from being adversely judged, or stigmatised.

One of the admissions lecturers made a comment about students misreading something and therefore posing a threat to patient safety. This was an example of how a student's learning difficulty had affected his/her 'social identity' and hence they were seen in an unfavourable light.

“That makes it more of a concern really, when students or qualified nurses have got dyslexia and aren't able to read things, or are misreading things and end up administering the wrong drug.” (Nicola, lecturer mental health)

- **Reading other people's handwriting.** For example, Jane said she had difficulty when faced with new words particularly if written in scruffy handwriting, e.g. on drug charts. The issue of handwriting is a common complaint in nursing and the difficulties would therefore apply to individuals who were not dyslexic as well.

- **Filling in unfamiliar forms.** Jane reported one incidence where she was faced with transfer forms from another Trust that she was unfamiliar with and so was taking more time to complete. One of the other new D grade staff nurses she was working with told her to *“hurry up, it's only a form”*. Jane had not shared with this person that she was dyslexic.

- **Having a limited vocabulary.** Jane also reported that initially she was not sure what to write in the Kardex and considered her vocabulary to be limited. She was worried that she was not using 'big words'.
- **Having difficulty spelling everyday words.** Vicky said that the task she found hardest was writing the Kardex. She was not confident in her spelling, particularly of everyday words but she was too embarrassed to ask others to help her. This was another example of protecting her 'social identity'.

As can be seen from the range of examples cited above the students' difficulty in dealing with information in written and verbal format occurs in a large number of activities they are required to perform in clinical practice. Some of these difficulties might get easier the longer they work within an environment, for example the terminology, drug names and forms used would eventually become familiar to them. Familiarity is more likely to happen once they are qualified and permanently based in one area. The challenge for student nurses throughout their training is they are rotated to new areas so that they are exposed to a range of patients/clients and settings. All students are faced with unfamiliar documentation, names and terms on each clinical placement they attended, therefore all need time to learn and adjust to the activities within the clinical area.

Coping strategies

Students in stage one identified problems with writing reports, constructing letters or form filling. The main problem for the students was spelling. Students had a range of strategies to help them:

- Carry an electronic spellchecker
- Carry a nursing and/or ordinary dictionary
- Use coloured paper, overlays or tinted glasses
- Ask others for help
- Look up terms in the patient/client's records
- Concentrate on giving simple clear reports
- Use a form of shorthand when taking notes, e.g. # for fracture, or just writing key words

- Learn and practise new words and terms
- At handover concentrate on the important aspects of the patient/client's care

Some of these strategies had unexpected consequences. For example, Matthew used an electronic spellchecker, and was studying on the mental health branch. His placements brought him into contact with clients who were paranoid. These clients were very suspicious about the spell checker device and its use required careful explanation by the student.

“... so actually what I've gone and done now is actually take a spell checker in with me, when I'm assessing people. I tell them that my spelling is atrocious, which actually explains things. But again working in mental health with certain categories of patients some of them are very paranoid and you've got the spell checker, and they don't understand, you know what I mean, so it can affect them as well... When you explain about your spelling and show them the spell checker they're normally happy with it.”
(Matthew)

The alternative to an electronic spellchecker device was a traditional paper dictionary. Students reported carrying pocket sized nursing dictionaries and ordinary dictionaries around with them. The limitation for both the spellchecker and dictionary is that the student must have a reasonable idea about what the word is in order to look it up. They are also bulky to carry around with them on a shift. Having these devices with them does not remove the necessity to ask for help in spelling a term on occasion. Michelle, who did not have a spellchecker and chose not to carry a dictionary, said that when faced with a word she did not know she wrote down the first few letters then went back and asked one of the qualified nurses.

Four of the students in stage one of the study reported preferring to use coloured paper. Lisa and Anne had been diagnosed as having Scotopic Sensitivity Syndrome (Irlen Syndrome). Anne had been prescribed orange tinted glasses, whereas Lisa was advised to receive information on purple paper. Beth and Vicky both said they preferred coloured paper. Beth found pink or blue paper made the writing clearer and Vicky said she takes a green overlay with her to help clarify documents. Both the use of tinted glasses and coloured overlays are obvious

signs that the student is different. As previously noted students were not always comfortable with this and chose not to use a supporting aid because of feeling embarrassed. It should be noted that there is considerable debate about the effectiveness of coloured lenses and paper, with many researchers arguing that they help only in as much as they reduce asthenopia (sore, tired eyes, headache) (Evans 1994; Ott 1997)

Some of the students reported that when they were writing reports they tended to use simple terms due to either their limited vocabulary or the time it took to write a report. Jane said she had felt very uncomfortable with what she considered her limited vocabulary but had come to realise that the most important thing was to get the message across.

There was a degree of awareness from all students as to how to manage problems with spelling. In addition to seeking help with their spelling from tools such as spellcheckers and dictionaries and on occasion asking other staff members for help, students recognised the need to refer back to the patient/client's records. As highlighted in the discussion on disclosure, the student's inability to spell everyday words or to pronounce terms and names that are unfamiliar to them can cause a degree of embarrassment if they have to ask their colleagues for help. This feeling of embarrassment may inhibit the student from seeking help, or they may choose to take some other avoiding behaviour.

Aside from accessing help with their spelling the students found that having a quiet environment, free from distraction and without time pressures enabled them to concentrate on what they were doing and improved their writing.

Dealing with verbal information posed particular challenges to the nursing students. One of the key means of passing information about the patient/client's care is through a verbal handover report. Handover reports are often given quite quickly at change over of shifts. All of the students found this a particularly difficult activity to do well. One strategy that students employed was to create a form of shorthand so that they did not have to write words out in full. Therefore, instead of writing 'fracture' the student would write #, L for Left, BP for blood pressure and so

on. Many of these shortened forms of words would be used in clinical practice by members of the health care team and are therefore not unique to the student.

During a handover report it is common practice for the reporting nurse to give a range of information about the patient/client. The students interviewed in stage one had recognised that they did not need to capture all the information given but should instead concentrate on the more important aspects of a patient/client's care. If a patient/client had been receiving care for some time the students had the opportunity to become familiar with the patient/client's problems, this also reduced the need to record every point reported on. The challenge for the student was in deciding which points reported on were the key ones they should note. Dyslexic individuals generally have difficulty with comprehension thus making this task more difficult for them to accomplish.

The fall back for missing information reported at handover was to review the patient/client's records. The alternative to this would be to ask a member of staff but this option did not appear to be the one favoured by the students. This may be due to the student's desire not to bring their problems to the attention of the staff they work with. For example, Lisa commented that:

"If you start saying, 'Ah well I've got problems doing this', it's 'What are you doing in nursing then if you've got problems doing this?'..." (Lisa)

Students are expected to learn a number of new medical, nursing and drug names/terms when they go to a particular specialist area of practice. Vicky recognised this need to become familiar with new terms and reported occasionally making lists of words at home and trying to memorise them.

b. Performing the role

Areas of difficulty

A common problem area for dyslexic individuals related to their short-term memory. Four students commented on the difficulty they had in remembering to do things, having poor levels of concentration, the length of time it took to learn complex things, difficulties in multitasking or the impact their poor memory had on how they organised their workload.

During the interview with Beth, she related a recent incident in the ward where she had forgotten to carry out a nursing activity that she had been asked to do by a qualified member of staff. While she was careful to normally make a note when she was asked to do something this did not always work as she sometimes forgot to look at the notes she made.

Poor short-term memory has an impact on organising complex activities. An example that was shared by two students was in discharge planning. Discharge planning involves liaising with a number of people and agencies about the arrangements to enable a patient/client to be discharged either to their home, or to some other place of care.

"I think it's more organising discharge and things. It's trying to remember things, where you've got to ring all these people and you've got to keep up the notes and you've got to remember who's going where and making sure every thing's been assessed before they go out. It seems a bit too much to remember sometimes and keep in here [her head]." (Lisa)

One of the clinical mentors commented on the student's difficulty with prioritising her work. The mentor clearly identified that it was the student's poor memory that caused her the difficulty in practice. The mentor's solution was to write things down in point order for her. However, this strategy does not encourage the student to develop a long term coping strategy, for once qualified this level of support will not be available.

Coping strategy

In order to overcome the problem of forgetting to do something or for getting the order of priorities wrong most students reported that they wrote things down and then carry that information around with them.

"I prefer to jot things down so I know exactly what I've got to do. So I have to write things down that I've got to do so I can go through them and check."
(Anne)

The one problem with this approach is that the student must remember to refer to their notes at regular intervals for this to work. As was noted in the section on

student problems, forgetting to do something even though it is written down is a reality.

The noting of patient details on paper or in a notebook must be done with some caution to ensure patient confidentiality. None of the students or clinical mentors referred to this need, presumably because taking short notes to help plan and carryout care during a shift is a well-entrenched practice for students and qualified staff alike.

c. Co-morbidity – Dyscalculia and Dyspraxia

Areas of difficulty

Some people who are dyslexic will have problems with numeracy, referred to as dyscalculia. Problems in this area manifest in nursing practice primarily in doing drug calculations. The potential risk to the patient/client in making an error in drug calculations was one of the fears most frequently expressed by the admissions lecturers. The admissions lecturers when looking to the future were most concerned about this area because it is typical practice in the local Trusts for qualified staff to conduct drug rounds on their own. The only area in the Trusts in this study where two members of staff routinely checked the drug calculations and administration was in paediatrics. This was because generally amounts administered need to be calculated against the patient's body weight rather than being a standard adult dose. Additionally, even minor errors in drug calculations can be very serious for an infant or child.

One of the key observations in relation to doing drug calculations, as with problems in writing reports or receiving handover, was that dyslexic individuals need time to think about what they are doing and that this time should not be pressured and should be free from distraction. In the University setting students were offered additional time in examinations plus the option to be in a room away from other students to cut down on the distractions. What seems apparent from the comments made by students is that finding time in practice was often difficult.

“They’re giving me things like...with the IV drugs and I’m trying to do the calculations and they’re all rushing around trying to do it themselves but hang on a second you’re asking me a question, don’t just give me the

answer let me work it out and then we can sort it out. But they're rushing all the time." (Lisa)

Although the higher education institution and clinical mentors are required to ensure that only those individuals who are competent enter the nursing profession, as nursing students are adults and are striving to enter a profession, there is also some responsibility on their part too. As a qualified nurse under the Code for Professional Conduct (NMC 2004a) they are accountable for their actions or omissions that have a bearing on patient/client care and safety. One of the principles of the Code is that every nurse must "Act to identify and minimise risk to the patient or client." Therefore, if an individual is aware they have a problem, particularly in an area such as drug calculation, they have a responsibility to seek to develop a strategy to minimise any risk to the patient/client.

The students were aware that they may experience problems in drug administration and that errors could be harmful to their patients. As they were students, a qualified member of staff closely supervised them, so the likelihood of making a mistake was significantly reduced. However, some of the students had considered what they should do once they qualified, as in many areas of practice a qualified nurse administers drugs on their own. One student took comfort from the fact that she planned to work in paediatrics on qualifying where it was normal practice for two people to conduct drug administration (although this assumes that both do not have dyscalculia). However, if as a qualified staff nurse she is unable to do the drug calculations competently and is relying on the other person to do it correctly, this undermines the principle of the safety protocol, i.e. that two people do the drug calculations. It is therefore important that a student develops a strategy for dealing with drug calculations during their training before they qualify and not think that they can abdicate this responsibility to another member of staff. This example suggested that students needed to fully grasp the professional accountability required of a qualified nurse and should develop coping strategies that not only help them function in the clinical area but above all, maintain patient/client safety.

Individuals who are dyslexic may also have Developmental Co-ordination Disorder or Dyspraxia, in other words have problems with co-ordination and balance.

Although this study focussed primarily on dyslexia, individuals might also exhibit other specific learning needs and as noted previously they may have dyscalculia.

Beth described herself as clumsy and disorganised, which might indicate that she is dyspraxic as well as dyslexic. Vicky stated that she had poor hand-eye co-ordination, which is another indicator of dyspraxia. Neither of these students had received a formal diagnosis of dyspraxia. As nursing is primarily a skilled profession there are obvious consequences for an individual who has difficulty with co-ordination or who is clumsy and finds fine movement a problem, e.g. drawing up an injection.

Dyspraxia is not as well known as dyslexia, although awareness is improving. It was interesting to note that Angharad (lecturer adult branch), who has a son who is dyspraxic, said that she was convinced that his problems would be far harder to accommodate within nursing than dyslexia.

Coping strategy

The two problem areas for the students when conducting the drug round were: reading the drug chart and drug containers and ensuring they matched, and correctly determining the dosage to be given. The latter point was only a problem to those students who had dyscalculia as well as dyslexia. All students reported their concern over reading the drug names.

Nursing students can only administer drugs under the direct supervision of a qualified nurse. It is unsurprising therefore that the most commonly reported strategy was to check the drug or drug dosage with another person. It had been noted previously that having time to work out the drug calculation was of great importance to the students who have problems with mathematical calculations. Students reported carefully writing down the drug calculations rather than doing them in their heads. It was then possible to show these workings to the supervising nurse for her to check them. Block (1971) wryly observes that mastery in learning anything new can be achieved if given unlimited time and space.

The results from the clinical mentors' questionnaires indicate that the mentors who responded see dyslexia as a problem to do with reading, writing and spelling. Only one mentor made any comment about the potential problems related to reading drug charts and doing drug calculations. This did not mean that the clinical mentors were not assessing competence in drug administration, but it might suggest that they were not focussing on supporting the dyslexic student, who might also be dyscalculic, to develop strategies in drug administration that would be appropriate for a qualified nurse.

For the student the most important thing to achieve during training was a strategy for administering drugs safely because as a qualified nurse they might well not have anyone else with whom they could check the drug or dosage details.

The students and mentors did not report any specific coping strategies for dealing with the types of difficulty associated with Dyspraxia, e.g. co-ordination.

6.4.3.4 Learning Strategies

Individuals have preferences about the way in which they learnt something. In Ott's (1997, p 290) opinion "*multi-sensory learning techniques provide the key to teaching all dyslexic people.*" For example, instead of just reading about something the student might also seek out a practical demonstration or ask someone to explain it to them. The following is an example of this multi-sensory approach.

"Like once they were telling me about a disease, and I said hold on a second I can't just hear it I have to read it as well. So sometimes I go out and I read things just quickly. And they say, "Why don't you just ask? I can tell you, I can tell you about anything." Well no, I just can't take it in." (Lisa)

Some students expressed a preference of using one sense when learning something new, as in the following example:

"I find that as well, I learn through listening to people. I can't read something I've got to be told." (Michelle)

Lecturers and clinical mentors need to be aware that students vary greatly in how they learn something and should be flexible in their approach to teaching. One of

the students expressed the view that it was up to the student to make it clear how they wanted to be taught.

“I just stress that I want to go with them. Try to explain that when they go over things to go over things slowly. You know when I think I need practice with something I ask them to go over it with me.” (Anne)

The students generally emphasised the need for additional time in which to learn something, or to practise an activity. As previously commented on, students desired peace and quiet without external pressures on them in order to perform or learn. The provision of clear instructions and explanations broken down into steps aided the learning process.

There were a number of examples of students choosing to learn a skill through observing others. There was evidence that visualising the activity then repeating it under supervision is the preferred way of mastering clinical skills.

The acquisition of clinical skills did not appear to be particularly difficult for nursing students who were dyslexic. When asked about their strengths the students gave a range of examples that included good verbal communication skills, the ability to learn skills quickly and their ability to show empathy with patients, particularly those with mental health or learning disabilities where there is an element of stigmatisation.

“... because of the way I've been treated I have a better understanding of people with disabilities and for families as I know what its like. For people who haven't experienced that they can be quite threatened. I have an understanding of how it affects people...” (Anne)

Because the students were able to utilise a range of learning strategies and access information from a number of sources within clinical practice there did not appear to be any significant difficulties associated with the development of the skills and attitudes appropriate to the role of a registered nurse. In fact, their life experiences in dealing with a specific learning need might have brought particular insight and understanding to caring for patients/clients.

6.4.4 Disclosure or non-disclosure?

Logically one would expect all eligible students to disclose in order to gain access to the resources and support, but this proved not to be the case, as many individuals chose not to disclose or were selective of when and to whom they disclosed. This section of the data analysis focuses on the factors affecting the student's decision to disclose or withhold diagnosis, the impact the decision can have on the student's experience on the course and the potential effects such decisions have on University and School selection and support processes.

6.4.4.1 Factors related to withholding or disclosing diagnosis

The voluntary nature of disclosure meant that access to dyslexic students for this study was restricted. Only students who had been diagnosed as dyslexic and were willing to disclose that diagnosis could be accessed directly. Limited information about students who were dyslexic (formally diagnosed or undiagnosed) came mainly second hand from the students who had agreed to disclose as part of this study. For example:

"I know one of my friends is dyslexic and is worried to tell the university, because she got turned away from two other universities because of her dyslexia." (Matthew)

The above example indicates that the student's decision not to disclose was based on their past experience and the fear that they would not be selected for the course. It also suggests that even though they have successfully gained a place on the course, they continue to withhold the information as the fear of being rejected had persisted.

The issue of disclosure was not black and white; it appeared that some students chose to disclose only in certain circumstances. The decision by a nursing student to disclose in a clinical area appeared to be related to the attitude of staff in the area, whether they were supportive or not, or the concern the student had that staff would think differently about them. Vicky stated that she usually did disclose but not straight away. She usually left it a few weeks to see what kind of comments the staff made or whether her mentor was supportive. If she felt comfortable then she mentioned it. Her underlying concern was standing out as different from the other students, which led to feelings of embarrassment. By

delaying telling the qualified staff until she was reasonably sure that her disclosure would be met in a supportive way she was attempting to lessen the threat to her own self-esteem (Hogg and Vaughan 2002) and 'social identity' (Goffman 1963).

The issue of being judged or labelled by others can affect the individual's confidence and thus their ability to perform as a nurse. Jane, who was recently qualified and waiting to register, said she felt more confident in her abilities if her colleagues did not know she was dyslexic. She stated the need to keep the diagnosis hidden, as she feared what her colleagues would think of her. One of the consequences of her loss of confidence was her inability to instruct the unqualified members of staff in the unit where she worked. As with Vicky, mentioned above, fearing being judged by others suggests a significant change in her levels of self-esteem and hence her levels of self-confidence.

This fear of being judged or labelled by others, particularly by the qualified staff who would be making decisions about a student's fitness for practice, might be sufficient to inhibit disclosure. In the following example Matthew stated that he already felt labelled by being diagnosed as dyslexic and felt stigmatised previously. The act of disclosing the nature of the problems he was facing was causing him some concern, which might or might not be realised in the clinical area. The fear itself, which could be based on past experiences, was sufficient to inhibit disclosure.

"... if they think you're having a problem it gives them reason to give you even more stigma when you go back out. If you start saying 'Ah well, I've got this problem' it's 'what are you doing in nursing then if you've got problems doing this?'..." (Matthew)

Some students reported negative remarks that could be considered as hurtful or were said to undermine the student's confidence. Whether the comments were made thoughtlessly or in a more deliberate way to discourage the student, is not always clear. However, the negative effect on the students was obvious in the way it was reported during the interviews.

"A lot of tutors are supportive but my personal tutor isn't at all. I don't find her supportive. In fact she makes things quite difficult. She did say last week. 'It's quite frightening to think you'll be a qualified nurse in about a year and a half. I wouldn't let somebody like you nurse me.'..." (Michelle)

Most of the students who said they disclosed to their clinical mentors, made a judgement as to the timing of the disclosure, including being willing from the outset of the placement to disclose their diagnosis. In the following example Michelle commented that she had not received any negative or unsupportive reaction from the clinical staff so far.

“All my friends know. When I go out on placement I write it on my self-assessment and action plans that I’ve just found out. Maybe because I haven’t come across anything yet. My last placement, they were really good. I haven’t come across anything negative.” (Michelle)

This seems to suggest that previous experience was a deciding factor on whether to disclose on clinical placement. The apparent willingness to disclose on the clinical placement does not automatically suggest that the person will disclose in other contexts. Lisa said she was willing to tell people straight away, however she also said that she chose not to disclose her diagnosis on the application form or at anytime during the selection process. It was only once Lisa was on the course that she disclosed to her personal tutor, who by coincidence was the Specific needs tutor for the School. Lisa’s decision not to disclose on the application form was based on her concern that her specific learning need would influence the selection process and therefore her chances of gaining a place on the course. This type of decision only applied to those students who were diagnosed before they came to apply for a place on the course.

When the admission lecturers were asked whether they felt students should disclose any problems they have, all agreed that they should. They were also keen that the student disclose to any clinical placement they went to as well. From the clinical mentors questionnaire one of the comments stated that it was “most important” for the student who is dyslexic to inform the mentor or senior nurse. What was interesting from the admission lecturers’ responses was the choice of terms they used about the student disclosing the diagnosis of dyslexia (my emphasis).

“... it’s about encouraging students to be open and have an honest relationship between student and lecturing staff.” (Nicola, lecturer mental health branch)

“... once they've brought it into the open you can have an open discussion.” (Gareth, lecturer learning disability branch)

“I do think they should be open because I think it can have an impact on filling in documentation for patients.” (Angharad, lecturer adult branch)

“... we should be encouraging people to be open and aware of their specific needs so that they don't need to go underground and cover it up.” (Elizabeth, lecturer learning disability branch)

The language used implies a strong belief that the student had a responsibility to disclose the diagnosis. The language suggests that if the students withheld the information they were being “dishonest” or “secretive” in a negative way. In contrast when the lecturers were asked whether there should be any form of screening to identify students with problems they unanimously rejected the suggestion for practical and ethical reasons, namely if the organisation identified a need through screening it was morally obliged to respond to that need. Some lecturers could see the benefit of identifying students that needed help.

What can be drawn from the above review of the data is that the lecturers and mentors believed it was the responsibility of the student to disclose the diagnosis of dyslexia to them. The students, however, tended to make conscious decisions about disclosure of the diagnosis of dyslexia, influenced by:

- Their previous experiences, particularly the comments and attitudes expressed by others to their specific learning needs, or by failing to secure a place on the course at other institutions due to being dyslexic.
- How sharing the diagnosis made them feel, for example if they felt embarrassed or less confident they might be less inclined to disclose.
- The environment in which they found themselves, if it was supportive they were more likely to disclose.
- The potential risk outweighing any potential gain, an example would be during the application process where the student feared that the diagnosis of dyslexia might result in the failure obtain a place on the course. This outweighed any help they were entitled to once they were on the course. The protection afforded by the Special Education Needs and Disability Act (2001) to prevent discrimination did not appear to have any bearing on their

feelings in this matter. Timing of disclosure was normally carefully considered.

When the student was first diagnosed may also play some part in the decision-making process, although the evidence for this is less clear. A diagnosis as a child meant that the individual had time to come to terms with their condition and develop strategies for coping. Three of the seven students interviewed in stage one were diagnosed as children and all were very comfortable with the diagnosis. However, as with the students diagnosed while on the course they were selective in when and to whom they shared information about the diagnosis, Neary (1994) describes such behaviour as the games students play.

6.4.5 Support provision

During the time that the student was in training a qualified member of staff would supervise them on placement in clinical practice. This meant that problem areas such as writing reports and conducting drug rounds were generally managed so as not to cause potential harm to the patient. Many of the concerns the admissions lecturers and to a lesser extent the School and University Support Officers expressed were what would happen once the person qualified and this supervision and support ceased.

Jane, who had just finished her third year, said she had noticed the change in support levels. The unit she worked on was very busy and she said that people did not have time to show her things. Some people had commented that she looked stressed although she said this was all external and internally she felt okay. It was worth noting that this same student reported a lack of confidence in her performance and was anxious about her colleagues knowing that she had been diagnosed as dyslexic. The change in level of support was likely to be a contributing factor to how she felt and how she was performing. In the long term it may also influence any decisions about remaining within the profession.

Some admissions lecturers argued that there was a real possibility that the amount of support and supervision provided for students may enable them to pass the course, where in fact they were not able to function fully as a qualified nurse.

“She passed the academic course with some resubmissions and some support, obviously got through and had all the competencies signed off by the mentors over the 3 years. But it’s been discovered as a registered nurse she is not able to read a drug chart. Subsequently has made some drug errors.” (Nicola, lecturer mental health branch)

Nicola, above, was citing an actual example of a problem she was dealing with at the time of interview. The way the course was designed was that the clinical mentors should make a judgement about whether the student was competent to perform the activities required by the Nursing and Midwifery Council in order for them to be registered as a qualified nurse. In this case there were indications that this system had not worked. The comments made by Matthew about how the mentors supported him in practice may shed some light on how this system of assessment may have failed.

“Where my other colleagues were doing drug rounds they wouldn’t put me on the drug rounds because just in case I got it wrong. You know? Well I mean it’s only down to my spelling but she perceived that I couldn’t read. She started saying, “I’ll do all the book work you just...you just care for the patients”. (Matthew)

It appeared that rather than helping the student develop a strategy for reading the drug labels and drug chart safely, the clinical mentor ‘protected’ him from the experience. This did not help the student achieve the level of competence required in order to register and could only be dealt with by educating the clinical mentors about their role. Gareth (lecturer learning disability) commented that the clinical mentors did not always detect the specific learning needs of students who are dyslexic and that there was a general lack of awareness.

The need to educate the clinical mentors was well recognised within the School. During the interview with Angharad (lecturer adult branch), who had a responsibility to oversee the preparation of mentors for the School, she reported that they were developing additional teaching material to reinforce the mentor’s role. She also reported that the mentorship training did refer to the specific learning needs of some students. However, it would appear that this message about how to support a student with specific learning need in practice had not yet reached all of the clinical mentors.

6.4.5.1 IT Equipment

The personal use of IT equipment in the clinical environment by nursing students was unusual. It was an obvious sign that the student was different and raised questions about why they needed the equipment. Some of the reactions from the qualified staff indicated a degree of uncertainty about whether hand held (pocket sized) computers would interfere with monitors and other equipment. Morrissey (2004) observes that there is wide misunderstanding about the use of mobile phones and other electronic systems and the electromagnetic interference they may have with medical devices that has led to a wide range of inconsistent hospital policies. There is evidence that certain mobile phone systems can interfere with medical devices typically used in intensive care that may place patients at risk, however, blanket restriction on information technology in all care settings is not necessary. This confusion and anxiety about the use of information technology was observed in the qualified staff participating in this study.

“First two years I had extra 15 minutes time [during examinations], no computer assistance. They said this wasn’t according to the Disability Act for nursing for the first 2 years. I’ve just received a laptop and a hand held computer. They said that the hand held computer would be for the wards where the sisters and nursing profession... on certain wards won’t allow that anyway as it would interfere with certain things on the ward...”
(Matthew)

Although students might be provided with a number of portable pieces of equipment their use in the clinical areas might well be restricted either on the grounds of size or weight, value (fear that it may be stolen or damaged) or barriers placed by the staff working in the area.

6.4.5.2 Support services

Students had access to a number of dedicated support staff at school and university level. The University of Glynrith had a split campus; the Nursing School being a few miles from the main campus where the Student Support Services Department was located. This meant that if the student wished to take advantage of the support offered by the University Dyslexia Tutor they had to arrange to go to the main campus. As the School only had one part time lecturer with responsibility for supporting students with specific needs it was perhaps unsurprising that the students reported that there should be more support on the campus where the

Nursing School was located. During the interview with the University Dyslexia Tutor it was interesting to note that she had recognised this gap in provision and planned to increase her presence by holding some sessions on the nursing campus.

One of the main grumbles from the students was the lack of access to dedicated support staff when they were out in practice. If the student wanted to take advantage of dedicated support they had to return to the University. The students were generally unhappy about this and cited a number of reasons why it was awkward, including shift patterns and travelling.

“Particularly when you’re on clinical placement because you are so far away from the University, because we are out on placement for eight weeks at a time. Being away from the University for that length of time you do kind of struggle. It’s quite hard for us to get in and out all the time especially when we’re working shifts as well. It might be useful to get together.” (Lisa)

The last sentence in the above quote from Lisa suggested an alternative to seeking support from officers based at the School or University. The suggestion was that dyslexic students should form some sort of support group. There was some challenge associated with this suggestion due to the constraints around disclosure and preserving the confidentiality of personal information. For example, the School Specific Needs Officer said she had tried to keep the diagnosis of all students confidential and had not considered establishing a peer group because of this.

During the group interview, Matthew, Lisa and Michelle expressed that it was a pity they had not been made aware of each other, as they could have offered each other support. It was perhaps reassuring that during the interview with the University Dyslexia Tutor she had come to the same conclusion about having student support groups.

“My other intention is to send out some invitations for students with dyslexia to attend group support sessions. I don’t know if it will come up but I certainly intend to run a support group.” (University Dyslexia Tutor)

The limitation of this suggestion is that it would only be open to students who had chosen to disclose their diagnosis of dyslexia. The University Dyslexia Tutor may

reach more students if an open invitation is sent out rather than a targeted invitation. If the support groups are seen to be a positive experience it may turn out that the formation of the groups encourages some students to come forward to seek help.

There was a consensus from the students in this study that the School should provide specific personal tutors who were knowledgeable about dyslexia to cater for students diagnosed as dyslexic. This should be over and above the current provision. The reason they said that this would be useful is that currently they were treated just like everyone else and their specific learning needs were not being catered for.

Matthew described in the interview how isolated he felt and that he had struggled to find information and support during the three years he had been studying on the course. He said that as a member of a 'minority' his voice was not being heard. The other students interviewed agreed that the School was set up to enable the majority to successfully complete the course but as members of a minority who had a specific learning need they were excluded.

Although the students had some comments about the shortcomings in the way their needs were catered for, they praised the support they received from the current support staff: School Specific Needs Officer, University Dyslexia Tutor, the University Special Needs Officers, staff at the Student Support Services Department and Drop-in Centre. The support they received in clinical practice from the mentors was varied. Having a supportive mentor was considered very important to how successful the placement experience was. The students stated they would like to have mentors who have a general strategy for support of dyslexic students when they are on placement with the mentor. For example, Beth said that mentors should help her with her paperwork, explain carefully what is needed and look over and check what she has written.

The comments made by the clinical mentors about how they go about supporting students in practice matches quite well the areas of support the students are expressing that they would like to receive, i.e. practical help in prioritising work,

proof reading, offering things in a way the student finds helpful. The following are excerpts from the clinical mentor questionnaire:

"[The student's] Memory sometimes was [a problem], would find prioritising difficult, so I would write things down in point order for her and would proof read anything she wanted me to."

"Closer preceptorship [term is used interchangeably with mentorship]. Provide verbal alongside written information. Use pictorial information. Encourage the student to use his/her coping mechanisms, i.e. coloured glasses, coloured paper, flash cards."

The themes identified in this section were the need for appropriate and accessible support from University, School and clinical practice staff and the desire by the students to give peer support. It was also clear that there were concerns about what happens to the individual once they become a registered nurse and the support they received during training is removed. In essence, the student not only needs to be supported in training but must be helped to develop appropriate strategies so that they can cope once they are qualified as a nurse.

6.5 DISCUSSION

The primary purpose of stage one of the study was to determine whether nursing students who were dyslexic experienced specific problems, attributable to their specific learning need, in the development of the clinical competencies required of a registered nurse. The experiences of the seven nursing students, supported by the observations from the admission lecturers, clinical mentors and support officers confirmed that there are areas that cause specific difficulties for students who are dyslexic. These areas of difficulty fit closely with those cited by other researchers (Tumminia and Weinfield 1983; Shuler 1990; Shellenbarger 1993; Moody 1999).

The data gathered also indicates that how a student copes with these difficulties could be affected by a number of factors in the clinical area, including the pressure to perform, the speed with which others impart information, being distracted by things going on around them, and negative or unsupportive attitudes and behaviour of others particularly if they have had bad experiences in the past (Morgan and Klein 2000), which could affect confidence and self-esteem. Issues around poor self-esteem identified from this study clearly link to Riddick et al's

(1999) study who found that dyslexic university students frequently have lower self-esteem than non-dyslexic students.

Stage one was also designed to gather data to begin to identify strategies dyslexic nursing students employ in order to achieve the clinical learning outcomes and how they may be supported in clinical practice. The students and clinical mentors identified a number of coping strategies; some related to the use of equipment, e.g. electronic spell checkers or hand held computers, other strategies related to seeking help or information, or by the student taking a different approach to a problem, e.g. using a form of shorthand when taking handover report.

Table 6.4 summarises the specific difficulties and highlights the types of pressure that make it more difficult for the student to cope in practice. It also lists the coping strategies and equipment identified by students and mentors as being helpful during the practice placement.

Table 6.4: Areas of difficulty in clinical practice and coping strategies identified by the students and mentors

Dealing with information (problems with reading, spelling and dictation)

- Receiving and giving handover report
- Completing the nursing records, e.g. Kardex
- Writing transfer letters and filling in forms
- Reading, spelling or pronouncing drug names on charts and labels

Exacerbated by: having difficulty with every day words; having a limited vocabulary; dealing with unfamiliar names and terms; pressure to complete in a given time; being distracted by things going on around them; negative or unsupportive attitudes and behaviour of others, as this can affect confidence and self-esteem.

Coping strategies

- Electronic spellchecker
- Hand-held or palm-top computer
- Nursing and/or ordinary dictionary
- Coloured paper, overlays or tinted glasses
- Ask others for help
- Look up terms in the patient/client's records
- Concentrate on writing simple clear reports
- Use a form of shorthand when note taking, e.g. # for fracture
- Learn and practise new words and terms
- At handover report concentrate on the important aspects of the

patient/client's care

Performing the role

- Remembering to do things
- Managing and prioritising their workload
- Organising complex tasks, e.g. discharge planning

Exacerbated by: the speed needed to do things in practice; being distracted by things going on around them; the speed with which others impart information; negative or unsupportive attitudes and behaviour of others, as this can affect confidence and self-esteem.

Coping strategies

Writing things down or the mentor writing things down for the student; information carried with them during the shift.

Co-morbidity

Dyscalculia

- Doing drug calculations

Exacerbated by: the speed needed to do things in practice; being distracted by things going on around them; the speed with which others impart information; negative or unsupportive attitudes and behaviour of others, as this can affect confidence and self-esteem.

Dyspraxia

- Skills requiring good hand-eye co-ordination or fine movement, e.g. drawing up an injection
- Skills requiring co-ordination of movement or balance

Exacerbated by: the speed needed to do things in practice; negative or unsupportive attitudes and behaviour of others as this can affect confidence and self-esteem. Nursing is a skills-based profession and therefore is inherently challenging to someone who has difficulty with co-ordination.

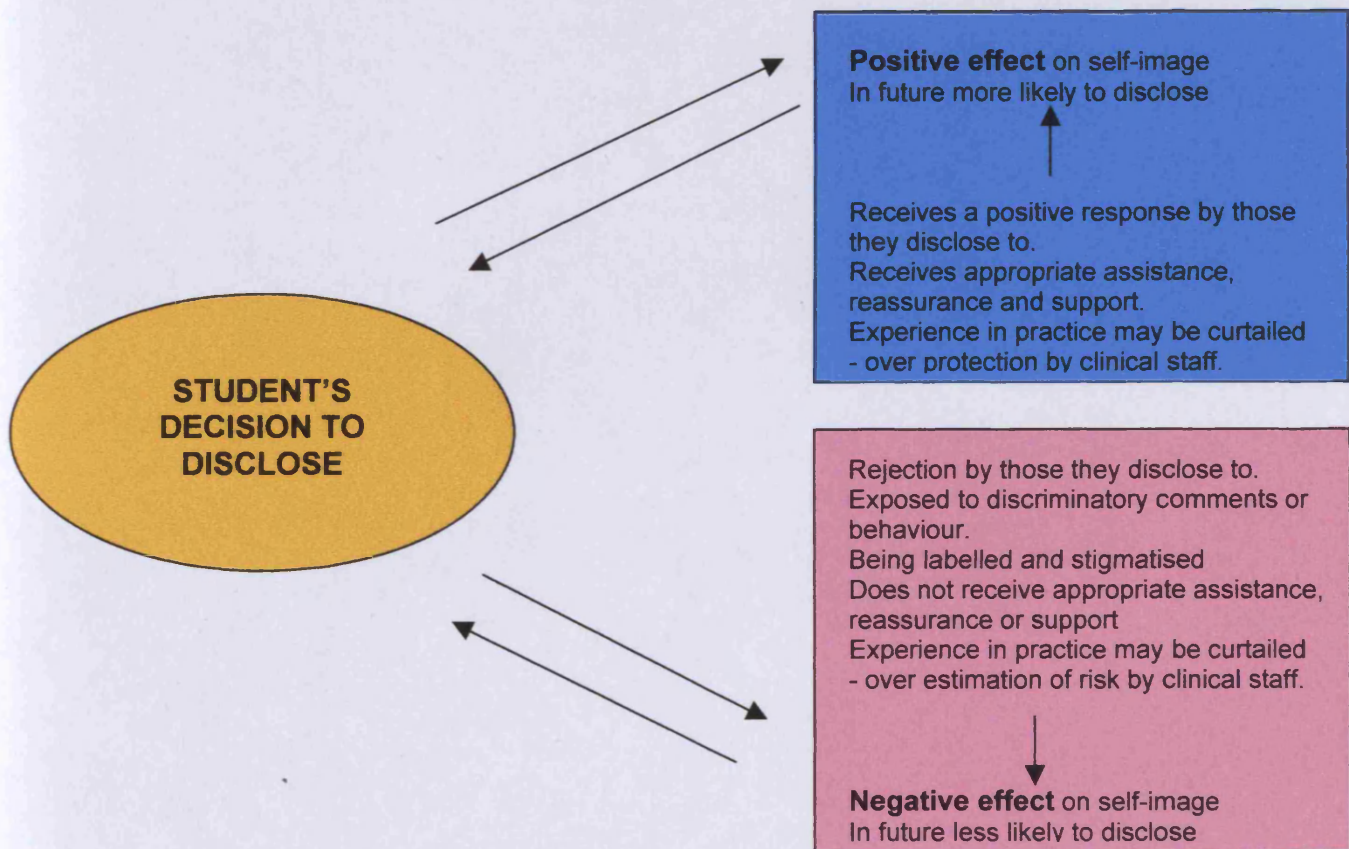
Coping strategies

None reported

One of the key areas to emerge from the students' data in relation to receiving support during the course was the importance of the diagnosis of dyslexia and subsequent decisions made by students about the disclosure of the diagnosis. The lecturers and clinical mentors argued that the students had a responsibility to tell them they were dyslexic, ostensibly so that appropriate measures to support the student can be put in place. However, the students have a right to decide whether or not to disclose their diagnosis. Evidence from this study suggests that students make conscious decisions about if and when to tell others, which is influenced by a number of factors. The individual student in essence weighs up the

possible benefits of disclosure in terms of receiving support, including IT equipment and additional time during examination, against the possible negative consequences, in terms of discriminatory comments and practices. Evidence suggests that being labelled dyslexic significantly affects how the student views himself or herself. The factors that influenced students' decisions about disclosure are presented on Figure 6.1.

Figure 6.1 Feedback mechanism showing the influences affecting a student's decision to disclose diagnosis of dyslexia.



As can be seen from figure 6.1, the attitude and behaviour of the students' lecturers and clinical mentors played a key role in determining whether students disclose the diagnosis of dyslexia. The data suggests that the lecturers' and clinical mentors' attitude and behaviour towards the students may be as a result of the tension they felt about upholding the rights of the individual student to be offered the opportunity to become a registered nurse against the potential risk the student might pose to patients/clients because of their specific learning need. How

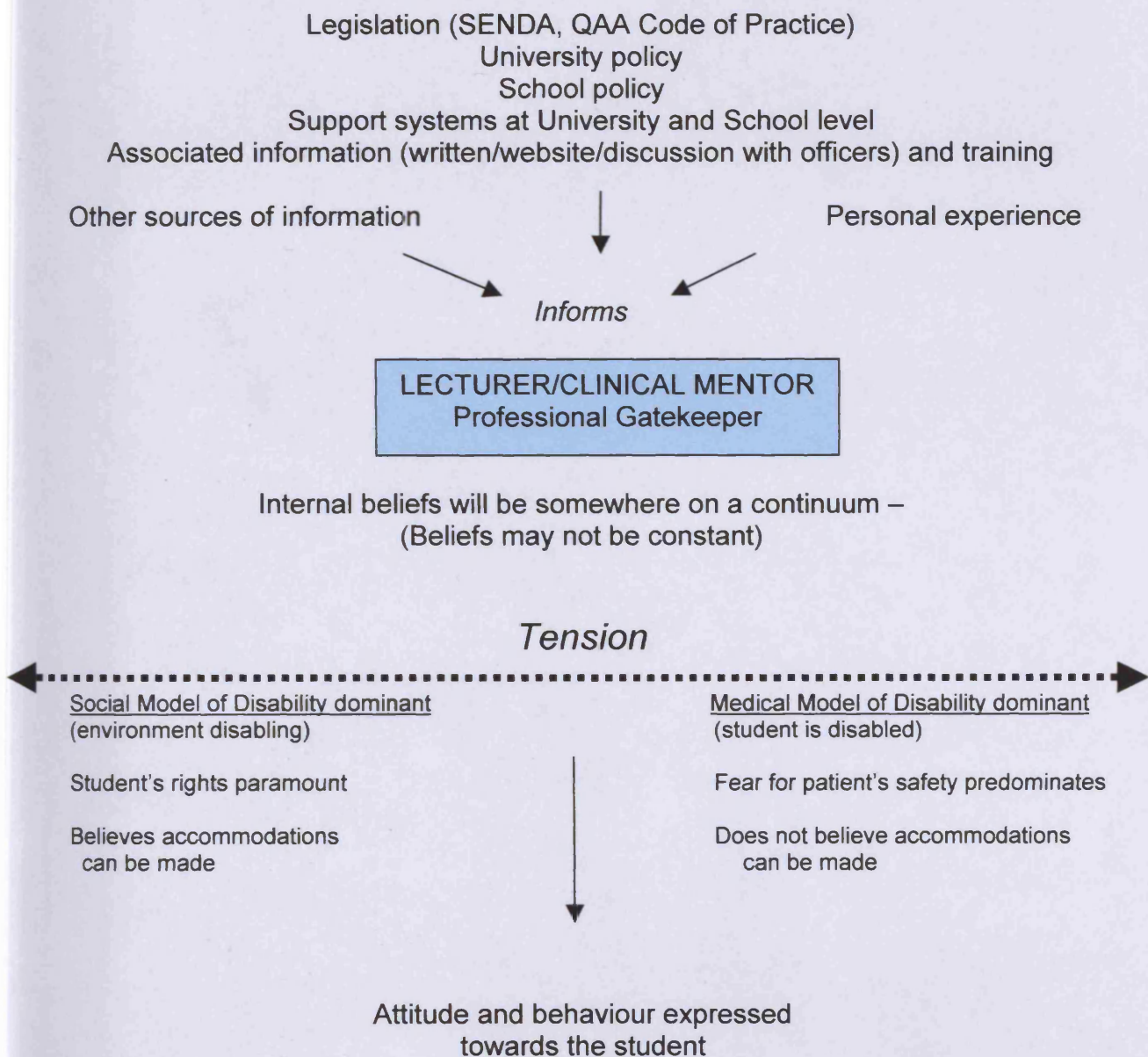
the staff member resolved this tension related to their personal interpretation of their role as professional gatekeeper.

The admissions lecturers and clinical representatives who made selection decisions appeared to feel this tension most acutely. When selecting a student, the admission lecturers and clinical representatives had to consider the requirements to be registered as a nurse as set down by the Nursing and Midwifery Council. Nursing is practised in a diverse range of settings where some of the skills required by the UK regulator in order to register as a nurse may in fact not be required in the setting in which the nurse ultimately works. From the regulator's point of view they have to ensure that nurses possess a range of skills that enable them to work across the sector safely as they cannot impose restrictions where a registered nurse may practise. Requirements for registration are not the same as requirements for employment into a specific role. Here then is the dilemma faced by the admission lecturers and clinical representatives, they have to select students who could potentially work anywhere in the health sector, as this is the requirement set out by the regulator. Individuals who could function safely in a more limited range of settings may have to be rejected. It is worth noting that employers often accommodate illnesses and disabilities that occur or are diagnosed in registered nurse employees. The problem becomes an employment issue unless the ill health or disability causes the nurse to act incompetently or unprofessionally, at which point the regulator is required to consider whether the person may stay on the register.

The clinical mentors had two elements to their role, firstly they were there to support and teach the student during the clinical placement, and secondly they had to make a decision about whether the student had achieved the clinical competencies determined by the Nursing and Midwifery Council. Unlike the admissions lecturers and clinical representatives involved in the selection process, who have to make a judgement on an individual's future potential, the clinical mentors are assessing performance which they can see. Therefore, although the clinical mentors were also gatekeepers to the profession, they did not appear to exhibit the same degree of concern about the students as the admissions lecturers.

Figure 6.2 illustrates the factors that fuel the tension felt by lecturers and clinical mentors in their role as professional gatekeepers. The attitude and behaviour resulting from the resolution of this tension had a direct relationship on how the lecturer or clinical mentor interacted with the student. This in turn affected the student's decision to disclose their diagnosis and could affect their level of self-esteem, which would have implications for their overall performance. It was likely that retention of the student on the course was also related to the attitude and behaviour expressed by the lecturers and clinical mentors.

Figure 6.2 Tension faced by lecturers and clinical mentors in determining whether an individual should enter the nursing profession.



6.6 IMPLICATIONS FOR STAGE TWO

The information gathered during stage one provided a clear indication of the types of areas that were likely to pose difficulty for the students in practice. In stage two, the range and nature of the problems identified so far would be compared to the difficulties expressed by the students and observed by the clinical mentors.

I decided to further explore the issue around the student's disclosure of the diagnosis of dyslexia in stage two. Of particular interest were the factors influencing the decision to disclose, the timing of disclosure, as well as the consequences of disclosure to the student's experience in the clinical placement. I determined that the clinical mentors would be asked whether the student's disclosure of the diagnosis of dyslexia altered how they undertook their role as mentor, and whether it changed their attitude/behaviour toward the student in any way. I also determined that I needed to discuss the concept of professional gatekeeper with the clinical mentors. I considered it important to ascertain whether they felt any tension about their role as mentor when supporting a student who was dyslexic. For example, did they express any concerns about the individual entering the profession? Did they feel that accommodations could and should be made for them in practice?

Unlike the students in stage one, who would only have received the Disability Support Allowance (DSA) well into the branch programme (DSA was only introduced in 2002), all four students in stage two would have received the DSA in the foundation year and would have been offered IT equipment, software and other physical support aids. Stage two would allow me the opportunity to gauge how useful this equipment/software was to the students in clinical practice, and to determine whether they met any resistance to its use.

The data gathered in stage one highlighted the importance to the student of receiving support from someone who was knowledgeable about dyslexia. In particular the students indicated that they fared best when the mentor had a clear strategy for supporting them in the placement. None of the mentors in stage one had received training about supporting students with specific learning needs.

However, the School Specific Needs Officer and the admissions lecturer who had a key liaison role with registry, both intimated that additional information about supporting students with specific learning needs would be given to mentors in future. Therefore, in stage two, the level of the mentor's knowledge, whether they had in fact received information from the School or University about supporting students with specific learning needs, as well as their strategies for supporting students would be reviewed. If mentors had received specific guidance it might be possible to test the students' assertion that they are better served by mentors who were knowledgeable about supporting nursing students who were dyslexic.

The students and clinical mentors in stage one identified a number of practical strategies to enable the student to cope in the clinical placement. I intended to compare these strategies to those employed by the students and clinical mentors in stage two, so that a fuller picture could be developed.

The longitudinal study would enable me to observe changes in the student's perception of him/herself over time. Analysis of data from stage one indicated that the student's experiences could have an effect on self-esteem and levels of confidence. Data gathered in stage two would enable me to explore how the relationship the student had with the various clinical mentors, lecturers and their peers affected their ability to achieve the clinical competencies to become a registered nurse.

CHAPTER 7: ANALYSIS OF STAGE TWO

7.1 INTRODUCTION

Stage two involved a longitudinal study of the experiences of four pre-registration nursing students during the two year branch programme element of their course, plus data collection from a sample of seven clinical mentors who had supported them. The students and mentors interviewed in stage one were not involved in stage two. The policy and procedures governing the School of Nursing, University of Glynrith and NHS Trusts used as placements for the students in stage one were considered again during stage two.

The nursing students included two female and two male students: Grace and Molly were studying on the Adult nursing branch, Shaun was studying on the Mental Health nursing branch and Steve was studying on the Learning Disability nursing branch. The students were interviewed at the beginning of their branch programme and then after each of their substantive clinical placements during the remainder of the course, six occasions in total. Steve provided some additional written information relating to an incident in a placement. Further ad hoc contact with him occurred via telephone and email during the final year of his course, all at his instigation.

For each student, two clinical mentors were identified who had supported the student in practice, one from each year of the branch programme. Molly took a break in her studies for maternity leave half way through the first year of the branch programme and chose not to continue in this research study, and as a result she was interviewed on two occasions only. Only one clinical mentor who had worked with her was interviewed. This meant that seven clinical mentors were interviewed for stage two rather than the eight that had originally been planned.

One final joint meeting was held with Steve, Grace and Shaun approximately two months after completion of their course, to provide them with an opportunity to reflect on their experiences as participants in this study.

In the next section a pen picture of the four students is presented, followed by a description of the seven mentors interviewed during stage two. An in-depth analysis of the data collected in stage two is then presented, with reference to the source material. This analysis was informed by the findings from stage one, presented in chapter six.

7.2 THE STUDENTS

This section introduces each of the four students who took part in the longitudinal study, outlining when they were diagnosed, how they felt about the diagnosis and the types of difficulties they identified at the beginning of their branch programme. These pen pictures were taken from the first interviews held with the students, as they were about to start their two year branch programme.

7.2.1 Grace

Grace was twenty-two at the start of the branch programme and still living at home with her family. Grace came from an affluent family, with both parents working in professional businesses. Her father and her older sister had been diagnosed as dyslexic. Grace first became aware of having difficulties with reading around the age of ten, and remembered feeling frustrated and not wanting to do her homework. An early memory for her was being in class and paired off with another pupil, with each one of the pair reading aloud a passage to the other person. Even though this was one to one and with her friends, she remembered it as an uncomfortable experience.

Her school at that time was not supportive and her family moved her to a private boarding school, which offered a wide range of experiences, both academic and sporting. Grace was allocated a Special Needs Teacher for English, which was very helpful to her. It was at this point that she had the first Educational Psychologist report undertaken, which showed she was both dyslexic and dyspraxic. Her parents took a very positive approach, focussing Grace's energy into what she was good at, without putting undue pressure on her or making a fuss about her dyslexia and dyspraxia. Grace's experiences with the other children at this school were positive, the other children looked after her by stepping in and doing things for her.

Before entering nursing she had qualified as a nanny working with children with learning disabilities, exiting the course as the top student in that year. She had also had a period of working as a care assistant with older people.

The following are a list of abilities and difficulties described by Grace as related to her specific learning needs:

- Being good visually. Often using visual cues to help her. The example she gave was of noting the shape of coins as well as the face value.
- Her short-term memory was poor, especially if given lots of instructions or if the instructions involved a number of unrelated tasks. She felt that her poor short-term memory affected her ability to read things like novels, as it was difficult to remember the story line.
- Verbally she was good, although some words were more difficult, especially terms or names she had not encountered before. It always took longer for her to learn terms that were unfamiliar.
- Grace's biggest problem was spelling. She said that she normally spelt things as the word sounded to her, which meant she had problems when there were silent letters or unusual spelling.
- Grace described her handwriting as "child-like"; she used a combination of printed letters and joined up writing within words.
- She was aware that she needed more time than other people in completing certain tasks, such as writing and doing mathematical calculations.

Grace outlined a number of things that helped her learn:

- Seeing it
- Being told it
- Learnt more by doing
- Liked to work it out for herself.

When asked about how she felt telling others about her dyslexia, Grace said

"I feel the need to disclose, not so that people feel sorry for me, but so that they have realistic expectations".

Grace commented that she had trouble with people who classed all dyslexics as the same, where in fact there was a spectrum. She said she did not like being classed the same as someone who is only mildly dyslexic.

Grace was very open about having specific learning needs and had a positive self-image. This was due, in part, to the supportive environment she had at home and previous positive experiences in school and college.

7.2.2 Molly

Molly was nineteen at the start of the branch programme and lived with her husband and his family. Her husband's brother was the only family member who was known to be dyslexic, however, Molly's brother was poor at spelling which made her think that he might be dyslexic also.

Molly had always struggled with English in school with English being the only GCSE that she failed. She thought at that time that something was wrong, but put it down to the teaching she received, she said her GCSE English teacher was away a lot.

Molly was diagnosed as dyslexic approximately six months into the Common Foundation Programme part of the pre-registration nursing course. When she had her first written assignment returned to her, the feedback noted numerous problems with spelling and grammar. She decided that it was time to do something about it and so visited the University Student Drop-in Centre. The officer who saw her referred her to Student Services, where she had an interview with the Dyslexia Tutor. After some preliminary tests she was referred to an Educational Psychologist who confirmed that she was dyslexic.

The following are examples of things she found difficult.

- Molly was slow at writing, the faster she was required to write the worse her handwriting became. She described her handwriting as both "*scruffy*" and "*crap*".

- Reading and comprehension were difficult. She reported that she might have to read something several times before she understood it. Molly read slowly, particularly when having to read long or unfamiliar words.
- Molly's spelling was generally poor, in particular she had difficulty with every day words such as "they're, there, their".
- She reported that she would sometimes forget to do things. One area she worried about was taking handover at shift change over, she feared that in taking the time to write down the notes she may forget something she had been told.

Molly had no problems with mathematics and was assessed as being strong in this area. Her ability to visually identify items was also assessed to be very strong.

Molly observed that she liked to learn by being shown or told what to do and then practising the activity herself.

Molly was "*distraught*" when initially diagnosed as dyslexic and harboured some anger towards the school for not diagnosing her as a child and offering her support. She felt that if she had received help in school, maybe she "*wouldn't be as bad now*". The diagnosis of dyslexia had affected her confidence and she worried about what other people now thought about her. Her biggest worry was that other nurses would think that because she had difficulty with her spelling that she should not become a nurse, although at the beginning of branch no one had actually said this to her. Since her diagnosis she also found it difficult to relate to her personal tutor, who was a middle-aged man. She said, "*Until this happened it didn't bother me having a man tutor. Now I think I can't approach him*". Generally Molly lacked confidence at the beginning of the branch programme.

7.2.3 Shaun

Shaun was forty at the start of the branch programme and lived with his girlfriend in the local community. Since leaving school he had experienced a number of jobs, including gardener, doorman, fitness trainer and for the last fourteen years was a support worker in the mental health field. Shaun was the only member of his

family formally diagnosed as dyslexic although his older brother and father had difficulty with spelling, which may indicate that they were dyslexic.

Shaun had struggled in school particularly with his reading. He felt he could explain things well or have in his head what he wanted to say, "*Could think clearly*" but found it difficult to put it down on paper. Shaun also found learning the times tables difficult. As a result he tried various tactics to avoid school particularly if there was a test due or if he was required to read/recite something out loud. He described himself as a shy boy who was sometimes "*cheeky*" or "*lippy*" when asked to do the things he found difficult. He covered up his problems by being "*difficult*". Shaun's main strength in school was art, which he continued to do into his adult life. Shaun was not diagnosed as dyslexic during his schooling and no one suggested to him or his family that he might have a problem.

Shaun was diagnosed as dyslexic about eight months through the Common Foundation Programme. During a clinical placement he spoke to a fellow student who was dyslexic about his worries for the exams that were set towards the end of the first year. The student asked Shaun to describe the type of things he was worried about. Shaun gave him examples such as being slow in writing, transposing letters and not knowing how to spell small words. This student advised him to take a test for dyslexia as Shaun was describing similar problems to those he experienced. Although a little sceptical, Shaun went to the Student Support Unit within the University and met with the Dyslexia Tutor. She carried out preliminary tests and referred him on for an assessment with an educational psychologist. Shaun recalled that one of the preliminary tests showed up his confusion with right and left. The Educational Psychologist told him that he was definitely dyslexic and was in the bottom 3% of the population in terms of his short-term memory. He had been very surprised and angry about the diagnosis.

The following is a summary of the areas Shaun had difficulty with:

- The biggest problem was his short-term memory. He sometimes forgot to do things he had been asked to do and often lost things like his car keys. When typing something he would sometimes forget where on the keyboard

a particular letter was and would spend time searching for it. He also had problems in putting names to faces.

- Shaun reported that things happening in his environment easily distracted him and so when he needed to concentrate he preferred a quiet environment.
- When reading text it sometimes looked as if part of the word rose up fractionally off the page towards him. He also said that when reading a word he didn't always see all of the letters that made up the word and therefore had difficulty determining its meaning of the word.
- Shaun had difficulty with spelling and wrote letters the wrong way around e.g. 'siad' instead of 'said', or 'thier' instead of 'their'. He found it difficult to spell small words like 'there'. He also reported that he was slow in writing, which meant he often failed to put down on paper all of the ideas he had in his head.
- Shaun felt able to do simple arithmetic provided he had plenty of time to work it out. However, things like percentages and fractions were still very difficult.

Shaun had strengths in picking up on visual cues, which was particularly useful in his work as a support worker in the mental health field, was good at problem solving and was verbally articulate.

Shaun felt quite angry with his school for not identifying that he had a specific learning need. He said he felt the school had "*let him down*". Now that he had been diagnosed a part of him wanted to go back to the teachers who had given him a hard time in school to tell them of his diagnosis and to show them he "*wasn't thick*". At the beginning of the branch programme Shaun appeared to lack confidence and was anxious about his academic abilities, although on the surface he appeared to be a very open and confident individual. He had no difficulty in telling other people about being dyslexic. He was very determined to succeed on the course in order to prove himself able, as he felt that he had been "*held back*" all his life.

7.2.4 Steve

Steve was forty-eight at the start of the branch programme and lived locally with his wife. Since leaving school he had undertaken a number of jobs including biological chemist, senior electronic technician and worked in the printing industry. He had decided to train as a learning disability nurse partly because his father and grandfather had been a nurse and medical orderly respectively, and his wife worked with people with learning disabilities. He said he wanted to “*give something back to the community*”.

Steve believed that his father, brother, sister and nephew were dyslexic, as they each had problems with reading and spelling, although none had been formally diagnosed. Steve had a disrupted education, attending thirteen or fourteen schools including overseas, as his father had been in the Forces. Although he always knew he had problems with English and to a lesser extent mathematics, he put this down to moving schools constantly and having an eight month break due to health problems. Although his father had similar problems to Steve, he was not particularly supportive when Steve was growing up.

Steve decided soon after he had started on the pre-registration nursing course that he would seek help with his writing. As soon as he had an assignment to write he went into the Drop-in Centre and sought advice on writing the assignment. The Dyslexia Tutor he saw did some preliminary tests and referred Steve on to the Educational Psychologist for testing. This test confirmed he was dyslexic. The report confirmed that problem-solving abilities were extremely high – classified as very superior category. Steve had a spelling age of 16 and a reading comprehension age of 12.

Steve's reaction to the diagnosis was “*I felt like someone had hit me round the back of the head with a bat or something*”. He felt quite angry at the diagnosis. He also said that he felt frustrated about the things that had happened to him when he was much younger. He said he “*felt let down*” and asked, “*Why me?*” He had decided to address these feelings by being open with other people about being dyslexic.

The types of things Steve had difficulty with included:

- He was “*weak*” at spelling particularly small words like ‘there’ and ‘their’. Although aware of the problem, he made the same mistakes repeatedly. He would sometimes write the letters within a word the wrong way around.
- Steve described himself as having a “*busy brain*”, which meant that he jumped from idea to idea when speaking with others. Verbal communication therefore appeared disjointed at times.
- Steve had a poor short-term memory and had particular problems with remembering people’s names.
- He preferred to read black text from coloured paper rather than white paper, as it was clearer
- Steve had difficulty reading and pronouncing unfamiliar terms, and needed unfamiliar terms read to him by another person initially. He had problems with comprehension, often it took two or three reads for him to understand fully. Steve had come to realise that because he was struggling with reading the individual words he was losing the meaning of the whole text. He felt he expended a lot of effort in trying to say the word in his head and once that need has been taken away he was able to concentrate on the meaning of the sentence.

Steve had developed abilities in mathematics through his working life, finding geometry easier than other elements of the subject, in school he had great difficulty in learning his times table. He was good at identifying visual patterns and used visual cues in learning and problem solving. Steve was able to quickly pick up an activity or skill with minimum demonstration. Steve preferred to use two senses when trying to understand something, e.g. would read aloud from the text so that he could hear, as well as see, the text.

Steve made the decision to be open about his specific learning needs but as he entered the branch programme was unsure of himself and his ability to cope on the course.

7.2.5 Summary

The two male and two female students who took part in stage two of the study ranged between 19 and 48 years of age. Three out of the four were diagnosed as dyslexic while studying on the pre-registration programme. As can be seen from the individual descriptions above, the diagnosis as an adult had a significant effect on self-confidence and triggered feelings of anger and frustration because their specific needs had not been identified while they were children. There was also evidence that the diagnosis came as something of a relief as they now had evidence that they were not stupid as they had previously feared and been accused of by their teachers and others. Grace, who was diagnosed as a child and supported through her schooling, did not express these types of feelings. These feelings about the diagnosis mirror those expressed by the seven students interviewed in stage one, and support the findings by Riddick (2000) and Dale and Taylor (2001) in respect of reduced self-esteem and confidence in adults diagnosed as dyslexic.

The problems experienced by the students in stage two had a number of similarities. All had:

- Difficulty with spelling, particularly everyday words such as 'there', 'they're' and 'their'
- Transposing of letters within words
- Slow at reading and writing
- Difficulty in reading and pronouncing unfamiliar, long or unusual words
- Had to read text a number of times to gain comprehension
- Poor short term memory

Not all of the students had problems with mathematics, Molly was strong in this area and Steve had developed skills through his work. All of the students had untidy handwriting.

On the positive side most described themselves as being good with people and used visual cues in learning and problem solving. Three students described themselves as good verbal communicators. Steve said he had got on well with

people but jumped from idea to idea when speaking with others. All felt they picked up and developed practical skills easily and quickly.

All of the students were aware of their problem areas and had already begun to think about coping strategies.

7.3 THE MENTORS

The students had a variety of clinical placements during the two year branch programme related to the specific branch they were following, i.e. adult, mental health or learning disability. All students had placements in acute, community settings and long-term or rehabilitation facilities. In each of the six substantive clinical placements in the branch programme, the students each had at least one mentor per placement. Some placement areas, typically in the community, used a team approach to mentoring so the student had more than one mentor while other placements had discrete areas within it, with each area providing a mentor, e.g. in theatre there are 3 areas where the student will work: anaesthetics, operating room and recovery unit. This meant that each student had at least six mentors and most had considerably more than this minimum.

Table 7.1 on the following page sets out the type of placement undertaken for each student during their branch programme. It also shows the placements where I sampled the mentors for this stage of the study.

The criteria used to select the mentors were:

- Representatives from acute, long term and community care settings
- Worked with the student for a substantial placement, i.e. at least 6 weeks
- Student had given permission for me to speak to the mentor.

Table 7.1 Branch Placements for students in stage 2. The # sign indicates where a mentor was sampled.

	Placement 1 Yr 1	Placement 2 Yr 1	Placement 3 Yr 1	Placement 1 Yr 2	Placement 2 Yr 2	Placement 2 Yr 3
Grace	Acute Surgical Ward	Community District Nursing Team #	Acute Medical Ward	Operating department and A&E/ paramedics	Acute Medical/ Surgical Ward #	Postoperative Recovery Unit
Molly	Orthopaedic Ward – night duty #	Commences maternity leave	-	-	-	-
Shaun	Community Mental Health Team #	Acute Admissions Ward	Elderly Mentally Ill Long Stay Unit	Psychiatric Crisis Intervention Team #	Psychiatric Intensive Care Unit	Community Clinic
Steve	Learning Disability – residential home #	Mixed Learning Disability and Mental Health Unit	Secure Unit	Challenging Behaviour Unit (hospital base)	Community Learning Disability Team #	Assessment and Treatment Unit (hospital base)

All interviews with the mentors occurred in their place of work at a time of their choosing. All the mentors were female, ranging in experience (qualified approximately a year to over 20 years experience) and age (early twenties to early fifties). One of Grace's mentors, who worked in the community district nursing team, was dyslexic herself and had worked with Grace during her community placement in the Common Foundation Programme as well as the branch community placement. All mentors were provided with an information sheet about the study and their consent was sought prior to the interview.

None of the mentors refused to be interviewed, however, two of the mentors were initially uneasy as to why they had been selected. This unease passed once the purpose of the study and process for data collection was explained and most appeared to be pleased to be asked their views. One of Shaun's mentors initially thought that because she had a disagreement with him during his placement, I was there on behalf of the School to 'check up' on her. Once I explained that this was not the case, she said on reflection that she was flattered that he had chosen her and that it showed they had "*mutual respect for one another*", even though they had fallen out on one occasion.

Both of Shaun's mentors interviewed for this study knew Shaun before he was placed with them as a student nurse, through his role as a mental health support worker. In the case of the mentor from the Community Psychiatric Team she knew Shaun both professionally and personally and described herself as his friend. Shaun had completed an observation placement with this mentor in the Common Foundation Programme as well as the placement in the branch. This meant that the relationship Shaun had with some mentors, including both mentors in this study, was different to the other students' relationships, as it was built on established relationships or knowledge about Shaun.

7.4 DATA MANAGEMENT

The notes from the interviews with the students and mentors plus observations of behaviour by the students carrying out specific tasks in practice, e.g. using a palm pilot to write client assessment notes, reading prescription sheets and administering drugs, were transcribed into Microsoft WORD documents (Rich Text

Format). All interviewees were invited to verify the accuracy of the information recorded in the transcripts and amendments were made where necessary. Two of the mentors declined the invitation to confirm the accuracy. All interviewees received a copy of the final version of the respective transcript.

The NVIVO software package was used to perform the thematic analysis in stage two. NVIVO allows the researcher to set up categories or 'nodes' in advance of reviewing the data, which is helpful if it is anticipated that specific themes are likely to emerge. Further identification of nodes and refinement of the node tree structure can then be done as the data are reviewed. Therefore, the themes identified in stage one of the study were set up as an initial 'node tree', as a template for the thematic analysis of the data in stage two.

The predetermined nodes were applied to the data gathered in stage two, and identification of additional nodes was made where new themes emerged from the data. A description of how each node referred to the text was set out to ensure that the nodes were consistently applied (see table 7.2). My supervisor independently coded all of the data gathered from one student (Shaun) and from the interviews with the seven mentors. Any area of discrepancy between my coding and that of my supervisor was discussed and the description for application of the node adjusted. From the outset there was a high degree of consistency in the application of the predetermined nodes and agreement of the new nodes emerging from the data.

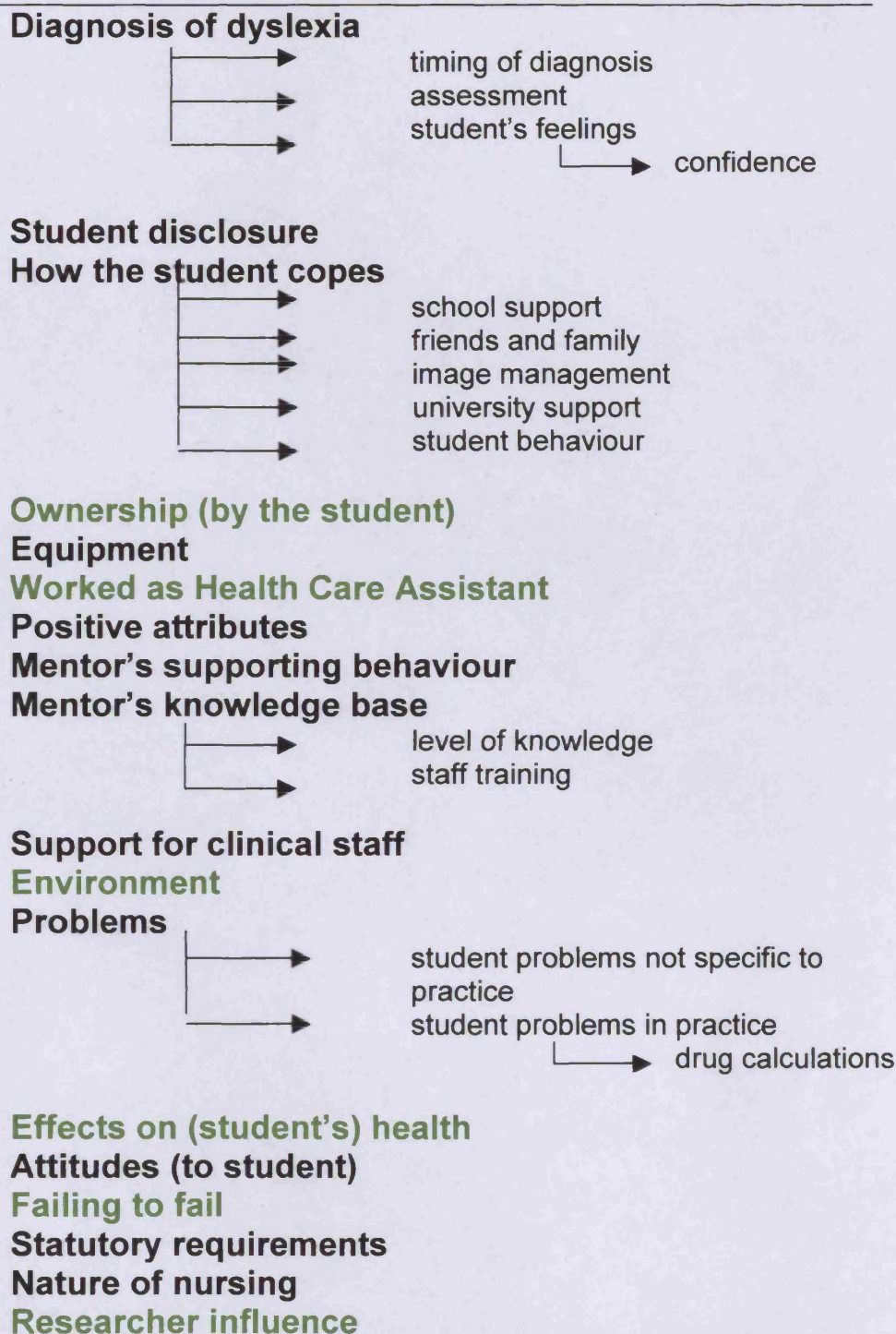
At the end of the coding process, I removed from the node tree any of the predetermined nodes (identified in stage one), which did not have any data allocated to them in stage two. These included:

- Selection process
- Screening
- Theory versus practice support (this was the fear teaching staff had that students were being enabled to pass the course and would not be able to function once support was removed on qualification)
- Repeated stories/nursing myths

- Demand/Increasing student numbers

The first two of the above nodes were particularly relevant to the admissions lecturers interviewed in stage one. The third, fourth and fifth nodes related to a small number of comments made by the teaching and support staff in stage one; the mentors and students did not mention these areas in stage two. The final node tree for stage two is described in figure 7.1. on the following page.

Figure 7.1 Final node tree for stage two. Main nodes in bold emerged in stage one, main nodes in green emerged from the data in stage two.



The node tree detailed above shows how certain themes were identified as nodes and further refined into sub nodes. The use of the NVIVO software enabled this fine grain and detailed categorisation of emerging themes to be identified for this

large data set. Table 7.2 lists the descriptors for each node and sub node used in the analysis of the stage two data.

Table 7.2: Nodes and sub nodes descriptors used in stage two

<p>1. Diagnosis of dyslexia (node) - timing of diagnosis (sub node) Description of events leading up to diagnosis. To include comments about not being diagnosed until on the course, or about not being diagnosed in school.</p>
<p>2. Diagnosis of dyslexia (node) - assessment (sub node) Description of the process of being diagnosed as dyslexic.</p>
<p>3. Diagnosis of dyslexia (node) - student's feelings (sub node) Any expressed feelings by the student to the diagnosis of dyslexia or being dyslexic. Feelings about the course and support.</p>
<p>4. Diagnosis of dyslexia (node) - student's feelings (sub node) - confidence (sub node) Comments made by the student about how being dyslexic or being diagnosed as dyslexic has affected their levels of confidence and self-esteem. The impact of diagnosis on the student's ability to perform subsequently.</p>
<p>5. Student disclosure (node) Student's disclosure or non-disclosure of diagnosis. Any related behaviour or consequences of the decision.</p>
<p>6. How the student copes (node) - school support (sub node) The role the school has in supporting students with disabilities and their mentors. Any mention of whether the student or mentor had accessed help from a member of teaching staff and the outcome of this. Includes where the school has not supported the student to their satisfaction.</p>
<p>7. How the student copes (node) - friends and family (sub node) The role played by friends and family in supporting the student.</p>
<p>8. How the student copes (node) - image management (sub node) Evidence of active manipulation of image by the student so that they appear in a good light, or minimises their disability.</p>
<p>9. How the student copes (node) - university support (sub node) The role of the University Student Support Officers in supporting disabled students. Any mention of whether the student accessed their help and the outcome. Any mention of mentors knowing about this service or accessing it for</p>

information/support - and the outcome.
<p>10. How the student copes (node) - student behaviour (sub node)</p> <p>Behaviour by the student to either cope with or avoid an activity they find difficult, which is due to them being dyslexic.</p>
<p>11. Ownership (node)</p> <p>Comments by qualified staff who were themselves dyslexic about the importance of working out for themselves how to cope. "<i>Need to work hard at this</i>". Realisation of student that they must take ownership and "<i>get on with it</i>". Recognition by mentor that the student needs to determine what they need.</p>
<p>12. Equipment (node)</p> <p>The acquisition and use of equipment to support the student on the course. Includes other people's reaction to the student using this equipment especially in practice.</p>
<p>13. Worked as Health Care Assistant (node)</p> <p>Implications for the student's behaviour/achievement due to previously working as a support worker. [Shaun and Grace had previously worked as support workers.]</p>
<p>14. Positive attributes (node)</p> <p>Any positive attributes described for and/or by students who are dyslexic. What the individuals can bring to nursing, their particular strengths and abilities, e.g. ability to empathise with patients.</p>
<p>15. Mentor's supporting behaviour (node)</p> <p>Strategies used or developed by the mentor to support the student. Any comments made by the mentor about how they changed their normal practice of supporting students to accommodate the student's needs. Any failings in this support. Includes when other nursing team members are supportive.</p>
<p>16. Mentor's knowledge base (node) - level of knowledge (sub node)</p> <p>Any evidence that demonstrates that the mentor understands what is meant by the term dyslexia or special educational needs, and what their responsibilities in relation to this are.</p>
<p>17. Mentor's knowledge base (node) - staff training (sub node)</p> <p>Any training or preparation around dyslexia or special educational needs and how they should deal/support/teach such students. Include comments about not receiving training.</p>

<p>18. Support for clinical staff (node)</p> <p>Any support from the Trust/organisation for clinical staff/mentors - whether disabled themselves or supporting mentors in their role.</p>
<p>19. Environment (node)</p> <p>Any comments by the student about how the environment challenges them, making it difficult for them to cope or makes it easier for them to cope. Examples: pace of work, amount of paperwork, support by staff.</p>
<p>20. Problems (node) - student problems not specific to practice (sub node)</p> <p>Problems experienced by the student as a consequence of being dyslexic in school or other environments outside of clinical practice.</p>
<p>21. Problems (node) - student problems in practice (sub node)</p> <p>Problems experienced by the student because of being dyslexic within clinical practice - related to the activities expected of a registered nurse. Includes behaviour of others that makes life difficult.</p>
<p>22. Problems (node) - student problems in practice (sub node) - drug calculations (sub node)</p> <p>Any comments in relation to doing drug calculations.</p>
<p>23. Effects on health (node)</p> <p>Any comments about how the experience of being on the programme has adversely affected the student's health.</p>
<p>24. Attitudes (node)</p> <p>Attitudes or behaviours - negative or positive - expressed or apparent in relation to the dyslexic student.</p>
<p>25. Failing to fail (node)</p> <p>Any reported problems about a mentor's willingness or reluctance to fail a student who is dyslexic in practice, e.g. mentor signing off clinical competence when the student is not competent.</p>
<p>26. Statutory requirements (node)</p> <p>The requirements of the Nursing and Midwifery Council, Quality Assurance Agency and Disability Discrimination Act. Includes school/university policies developed because of legislation. Issues around statutory responsibilities to ensure fitness for practice and fitness for purpose.</p>

27. Nature of nursing (node)

Views on whether a disabled person can become or practise as a registered nurse. The argument around whether a person has to be physically and mentally fit to be a nurse, or whether the diversity of nursing means that a person with a disability or who is affected by disease may still be able to nurse in some capacity. May relate to historical perspective.

28. Researcher's influence (node)

The researcher's influence on the students or mentors. This can be on behaviour or opinions/way of thinking. Include suggestions for changing behaviour made by researcher through discussion with the student or mentor.

Below is a description of the steps followed in analysing and writing up stage two of the study:

- Writing up of the analysis of the themes (nodes) under each broad category followed the same pattern. Firstly the data under each node were printed out and reviewed. Sub themes (sub nodes) or important issues were identified related to that theme, e.g. when writing about the students' decisions to disclose their diagnosis, the data grouped under the disclosure node was printed and reviewed. From consideration of the data, a number of sub themes were identified, such as 'timing of disclosure', 'who the student disclosed to' and 'consequences of disclosure'. I could have used NVIVO to do this but I wanted to get closer to the data at this stage and found doing it by hand more helpful to me.
- Next I printed out and reviewed nodes that might have some bearing on the node being analysed. In the case of student disclosure, I reviewed the data categorised under the nodes: environment, impression management, attitudes expressed by others, student's feelings about diagnosis and the student's level of confidence.
- I considered whether there were any differences between the students diagnosed on the course compared with Grace, who was diagnosed as a child.

- Next, I looked for changes in the students' responses over the duration of the two year branch programme. In some areas, as with the node related to student disclosure, behaviour changed over time and through experience.
- I then reviewed the analysis of data from stage one specifically looking for similarities or differences between the data sets, e.g. did the students in stage one report similar or different approaches to disclosing the diagnosis of dyslexia compared to the students in stage two.

This iterative process was repeated for each area analysed, with the chapter sections being revised as new issues or patterns came to light.

7.5 DATA ANALYSIS

To give structure to the analysis of the data, the emerging themes are considered under four main category headings and presented in the following sections:

- 1) Students' Experiences
- 2) Mentors' Experiences
- 3) Environment
- 4) Researcher Influence. This last category being important for this longitudinal section of the study, as a relationship developed with the students through repeated contact over two years.

The following sections present the analysis of the data under the four category headings.

7.5.1 Students' experiences

I identified seven themes to the main category entitled the '**students' experiences**', namely: 'disclosure and impression management', 'previous experiences', 'effects of expressed attitudes by others', 'problems in practice – barriers to coping', 'what and who helps', 'student coping strategies' and 'effects on students' health'. All of these areas are explored in the sections below.

7.5.1.1 Disclosure and impression management

Dyslexia is an 'unseen' disability, therefore in order for a student who is dyslexic to gain specific or additional support in practice, disclosing diagnosis and identifying specific learning needs is an important first step. In stage one it was clear that the

students made conscious decisions about disclosing their diagnosis to others, influenced by a number of factors. These factors related to their prior experiences of disclosure and the context in which they were disclosing. The main factor was in relation to the student's fear about potential negative consequences of disclosure. Fear that disclosure would result in a 'poor' response from others, with a potential for discrimination in the way they were subsequently treated was paramount. Social psychologists have recognised that people are guided by a 'self-enhancement motive', in other words they are motivated to have a positive self-image and associated self-esteem (Hogg and Vaughan 2002) and would avoid circumstance that would challenge this positive self-identity.

The data from stage two supported the three key factors determining disclosure which were identified in stage one, i.e. past experience, context and fear of consequences. The following two examples, identified in stage two, showed instances where individuals chose not to disclose or seek diagnosis even if the consequences were loss of support or that it made their role more difficult or blocked access to funding for equipment. These were clearly conscious decisions by the individuals to protect their self-image. The student in the second example was part of the hidden population of students with specific learning difficulties; it could be argued that her resistance to being tested is a way of avoiding being labelled.

Example 1:

In multidisciplinary meetings, one of Grace's mentors, who worked as a District Nursing Sister and was herself dyslexic, reported that she felt that it would be inappropriate for her to say she was dyslexic and to give her a moment to think about what she was saying. She felt that others would judge her if she did, and have a negative impression of her, particularly the General Practitioners in the meeting. (Excerpt from interview notes with Grace's mentor year 1 branch programme.)

Example 2:

Shaun described a student in his group who he is sure is dyslexic. The person was afraid to come forward and be assessed and take the opportunity to receive additional support...She appeared to be very sensitive about the possibility of being dyslexic and told Shaun categorically that she was not, even though Shaun noticed that she has more problems than he did with spelling. (Excerpt from interview notes with Shaun.)

Social Identity Theory contends that individuals define themselves in terms of their group memberships and that the status, prestige or regard in which a group is held has a direct affect on the individual's self-esteem. It is for this reason that people strive to become members of highly regarded groups or attempt to protect or improve the esteem of their existing group (Hogg and Vaughan 2002). If a group is seen as unfavourable, members might seek to leave it, although this might not be possible. In this study, being considered as disabled or having a specific learning need might be considered by some as an unfavourable group with which to be identified with. As dyslexia is a hidden disability some individuals try to 'pass' as an individual who is not dyslexic. In the second example quoted above the student appeared to have specific learning difficulties but chose not to disclose or seek affirmation through diagnosis and therefore was attempting to 'pass' as someone who did not have a problem. This 'passing' behaviour was evident in some of the students interviewed in stage one.

The context of disclosure and issue of how the student tried to manage the consequence of disclosure was identified in Galambos' (1998) study of self-disclosure decisions by adult learners with learning disabilities in post secondary education. In this study she describes the disclosure process as "*complex, consisting of multiple levels of decision-making, all decisions are governed by context and an apparent concern about impression management*" (1998 p. vi). She does not make any recommendations regarding whether students should or shouldn't disclose, identifying that disclosure is a personal choice and that students should be assisted in understanding the complexities related to disclosure, thus optimising their control over the disclosure process.

In comparison, in Wray et al's (2005) *Professional Education and Disability Support* (PEdDS) project, which explored the experience of social work students in practice and sets out best practice guidelines for teachers, while accepting that disclosure is a matter of student choice, they strongly recommend that students should disclose early to the course providers and to the placements. Their reasoning is, if the course or placement is not aware of the student's particular needs it will not be able to make appropriate changes to support them. They conclude that not telling may "*work against a student if it is later thought they were*

deliberately misleading" (2005, p108). This approach appears to primarily serve the interests of the establishment, i.e. for them to 'deal with' a disabled individual, and the quote carries an implicit threat for students who choose not to disclose. The fear of telling others could affect performance, which will be heightened if the decision not to disclose also carries a negative value judgement, for example Molly feared what others thought about her and this fear was affecting her performance.

"I do sometimes lack a little bit of self-confidence now that I know that it's there [referring to the diagnosis of dyslexia]. You know, when I'm out on the ward I'm worried that people are going to think I can't spell. They do comment... I think people are going to think, 'Well she wants to be a nurse and she can't spell!'..." (Molly)

While accepting that institutions would wish students to disclose any disability so that adaptations can be made, the decision to disclose must lie without prejudice with the student.

The students completing their studies in stage two all agreed that individuals should tell others about their specific learning needs, however, in Steve's case he advised caution and the need to recognise that there might be consequences to disclosure. The longitudinal study in stage two enabled me to observe how Steve's disclosure decisions were affected through experiences on the programme, and helped explain why he was more cautious than the others about open disclosure. Steve, who was diagnosed as dyslexic during the Common Foundation part of the pre-registration programme, initially decided that telling clinical staff that he was dyslexic was "*less stressful*" for him if they knew. In fact his mentor in year one commented that Steve had been very open about his dyslexia and "*made it a big issue*". He took every opportunity to talk about it. However, through his experiences of telling a range of different people about his diagnosis during the branch placement this view of open disclosure changed. During the first year of the branch he reported two positive outcomes of telling others, the people he told in two placements had experiences (personal or through family and friends) of coping with dyslexia and consequently were supportive to Steve. However, in the second year of the branch he had a poor experience on a placement where he felt that the clinical staff were using his dyslexia and the problems he had in practice

against him and were deliberately making things difficult for him. Because of this experience he said that in future *“I plan to be far more cautious about who and when I tell people about being dyslexic”* (Steve).

This one negative experience changed Steve’s view on disclosure decisions. In the final interview he was asked what advice he would give to another student with dyslexia about disclosing, his response was, *“to be aware of the consequences of disclosing you are dyslexic. Such as putting a label on yourself which others will judge you by.”* He said everyone should disclose but should think about timing – *“play it cagey”*, and to realise the possible consequences.

In stage two it became more evident that what information was disclosed and the manner in which it was disclosed, including timing of disclosure was important to the students. There was evidence of students using strategies to get others to view them in a positive light, in other words there was evidence of ‘impression management’ as originally described by Goffman (1959). Goffman states that it is in the individual’s interests

“to control the conduct of others, especially their responsive treatment of [us]... expressing [ourselves] in such a way as to give them the kind of impression that will lead them to act voluntarily in accordance with [our] own plans” (1959, p3-4).

Jones and Pittman (1982) identify 5 strategies individuals use in self-presentation:

- Self-promotion – getting others to see you as competent
- Ingratiation – getting others to like you
- Intimidation – getting others to fear you
- Exemplification – getting others to see you as a respectable person
- Supplication – getting others to take pity on you.

Grace, who was a young and attractive woman, used a combination of self-promotion, ingratiation and supplication in her clinical placements. In the interviews with her she appeared to be well aware that she was adopting these behaviours as a means of coping. One tactic for coping in the clinical area Grace identified was to *“play the underdog”* so that *“people will look after me”*. Grace said that by appearing to be willing to get involved but admitting she found things hard,

the qualified staff usually took time to show her how to do things. She thought this was a little manipulative but a good strategy for getting by. She tried not to get involved in ward politics and quickly apologised if she did things wrong. In this way she felt that she managed to get along well with the staff.

Grace felt that her disability was too great to hide and that she had no choice but to disclose to others that she was dyslexic. The tactic of supplication was probably one she had used since childhood as evidenced in the first interview where she described getting her school friends to do things for her. The tactics described in the paragraph above appeared to have served Grace well in clinical practice, for example on the busy orthopaedic ward the mentor described the difficulties Grace had in terms of writing reports and other documentation but also commented that Grace *“worked like a train on the ward”*. She considered Grace to be *“an excellent nurse, conscientious and trustworthy”*. The mentor said she didn't worry that she would do *“anyone any harm, as she was not overconfident, like some students”* (Grace's mentor year 2 branch programme).

Both of Grace's mentors interviewed for this study had offered for her to come to their homes off duty for them to give her extra help with writing up her competency statements and other written assignments. This was something they said they did not do for every student.

Conversely, Steve, who was a large middle-aged man, presented himself as a solid citizen (exemplification strategy), once describing how he acted as a *“father figure”* to the younger students in his group. In clinical practice he also tried self-promotion as a strategy but was less successful than Grace. Steve's mentor stated that Steve spent a lot of his time explaining to her what he was good at, such as communicating with people, rather than dwelling on the areas he found difficult. She felt that *“he was trying hard to project a positive image of himself”* (Steve's mentor year 2 branch programme).

The above example fits in well with Steele's (1988) self-affirmation theory. Steele postulates that people are driven to publicly affirm some positive aspect of themselves if they have had their self-esteem damaged through failure or criticism.

Unfortunately, Steve experienced a range of problems with the work on this placement in relation to organising, prioritising, reading and writing case notes and generally managing his caseload. It was interesting comparing his account of this placement with that of his mentor, Steve's account identified far fewer problems than that of his mentor. As a consequence of Steve endeavouring to project this competent image, his mentor only discovered problems when things went wrong towards the end of his placement. She said, "*I felt that he wanted to keep it hidden, to give the impression that he could do it.*" There was no offer of additional off-duty help for Steve as there had been for Grace.

Shaun also controlled what information he disclosed to the clinical staff. He was open about being dyslexic but when describing the problems he experienced he said he had "*slight problems with writing.*" Shaun was already very experienced in working in the mental health field, as he had been a support worker for many years, and was quite well known by his mentors. His overriding desire was to continue to present himself as a competent individual rather than one with problems.

All four students chose to disclose the fact they had specific learning needs in each of the placements they went to. The motivation for disclosure tended to derive from a need for the mentors to understand the students had difficulties rather than unfairly judging the students to be "*inept*" or "*stupid*" and a desire to receive additional help or support. Molly made a point of identifying her particular need for additional help with report writing in her written objectives for each placement she went to, but did not describe herself as dyslexic. She only mentioned this verbally to the mentor once she had ascertained that she was likely to have a positive or supportive response from the mentor. Grace experienced a "*need to disclose*", not so that people would feel sorry for her, rather that they would have realistic expectations of her.

None of the seven mentors interviewed for stage two expressed views about whether individuals with 'hidden' disabilities should disclose while on placements. However, there was some evidence to suggest that the mentors felt that the onus was on the student to tell them what they needed. For example, Steve's mentor

(year 1 branch programme) said *"I left it to Steve to say what he needed, which he did"*.

The concept of 'owning the problem', in other words that it was up to the individual to address their problems and develop coping strategies, was also evident. One of Grace's mentors knew of a nursing sister who was dyslexic and approached her to see whether she would give Grace some advice on developing coping strategies but was surprised when she refused to speak to Grace. When asked why, the sister had said there was nothing she could tell her. The sister said that she had had to work harder than everyone else to get qualified and that was what Grace would have to do.

All four students in stage two appeared to be aware of their problems and identified that it was their responsibility to develop coping strategies. Molly reflected that, *"I know I just want to be a nurse... so I've just got to get on with it"*.

This section has illustrated the complex nature of deciding whether to disclose a diagnosis of dyslexia and sharing the individual specific problems this condition causes. The importance of impression management and dealing with what Goffman (1963), in his seminal work on stigma called a 'Spoiled Identity', is a primary driver in the decision making process. Being labelled as dyslexic or as someone with specific learning needs goes to the heart of how an individual sees himself or herself and it follows that maintaining control over who knows about the disability is important to the individual. Disclosure is a matter of personal choice and rather than imposing on individuals a requirement to disclose, as recommended by Wray et al (2005), evidence from this study supports Galambos' (1998) view that it is better to put strategies in place to assist the individual in understanding the complexities and possible consequences of disclosure.

7.5.1.2 Previous experiences

The three years spent on the pre-registration nursing programme is a period of significant role change for individuals as they strive to meet the requirements to become a registered nurse. Prior to entering nurse training, Shaun and Grace

were already working in health as support workers, while Steve and Molly entered from outside the health care environment.

For Shaun and Grace their experience of working as support workers had some consequences for them as students. In Shaun's case, he was undertaking his training in the environment in which he had practised as a mental health support worker for fourteen years. In addition, during training he continued to take up extra shifts in that environment as a support worker. Both students expressed discomfort in delegating work to support workers with whom they had worked, as can be seen from the following examples.

Example 1:

When Shaun was on the ward as a student where he had previously worked as a nursing assistant, he reported some discomfort in asking fellow nursing assistants to do things. He said he felt sure that they would think he had changed and was "*no longer one of them*". Shaun remembered that he had previously commented on others who had changed their role from assistant to student. He recognised that he must not let this affect his performance during the placement and that there would be future role change when he became a qualified nurse next year. (Excerpt from interview notes with Shaun.)

Example 2:

Grace used to be a nursing assistant prior to entering training and remembered how she felt when the other staff asked her to do things, as a result she tried to avoid delegating but at a cost to herself. She realised this must change. (Excerpt from interview notes with Grace.)

One possible reason for this discomfiture is the movement from belonging to one social group, i.e. support workers, with whom they identified, to another social group, i.e. student nurses. The students were still identifying with the support workers but their changed status meant adjusting their relationship with the support workers. Social psychologists suggest that self-concept and self-esteem are directly influenced through the group memberships individuals develop. Transition from support worker to student nurse and hence to registered nurse would therefore have an impact on how the individual saw themselves (Hogg and Vaughan 2002). Although experience of this kind of role transition is not unique to dyslexic students, it may play a part in influencing their decision to disclose. Being seen as a student with a learning difficulty is potentially more problematic to the individual than just being seen as a student.

The reluctance to delegate to untrained staff was also identified in stage one by the student nurse, Jane. However, her *“inability to delegate”* stemmed from her loss of confidence, which she attributed to her diagnosis of dyslexia while on the programme, rather than any change in group identification.

Shaun's level of expertise in mental health care coupled with the dual role he played in the clinical areas, i.e. support worker and student, caused confusion not just for himself but for the staff who worked with him. Previously, Shaun had also provided training to staff on the management of violence and aggression when working as a support worker. He had therefore played the role of work colleague, student or teacher in the clinical practice areas. Staff attitudes towards him manifested in a number of ways, some of the junior qualified staff seemed uncomfortable in teaching Shaun, as he had previously taught them. When he asked the qualified staff to show him how to complete certain forms and protocols the reaction from some was one of surprise, it seemed they thought he already knew how to do it. He said that type of response was *“Go ‘way, you don’t need me to show you how to do this!”* Shaun felt he needed to keep requesting that they show him how to do things and that he needed to refuse to carry out assistant duties when there officially as a student. Alternatively, some staff continued to treat him as a support worker and ignored the fact that he was a student. In some instances he noted some staff treated him in a negative fashion because of his role change, *“Staff seemed to judge me poorly because I’d been an NA [Nursing Assistant] and was now in training, a ‘who does he think he is’ attitude.”* (Shaun)

Shaun did appear to benefit in one respect through his past experience and friendships with some of the staff with whom he worked. During placements that occurred before he was required to submit a theoretical summative assignment he successfully negotiated to take reading time prior to the submission date and then worked back the hours after the assignment was submitted. This re-organisation of his placement was done in agreement with the clinical staff but without the knowledge of the school. When I asked why he did not ask the school for this additional preparation time, which he could legitimately claim he needed as it took him so long to produce written work, he said he preferred not to talk to the lecturers about this as he didn't want to appear to them unable to cope with the

work. He would much rather arrange this himself with the staff in the placement area. This was an example of impression management. By hiding his specific need from the school staff Shaun was attempting to ensure they saw him as competent (self-promotion strategy) (Jones and Pittman 1982). It is very unusual for students to be able to rearrange placement time without clinical staff raising concerns with the school. The clinical staff involved became party to Shaun's self-promotion strategy.

Shaun's strategy to re-organise his placements to have reading time before assignments were due to be submitted proved to be a success, as he completed his nursing degree with first class honours. All of the students in stages 1 and 2 commented that dealing with the myriad of challenges and new experiences in clinical practice made it more difficult for them to cope with writing their theoretical assignments, but were not in a position to arrange reading time. Although it is difficult to draw conclusions from just one case, Shaun's experience suggests that schools should look at the timing of assignments in relation to clinical practice and the use of reading weeks. This could potentially benefit all students but would be particularly helpful to those with a learning difficulty.

7.5.1.3 Effects of expressed attitudes by others

During the pre-registration nursing programme the students were exposed to a number of mentors and other clinical or teaching staff. In stage one it was observed that the attitudes of staff and other workers influenced decisions around disclosure of diagnosis. (See section 7.5.1.1, page 175 for more detail on disclosure decisions in stage two.) There was also some indication from the students in stage one that the attitude of their mentors and co-workers contributed to how successfully they developed clinical competency and coped within the clinical setting. Blankfield (2002, p31) believes that the

"... biggest 'problem' for a nurse with dyslexia is the attitude of non-dyslexic employers, placement tutors and colleagues, who tend to react either with horror or sympathy when dyslexia is disclosed."

This section will explore Blankfield's contention and examine what role expressed attitudes by others had on the students in stage two.

There appeared to be a correlation between acceptance by the clinical team, with positive interactions with team members, when the student demonstrated a degree of competence and a willingness to fit in with the staff and their routines. This could be described in terms of a positive feedback loop. Support from the mentor in a friendly and positive environment made it easier for the student to develop competence. The more competent the student, the happier the staff became and therefore more likely to provide positive support to the student. The converse of this positive feedback loop was observed in Steve's case. In one unit he found it difficult to fit in with the unit routine. The staff, either through lack of knowledge or understanding about how best to support him or general concern about an individual who is dyslexic becoming a nurse, provided a negative atmosphere for him to learn in. Steve eventually asked to leave this placement early, as he was so unhappy.

In the interview following his departure from this placement Steve reported that his mentor had told him that he was too slow in writing the Kardex, even though Steve had told the staff he had difficulty with writing. He reported that he felt the staff were using his dyslexia and the problems he had against him and were deliberately making things difficult for him. Steve said he felt staff had unrealistic expectations of him. Added to this his mentor could be heard to 'tut-tut' over the time he took to do the drug round, which undermined his confidence. From Steve's point of view this unsupportive behaviour was akin to harassment and was very destructive in his relationship with the staff and on his performance. This example illustrates the need for an open dialogue and supportive relationship between student and mentor about the student's learning needs in practice.

Staff appeared to accept the students more easily if they fitted in with the normal routine of the area; any deviation was met with concern or mistrust. For example, Shaun had particular problems with his short-term memory and decided to bring a pocket personal computer (PC) with him to the unit to make notes to act as an aide-mémoire. The use of the pocket PC was met with concern from the staff, particularly about what he was going to record on the device. Shaun was using the pocket PC in the same way that the other staff were using personal diaries. This unease from the staff in two consecutive areas eventually resulted in Shaun

abandoning the use of the tool in order to be seen to fit in with the practices of the unit. Similarly Steve was receiving additional tuition from the University Dyslexia Tutor throughout the academic year, which meant that on occasion he had to leave clinical placement to attend the sessions. The school had agreed to this arrangement and the placements were all informed in advance that this would be happening. His mentors felt he should have remained on duty and therefore expressed their dislike at his absences.

Disclosure of the difficulties experienced by the students in some instances positively changed staff attitudes towards them. Molly's mentor (year one) said that if Molly had not told her, she would have thought she was "*a bit slow in catching on*". So knowing her diagnosis helped the mentor understand her problems. The mentor commented that some students liked sitting at the desk writing up the notes, as this was seen as an important/higher kudos thing for them to be doing. It was also "*a way of avoiding work, such as putting a patient on the commode*". The mentor said that had she not known of Molly's diagnosis she would think she was "*swinging the lead*" because of the length of time it took her to do the notes. Other staff, who didn't know of her diagnosis, made comments about Molly, which suggested they thought her slow or lazy.

Unfortunately, even when staff knew about the students' specific problems and were generally supportive of them in the placements, they still made comments to the individual student, particularly when it took the student longer to finish a task. It could be argued that this is unsurprising in modern healthcare settings, as all have time pressures in meeting service demands. Any individual who is deemed slow at an activity is likely to be commented on. However, comments on performance particularly in areas that the student felt they had already identified that it would take them longer to do, acted to undermine student confidence.

Shaun was the only student who reported being teased by the other students in his cohort. His friends sometimes called him Forrest Gump. He said that this was done by a few of his friends in a lighthearted way and was not said to be unkind and so he had not been offended. Åstedt-Kurki and Isola (2001) observe that the use of humour between nursing colleagues helps them cope with difficult or

uncomfortable situations and leads to an improvement in the working climate. This use of 'black humour' is well known within the mental health field, which is where Shaun and his peers were working, and so could be a familiar way for them to deal with a situation where they felt uncomfortable.

It is arguable whether the attitudes of others constituted the 'biggest problem' for dyslexic students, as contended by Blankfield. However, evidence from this stage of the study indicates that it was an important factor in how students developed clinical competencies.

7.5.1.4 Problems in practice – barriers to coping

In the initial interviews with the students at the beginning of stage two, common types of problems experienced by all four students were identified. These difficulties mirrored those identified by students in stage one. The problem areas are listed below:

- Difficulty with spelling, particularly everyday words such as there, they're and their
- Transposing letters within words
- Slow at reading and writing
- Difficulty in reading and pronouncing unfamiliar, long or unusual words
- Have to read text a number of times to gain comprehension
- Untidy or childlike handwriting
- Poor short term memory
- Easily distracted, poor concentration

Grace, Steve and Shaun identified problems with mathematics (co-morbidity of dyscalculia) but Molly described herself as strong in this area.

The general difficulties described above gave rise to particular problems with activities in clinical practice. The students in stage two reported having difficulty with the same type of activities as those reported by the students in stage one. However, the students in stage two were also able to identify further problems specifically in relation to having poor short-term memories.

For clarity the areas of difficulty are grouped under three of the four headings used to summarise findings in stage one. However this is a crude separation and there are areas of overlap.

- I. Dealing with Information,
- II. Performing the Role,
- III. Doing Drug Calculations.

The fourth heading used in stage one has been excluded as there were no reported problems related to the co-morbidity of dyspraxia. Grace classed herself as dyspraxic but did not describe any problems attributable to this condition.

I. Dealing with Information

- **Receiving and giving handover report (verbal)** - For example, Molly reported having difficulty with handover because she couldn't write down fast enough what the staff were saying [staff regularly carry notes with them during a shift to act as an aide mémoire]. She said, "*I might forget something and they've gone past it, you know. And I'm thinking, what did they say?*" This inability to write down key details fast enough at handover is also reported by the nine dyslexic nursing students in Sanderson-Mann et al's study (2004). Grace reported that her problem was in giving the report because she had difficulty saying some of the terms used.
- **Giving or receiving other verbal reports, e.g. multidisciplinary team meetings, receiving information from colleagues** – Problems related to short term memory were apparent, manifesting in a variety of difficulties in practice.

Grace found difficulty in assimilation when a lot of information was passed to her quickly. She said "*I find it worrying when I am told to pass on a complicated message, like from the doctor to the nurse in charge about changes in the patient's care.*" Grace also felt that when staff were teaching her in practice they were often "*too quick to pick me up on things and didn't give me space to work things out for myself*".

Shaun found that during multidisciplinary meetings if he had been asked a question and there were other conversations going on around him or across from where the questioner was seated, he found it very distracting and hard to respond well.

Steve felt his short-term memory problem was “*always going to be with me in practice*”. He was particularly concerned about his inability to remember people’s names, a situation that got worse when he was under pressure such as during multidisciplinary meetings. He also observed that when he was in stressful situations he also found it difficult to remember appropriate terminology exacerbated by what he considered a “*limited vocabulary*”. He thought that rather than being able to choose from a number of words with similar meaning he sometimes chose inappropriate words. He was afraid that this restriction meant that he ‘put his foot in it’ and feared that he may come across as prejudiced when he had not meant to.

Grace’s mentor in year one, who was also dyslexic, described how she found interview situations difficult because when she got stressed it was “*even more difficult to find the right words*”. This also happened in multidisciplinary meetings, made worse because she was uncomfortable about disclosing being dyslexic and needing more time.

- **Completing the nursing records and other correspondence, e.g. initial assessment, planning care, writing reports on patient’s condition, discharge letters** – A number of factors contributed to the students’ difficulties in this area, described below.

Unsurprisingly all of the students reported needing to take additional time when completing any written activity. Shaun estimated that it took him twice as long to write up the nursing record at the end of each shift compared to other students.

The mentors appeared to be aware that the students needed extra time to complete written work. One of Molly's mentors commented that it took Molly twice as long to do written tasks. She also observed that Molly knew what she wanted to say in the nursing notes but found it difficult to translate this into written text. Grace's mentor in the orthopaedic ward commented that she "*had a lot of problems putting things down [in the nursing records]*", which was at variance with her ability to describe what care she planned and had given. The mentor also characterised Grace's writing ability and handwriting presentation as "*childlike and simple*". This marked difference in verbal ability from written ability observed in Molly and Grace is well reported for individuals who are dyslexic (Ott 1997).

The pressure to perform in a given time span coupled with distractions in the environment proved challenging to Shaun. He commented on this issue in most of the interviews following placements. For example, after the first placement he said, "*I find it difficult to concentrate on a task if there are a lot of distractions going on around me.*" After the fifth placement he also described his sensitivity to things going on around him in his environment. This awareness broke his concentration and led to him being distracted from doing things like report writing. He also said that a close family bereavement during the common foundation year had made him even more sensitive to distractions. This indicates that it is not just the environment or nature of the activity being undertaken but also individual factors that will affect performance in students who already have a disability or disadvantage.

Shaun's mentor in year two, who was a sister in the acute psychiatric liaison team, while noting Shaun's needs, observed, "*Time isn't available in this job... you have to keep up with the documentation.*" The reality of pressures within the modern health service may compound problems for some individuals with specific needs and may mean that sufficient allowance of time to meet their needs is not available.

- **Reading, spelling or pronouncing drug names on charts and labels –**
Shaun's biggest area of concern was accurately reading medicine charts and dispensing drugs, made more difficult for him in many instances because of the doctors' handwriting. He reported one incident where, under supervision, during a drug round he had failed to recognise a drug the doctor had prescribed. Shaun instead interpreted the name for one that he was familiar with. He was very concerned that even when the error was pointed out to him he still couldn't recognise the new and unfamiliar drug name but instead still saw a drug name he did recognise. He was acutely aware of the need to develop a means of coping with this to prevent harm coming to patients.

Grace reported that she had particular difficulty in completing admission assessments on patients due to the challenge of spelling medical terms/words. She observed that when she felt pressured in work she tended to get flustered and her spelling deteriorated. Her placement in the operating room proved to be the most uncomfortable for her due to the range of procedures, instruments and other equipment used. The environment was very stressful and she was pressured to perform, which led to her having increasing difficulty in learning and recall. She recounted how her mind would go blank when asked to remember things.

On one unhappy placement in a secure learning disability and mental health unit, Steve recounted how he felt staff were "*unfair*" to him during a drug round. He said that while he was identifying the drugs against the prescription chart and calculating the dosage, the staff asked him to recall what the drugs were for and their side effects. Steve said he needed time to dispense the drugs and having to answer questions as well made it more difficult. In effect the questioning overloaded him and he was less able to cope.

Dealing with unfamiliar paperwork, particularly where the students were required to write a lot of free text took all of the students longer to complete. All four students had difficulty with everyday words, which meant that

writing any report was a challenge. Shaun observed that sometimes when he came to write a report he would have to concentrate so hard on the actual words he would lose his train of thought about what message he was trying to convey. All four students reported that doing paperwork caused them anxiety.

II. Performing the role

○ **Managing and prioritising their workload**

Working in any healthcare setting requires staff to prioritise and manage the care they deliver to ensure patients/clients receive timely and appropriate care. All nursing students must learn this key skill during their pre-registration programmes.

All of the students in stage two exhibited short-term memory problems to a degree, which had a direct affect on their abilities in this area. This would manifest itself as forgetting to carry out specific tasks or in remembering instructions.

When Shaun was diagnosed as dyslexic, the educational psychologist report identified that he was in the bottom 3% of the population in terms of his short-term memory. It was unsurprising therefore, that he identified problems in practice related to remembering to carry out tasks, and to express on-going anxiety about forgetting to do things. For example, Shaun reported on one incidence when he was on community placement where he had forgotten to do a house call. He only recalled the planned visit when driving past the area on his way home that evening. Normally all planned visits were listed on his palm pilot but this visit was an ad hoc, open-ended arrangement agreed with a housebound client. No harm came to the patient because of this lapse, however this was by chance and was clearly unacceptable behaviour. As previously mentioned pressure to perform, distractions in environment or multiple calls for his attention exacerbated Shaun's short-term memory problems.

One of Shaun's mentors in year two commented that she did not think Shaun was "*significantly forgetful*", however, she said that he did like to chat and she would have to remind him on occasion that he had some outstanding activity to be completed.

Grace also exhibited anxiety about remembering to do things throughout the two years of the study. She regularly felt while working on the wards that she was not a good nurse and worried that she had not completed all her tasks or that she had forgotten something. Grace expressed feelings of frustration in not being able to meet all the demands placed on her in the clinical area. She recalled one instance when she rang up the ward after her shift because she had forgotten to replace a patient's anti-embolism stockings. She had washed them after the patient had a bath as they were soiled and had forgotten to replace them. This constant worry was very tiring and she felt sure she would eventually burn out. It was mainly for this reason that she eventually sought permanent employment in the post-operative recovery unit because when the shift ended all patients were transferred back to the ward so that she went home in the happy knowledge everything had been completed.

During Steve's first year on the branch programme he had trouble in the community setting as he was allocated a number of clients in his caseload. He said it was "*difficult to keep track*" of the clients and their caring needs. His mentor in the community placement thought that Steve was not particularly organised and "*even with advice he couldn't do it*" [prioritise case load]. He seemed "*unable to prioritise his work and got in a mess*". Because he was unable to prioritise his work, he had not completed the work he should have done. Unfortunately he had not told his mentor when he had not done the work and she found out later. When asked why she thought he had done this. She replied, "*I felt that he wanted to keep it hidden, to give the impression that he could do it.*"

In contrast to Steve's experience in community, Grace had a community mentor who was dyslexic herself. This mentor set out for all students which

patients they would see and the order they would see them in. The mentor commented that one of the newly qualified nurses in her district nursing team still checked with her each shift to make sure she had prioritised the caseload appropriately. The mentor felt that being able to prioritise was something that came with experience in the community and was to do with a person's confidence. This different approach may reflect her experience of developing competence in this area.

○ **Avoidance tactics**

Steve's memory problems were particularly in evidence when he tried to remember people's names. His anxiety about his poor short-term memory was inhibiting his performance and seemed to exacerbate the actual problem he had in this area. For example, Steve had specific difficulties in case meetings because he had to remember the names of the participants plus the names and details of the clients he was reporting on. The fear he had of not being able to remember names and details led to him avoiding taking part. Unfortunately for Steve, case meetings are essential in long-term management of clients with learning disabilities, which meant avoidance was not a realistic option. In one instance Steve reported how his mentor wanted him to practise using non-judgemental language at the weekly case meeting. He felt that this would be difficult because of his short-term memory problems which were made worse by the stress of performing in a public meeting. His refusal to take part (avoidance tactic) rather than develop a means of coping with the activity was not well received by his mentor.

Shaun also reported using avoidance as a tactic. Shaun reported that it took him a long time to write up the patient's records. He admitted that on one occasion he had asked a fellow student to complete a report for him, as it was close to the end of the shift and he realised he would not get off duty on time.

Avoidance would seem to be an inappropriate response to developing coping strategies as it means the work is taken up by other members of staff.

- **Organising complex tasks**

In stage one, two of the students identified particular difficulties in organising the discharge of clients due to the number of people and organisations that were sometimes involved. While none of the students or their mentors reported similar difficulties in stage two, there was some evidence that performing multifaceted tasks was challenging to the students. For example, Molly's mentor observed that it took Molly longer to learn to do an activity if it was complex.

Many areas of patient/client care were protocol driven, giving rise to a wide range of standardised assessment forms/tools. Not only do the students have to complete the forms, they must also identify in what circumstances these forms should be used. For example, Shaun's mentor observed that it took Shaun 15-25 minutes longer than other students to complete the assessment form used by the Psychiatric Intervention Team (who deal with high-risk clients). The assessment form ran to several pages, with numerous subsections to be completed. The mentor said that because of the number of assessments undertaken in a shift, the write up of the form needed to be done immediately. She described this area as the most challenging area of psychiatry, as the consequences of getting an assessment wrong could have profound and potentially life endangering consequences for the clients. She believed this pressure made this environment "*more stressful*" for Shaun.

In another example, Steve's mentor noted that in addition to a number of standardised forms used to assess the clients' condition there were some forms that were used more rarely depending on the client's specific needs, e.g. an assessment for Alzheimer's Disease. The mentor recognised that dealing with a range of forms used in different circumstances was challenging to Steve.

III. Doing drug calculations

Shaun, Grace and Steve reported difficulty with mathematics. However, Steve, through his work in the electronics industry, had developed good coping strategies in this area. He felt able to cope provided he was given time to work out the calculations.

Shaun described his ability to be limited to “*simple arithmetic*” provided he was given “*plenty of time to work it out... however, things like percentages and fractions are still very difficult*”. As with writing up reports, Shaun’s performance deteriorated if he was under time pressure or had distractions in his immediate environment. He also found it more difficult to work out a dosage if the client was waiting in front of him. He reported one incident early in his branch programme, when he made a drug calculation error during a ‘depo’ clinic [clinic where long-acting injected anti-psychotic drugs are administered]. In most cases the prescribed amount came in one ampoule, however, on this occasion the dose was smaller and he had to work out the amount to be injected. He worked the dose out in his head and drew it up, when it was checked by the staff nurse it was found to be wrong. This was a valuable lesson for Shaun and caused him to seriously consider strategies to reduce future errors. Throughout the rest of the branch programme, Shaun expressed on-going concerns about his performance in drug administration.

Grace did not report any specific incidents or errors in drug calculations during her branch programme. Grace’s mentor on the Medical ward observed that she was very nervous about the mathematics involved in drug rounds and about setting up intravenous equipment and pumps, but felt that this was “*no more than any other student.*”

Summary

The students identified general problem areas at the beginning of the branch programme, which translated into specific difficulties in completing activities in clinical practice. The evidence from this analysis and from the analysis of the data in stage one lends support to findings presented in the

literature review. For example, Moody (1999) describes eight problem areas, six of these areas were clearly identified in this study: literary skills, memory, sequencing ability, speech, organisational skills and emotional factors. The remaining two areas: visual orientation and hand-eye co-ordination were not reported on in this study, but this is not to suggest that they were not present, only that they did not cause sufficient difficulty to be observed by the mentors or significantly affected the students' performance such as they would report it as a problem. These problems may have been seen if the research methodology had involved long periods of observation.

Modern day pressures of delivering healthcare acted to exacerbate the difficulties experienced by the students, in particular: time pressure, complexity of tasks, unfamiliar terminology, multitude of forms and assessment tools, and included deciphering the doctor's handwriting on drug charts.

The findings also support Riddick et al's (1999) study into self-esteem in higher education students who are dyslexic, as there was clear evidence to suggest the students in stage two lacked confidence on occasion, and exhibited anxiety about their performance and were concerned about what others thought of them. As previously mentioned, in Steve's case, his anxiety over remembering names was inhibiting him to such a degree that he chose to avoid certain key activities and this was ultimately affecting his development of clinical competence.

Disclosure decisions reported in stage two appear to mirror those identified in stage one. The students weigh up the possible benefits of disclosure against the possible negative consequences in terms of discriminatory comments and practices. As can be seen from Steve's example in the previous paragraph, negative experiences can inhibit disclosure and the resultant access to support. Evidence from this stage of the research supports the disclosure feedback model (see chapter six, figure 6.1, page 150).

7.5.1.5 What and who helps

1. Equipment

Dyslexia is classed as a disability under the Disability Discrimination Act (1995) and as such entitles pre-registration nursing students to have access to the Disabled Students' Allowance. This allowance covers four areas:

- Non-medical helpers allowance
- Specialist equipment allowance, e.g. IT equipment
- Travel allowance
- Other supplies allowance, e.g. Braille paper (NHS Wales, Student Awards Unit, booklet 05/06)

All four students in stage two opted to receive the allowance for specialist equipment. All purchased laptop computers, and all bar Steve bought palm held PCs. Shaun attempted to use a scanner and associated software, which enabled written text to be scanned then read out loud by the computer. This proved very time consuming and was quickly abandoned. All four students felt that the use of the laptop was vital for their academic work on the course.

While the students were unanimous in their appreciation of the laptop for their theoretical work, they were less enthusiastic when it came to using the laptop in practice. Out of the four students, Steve was the only one who did so during his first year of branch, choosing not to continue in the final year. The reasons for this reticence fell into two categories. Firstly, as the students had nowhere to securely store the laptop they all feared it would be stolen or damaged. Secondly, having a laptop in practice would make the students stand out as different to other students. As has previously been noted, the students managed their images carefully and chose to whom and when they would disclose their diagnosis. Steve reported that when he had used the laptop in practice he noticed the social workers would quiz him about his problems and seemed keen to label or categorise him in some way, which he did not like.

Shaun did use his palm held PC to good effect when he was in community placements, partly because the device was small, about the size of a pack of cards, and fitted easily into his pocket. He used it as a combination of diary,

notepad and aide-mémoire for the house calls he had planned. Reports on visits were usually completed at the end of shift or at the end of the week so having notes was vital due to his short-term memory problems. Shaun chose not to use the device on any of his hospital placements, mostly because he was able to access patients' records quite easily.

Grace never used her palm held PC as she felt she did not have the time to learn to use it properly. Unlike Shaun, who was a self confessed lover of gadgets, Grace had little interest in the technology. This suggests that the blanket provision of IT equipment to all students might not necessarily be appropriate, as using technology requires interest and dedication to learn. It also implies that the students must identify the context in which to use the equipment to enable them to cope with the challenges of the role.

II. Support network

The students received support from a number of quarters, namely the University, School, mentors and staff in clinical areas, and from family and friends. Some supportive arrangements were set up for the students, e.g. School Specific Needs Officer or School Counsellor, others the students actively sought out and established for themselves. This section considers how the students' viewed the effectiveness of the support they received, beginning with the arranged support structures.

Within the School of Nursing, University of Glynrith, there was a designated Specific Needs Officer, who was one of the nurse lecturers with a special interest in this area (interviewed in stage one). All four students had contact with this officer in the Common Foundation Year and beginning of the first year of the branch. This contact was to agree a 'contract' to allow them additional time in the written examinations and to help arrange assessments to enable them to acquire the IT equipment.

Although the Specific Needs Officer was available for pastoral support, none of the students approached her for this, choosing instead to approach the School Counsellor, their Personal Tutor (the year is broken down into groups and each

group is allocated a personal tutor for pastoral care), Link Lecturer to the placement they were on or other module leaders with whom they had established a rapport, e.g. in year one when Steve had problems on a placement the Link Lecturer provided him with good support, however when he again experienced problems in year two he found the Link Lecturer to that placement to be unhelpful and turned instead to his dissertation supervisor, whom he "*respected*". It was clear from the students' descriptions that the personal relationship the student had with the different members of staff was the deciding criterion, rather than their designated role, suggesting that it is advisable that supporting the needs of students should remain a core element of most teaching roles in the School and clinical areas. This also suggests that all staff training should include instruction on how to support students with specific needs.

Shaun and Grace tended to favour establishing their own networks for support from family, friends and co-workers. Shaun had difficulty in his written assignments because of his inability to write down on paper the ideas he had in his head. To overcome this, he identified people to help him. He described how a staff nurse he knew had very good IT skills. Shaun was able to talk about his ideas for an assignment and his friend would quickly type it up. On another occasion one of his mentors reported that she provided him with additional help with his written assignments and clinical competency records. Shaun would go to her home off duty to discuss his ideas and have her proof read his work. The mentor noticed that it was very helpful to Shaun at the beginning of an assignment, having someone with whom to brainstorm ideas and to act as a sounding board. Grace mainly used family and friends for proof reading her work, particularly her grandmother. There was no evidence to suggest that there was time or opportunity in the clinical area for Shaun and Grace to translate these coping strategies of using people as 'sounding boards' and 'proof readers' to deal with the nursing and other documentation.

One of Grace's mentors, who was herself dyslexic, recognised that she had a "*disability*" with mathematics. As she was employed as a community district nursing sister she frequently worked alone. Her coping strategy was to telephone a particular pharmacist. She described her relationship as being "*best friends with*

the pharmacist". She had determined that the only way she could cope in her role was to seek help and support.

In the interviews with Molly during the first half of the branch programme, before she left on maternity leave, it appeared that she was having difficulty in identifying the most appropriate people to help her. She seemed unhappy with the level of support from the school and she was uncomfortable with her male Personal Tutor. Her diagnosis as dyslexic had undermined her confidence and affected her relationship with him. She was reluctant to talk to him about how she felt, partly because he was in a shared office and privacy was not guaranteed, and because she feared there may be some 'backlash', that would affect her studies. On a more positive note Molly reported that the mentors she had encountered in practice were very supportive of her.

It is reasonable to conclude that all of the students were pro-active when it came to seeking support, whether from established officers or individually determined by the student. Where and from whom the support was given was driven by the students' personal preferences and relationships.

III. Mentors

Neary (2000) identifies twenty ways in which the mentor could either provide help or support to the mentee. The following five areas identified by Neary (2000, p24-26), were very evident in stage two and had a bearing on the specific needs of students with dyslexia:

- *Personal development (mentors and mentees need to develop an appropriate professional, supportive relationship) – how successful and confident the student was on placement had a direct relationship to how effective their relationship was with their mentor. Students valued mentors who were "approachable", "friendly", "relaxed" and who had "time" and "patience" to show them how to do things and allowed them to ask questions. The students and mentors consistently spoke about the need for time together and the importance of listening to the needs of the students. It was important for the students not to feel pitied but to receive "help and*

encouragement” in a positive way. Grace liked one of her mentors in the final year who “*didn’t patronise or mollycoddle*” her. Molly and Steve spoke about two of their mentors they particularly liked because they were good at explaining things in “plain English” and did not use jargon.

- *Challenge the mentee to face up to opportunities and problems and recognise personal strengths and weaknesses* – One of Grace’s mentors in the final year pushed Grace to do things, for example, she was given her own bay of patients on the ward to organise care for and report on, and was encouraged to give the ward handover report everyday they worked together. Although Grace found this experience “*draining*”, she did have a sense of achievement from doing it.

Not all mentors took this challenging approach and in contrast provided more guidance, supervision and structure to the student’s workload than normal. For example, Shaun’s mentor said *she “didn’t overload him with files... didn’t expect him to do too many reports”*. Steve’s mentor in the second year said she realised he “*wouldn’t be able to be up and running like most other 3rd year students*” and therefore she had carefully selected the types of clients he should have in his caseload and which assessment he would be required to do. She chose the cases “*on the basis of what I thought he could do and I was more prescriptive with him than with other students.*” This behaviour can be looked at in two ways, firstly that providing a restricted and supervised environment would give the dyslexic student more structure in which to function and therefore be more likely to succeed. The converse of this is, if the support and environment is overly controlled the student would not get the opportunity to learn how to cope, which would, in turn, not prepare them for the time when qualified where this level of support is not available. During stage one some of the lecturers had expressed concern that students may be ‘enabled’ to pass the course and end up not be fully prepared to work as a nurse without high levels of support. The consequences of this are significant, because these nurses would not be competent in their role and would therefore pose a risk to patients/clients.

- *Providing feedback* – the students' welcomed receiving constructive feedback on their performance, particularly in respect of their written work. Some mentors took the time to discuss with the student what should be written in the nursing records, including providing them with examples. Grace's mentor (community) said "*I would spend time with her on writing the Kardex. I would sometimes dictate what should be written... to give examples of what should be written*".

Unfortunately, some mentors were inconsistent in the feedback they gave, which was not well received by the students. For example, Steve reported that due to his inability to remember names, he had noted the clients' initials in his personal diary to act as an aide-mémoire. His mentor had challenged him on this as a breach of confidentiality, however, Steve noticed that when the mentor typed up notes from a case meeting, which were widely distributed, she used clients' initials. With another mentor Steve had noted that his mentor was "*laid back one minute and a strict authoritarian the next*", which left him feeling uncertain.

- *Difficulties arising* – Grace's mentor (community) felt "*very comfortable in telling her she was wrong*" and then sought to give constructive advice on dealing with the problem. Grace had particular problems with writing up her clinical competency document (part of the summative assessment of practice). The mentor reported setting time aside to help her rewrite it.

All of the students had difficulty with terminology and drug names. The mentors identified the importance of helping the students deal with this difficulty and many reported helping with the pronunciation of terms/drug names.

- *Planning (helping the mentee plan their learning)* - Many of the mentors thought carefully about what activities the student should be involved in. The more successful interactions were based on dialogue with the student to discuss their needs rather than either setting challenges that may be daunting for the student to achieve, or by over restricting the experience.

Shaun's mentor in the community explained how important it was to discuss the client cases Shaun was involved in, getting him to reflect on what he had seen and done to help him determine how to act in future caring situations.

By contrast, one of Steve's mentors reported carefully choosing the client list and caseload to be completed. Steve was not involved in this decision and continued to have problems in managing his work. The mentor reflected on the failure of her strategy and noted that Steve seemed de-motivated and distracted by a looming assignment. She had in effect failed to identify what was the cause of Steve's problems and had not agreed with him an appropriate plan for his learning.

Communication about the student's needs and the mentor's expectations is essential. Neary (1994, p38) neatly sums this up:

"A good mentoring relationship is a dialogue between two people committed to improvement."

However, she also observes that mentorship is a complex process and that the outcome is uncertain (Neary 2002), as was the case between Steve and his mentor in the last example.

7.1.5.6 Student coping strategies

This section reviews the strategies and behaviours the students used to help them cope in clinical practice. There were marked similarities between the four students in stage two and the seven students interviewed in stage one, with all students appearing to have a degree of self-awareness of their problems and how they should act to overcome them.

- All of the students in stage two identified the need to seek out a quiet area, free from distractions when carrying out written tasks or other activities that required concentration, e.g. drug calculation. There was also consensus on the need to arrange such tasks so that there was sufficient time to complete them and undue pressure to perform was avoided, e.g. Shaun described how, when on one ward, he would take the nursing records to write up into

the four-bedded bay because it was preferable to the “*chatter at the nurse’s station*”. As they were students, they were not always in a position to arrange their work in this way, additionally some clinical areas were by their nature time pressured, e.g. operating room, A&E department, making it impossible to fully implement this strategy. By the end of the programme the students realised that they needed to seek out work environments where their performance would not be overly pressured, e.g. Shaun sought a job in the community on qualifying, as he knew from experience this environment was not so time pressured for tasks such as report writing.

- All of the students appeared to recognise the need to seek help or clarification from other sources, for example, to check their comprehension of information, the accuracy of reports they had written, spelling, pronunciation and drug calculations. During the interviews the students gave a wide range of examples of where they sought help. Grace reported that she was very conscious of her poor memory and was not afraid to ask other staff for help if she had forgotten how to do something. Grace appeared to have no difficulty asking people to help with spelling if she could not find the term in the dictionary she carried with her. Occasionally she had even asked the patients to confirm the spelling of some words; she did recognise that this was not entirely appropriate.

Molly said, “*Sometimes the mentor has got to say to me what it is [pronounce the drug name]. So what I’ve done for that is, I go home and look in my BNF [British National Formulary] and write it and try to say it and learn it. And I recognise it again then, if it comes up again, I know what it is.*” Molly also reported taking note of terms, jargon and abbreviations used on the wards and clarifying their meaning with the staff, if she was unsure.

Steve explained in his final interview that he needed to be open about his dyslexia so that he could seek help from others when doing important tasks such as wording an important report appropriately.

Shaun described how he looked carefully at what other staff had written in the nursing records to get a feel for the structure and type of content needed.

- Rather than solely relying on others to help them, the students also recognised the need for them to be vigilant and cautious particularly in tasks such as reading drug charts. Grace said that if in doubt she would check, letter by letter, the drug listed on the administration chart with the name on the drug container. Grace commented that the more exposure she had to the drugs, the easier it became to recognise them. Having made an error in reading a drug name (when doing a drug round under supervision), due to the doctor's handwriting, Shaun stated that in future if he was in any doubt he would contact the doctor to check what had been prescribed.
- The students reported instances where they had taken action to either rehearse an activity they had difficulty in doing or to make plans in advance in an attempt to minimise their difficulty. For example, in one interview Grace described how she had prepared to give the ward handover. She carefully rehearsed what she was going to say and made brief notes, in bullet form, listing the key areas. Any terms that were difficult she wrote out phonetically so that she would be able to say them.
- All of the students used some form of personally devised shorthand during their working days, to help keep track of information. Molly recognised that she was not able to take in all the information imparted at handover report and therefore focussed on the key points about the patient, e.g. intravenous infusion, which she recorded as IVI. The examples of abbreviations she gave were mostly those commonly used by nurses. Steve was the most imaginative in this area. His main difficulty was recalling clients' names, and because he preferred visual cues as an aide-mémoire, during the first year of branch Steve experimented with a form of pictorial hieroglyphs, e.g. he would draw a picture of a knight chess piece into his daily diary next to the client's appointment time. This symbol made him think of Richard the Lionheart, which he used to represent the client Richard. A picture of a hand meant 'how', and was used for Howard. A picture of a fairy cake made him think of a

tuck shop, and was used for Tucker. The problem he had with this strategy was that he was not confident that he would always remember the thought process that led to the use of the symbol. Steve abandoned this strategy by the end of the first year and resorted to using the clients' initials and 'mind-maps' to remember case histories. [A mind map is typically a diagram with key words or images radiating around a central item, used as a way to explore or remember aspects related to a specific idea/theme].

- Behaviour that was common to Grace, Steve and Shaun was that they spent a lot of time and energy talking to the patients and their work colleagues. Unfortunately, from observations made by the mentors, this "chattering" (Grace's mentor community) or desire to "sit and chat" (Steve's mentor community) was not always felt by the mentors to be appropriate. A possible reason for the students behaving in this way was put forward by Grace's mentor, who was herself dyslexic. She reflected on how she tended to talk a lot in order to get her ideas out because she found it difficult to find the right words, and she saw the same behaviour in Grace.

Summary

Self-awareness of the students' specific difficulties in practice and the potential consequences of their actions were obvious in the students in both stages of the study. This challenged some of the fears expressed by members of the nursing profession who consider that individuals who are dyslexic pose an unacceptable risk to the patient. Wright's (2000) study of UK HE institutions offering nursing courses showed that 24% of respondents feared that individuals who are dyslexic pose a safety risk in practice. Although this study had responses from a small number of students, it does provide some indication that while there may be a potential risk, the individual's heightened awareness and use of coping strategies might more than compensate.

7.1.5.7 Effects on student's health

It has long been recognised that individuals react differently to the pressures or stressors put on them by modern day living. The Health and Safety Executive (HSE) (2006) defines stress as "the adverse reaction people have to excessive

pressure or other types of demand placed on them". Each person's response to a stressor is unique, what is stress to one person can be stimulation to another. Stress becomes an issue when the individual suffers *distress* from the experience. In 2000, a major review of occupational stress was conducted on behalf of the HSE, called the Bristol Stress and Health at Work Study. This report provided strong evidence that occupational stress had a detrimental effect on health, especially high blood pressure, nervous trouble/depression, bronchitis and breast cancer. Occupational stress was found to be greater in jobs that had shifts or long hours, and in demanding work that had to be done quickly; both elements found in nursing practice (Smith et al 2000).

Jones and Johnston's (1997) review of distress, stress and coping in first year pre-registration nursing students found that the top four sources of stress (challenges) in academic terms were: 'fear of failing', 'lack of free time', 'long hours of study' and the 'college response to student need'. However, while the students in Jones and Johnston's study had a consensus view of the sources of stress on the course, these sources appeared to have little association with individual distress experienced. The researchers found that the sources of stress associated with actual distress suffered were uncommonly reported, e.g. 'alcohol usage', 'loneliness', 'other personal problems', 'actual personal health problems', 'doubts about career choice' and 'problems with parents', leading them to conclude that it is not possible to unambiguously define the causes of student distress. They also found that greater levels of distress occurred before and after the clinical placements, suggesting that the demands and fears about clinical areas are a significant factor in student distress. The students in Jones and Johnston's study reported higher levels of distress than fourth year medical students and the general female population (Firth 1986).

There is evidence that students on nursing courses experience emotional distress that could affect their health and well-being (Beck and Srivastava 1991), which could lead to absenteeism (Timmins and Kaliszer 2002). These findings relate to the whole student body, not just those who have specific learning difficulties, suggesting that the experience of being a student nurse exposes all individuals to stressors.

Shaun and Steve both experienced ill health during the final year of their course, which could be attributed to sustained stress resulting from a combination of personal, family and course issues. In Shaun's case, he experienced chest pain (muscular not cardiac in origin) a few weeks before submitting his final dissertation, which led to hospital admission, while Steve began experiencing debilitating anxiety attacks. Steve described the experience of having one of these attacks as *"it feels like someone has pulled the plug out, everything just goes, I forget who I am talking to and what I am doing."* To deal with these attacks Steve sought professional counselling help and had some time off on sick leave.

The experiences of the students in this study supports the evidence that student nurses are exposed to stressors that can lead to distress affecting their health and well being. However, it was not possible to determine whether the additional health and well being difficulties experienced arise from having a specific learning need, or whether a specific learning difficulty contributed to or exacerbated any distress experienced.

7.5.2 Mentors' experiences

Four themes were identified under the category heading 'mentors' experience', namely: 'training and knowledge base', 'receiving support', 'the nature of nursing – professional gatekeeper', and 'failing to fail'. Each of these themes will be discussed in the following sections.

7.5.2.1 Training and knowledge base

As previously observed, the Nursing and Midwifery Council standards for the preparation of mentors does not include specific instruction that they be prepared to work with students with disabilities or specific learning needs. The standards only state that mentors should:

"Create and develop opportunities for students to identify and undertake experiences to meet their learning needs." (NMC 2004e, p4)

In the case of the seven mentors interviewed in stage two, all stated that they had not received specific preparation for their role and all agreed that it would have

been useful. One of Shaun's mentors confessed that she "*didn't know what to do*", while one of Steve's mentors expressed the hope that her lack of training (she had received mentorship preparation) had not affected how she had supported Steve.

On questioning about their understanding of dyslexia and the types of problem an individual who is dyslexic may experience, all of the mentors could identify that it was a learning difficulty to do with reading and writing. There was a common perception that individuals just had problems with spelling and in particular getting letters back to front. The mentors had gathered the little information they had through contact with family, friends or colleagues, or through "*places like magazines*". Grace's mentor in community was herself dyslexic and so was very aware of the types of problem Grace was facing.

The students were aware that their mentors had not received specific training. Shaun, Grace and Steve all concluded that the mentors had not been prepared to deal with someone with a specific learning need. Shaun went on to say that the mentors were ill prepared generally for their teaching role, and observed that,

"mentors need to have an increased awareness of the students' needs, things like drug rounds and doing the written work." (Shaun)

Molly conversely was less worried about the mentors' knowledge base, she said,

"No, it's more to do with the type of person, whether they are helpful or approachable. Knowledge does help but mentors can be supportive whether they know about dyslexia or not." (Molly)

7.5.2.2 Receiving support

Each clinical area used for placements for pre-registration nursing students had a designated Link Lecturer within the School of Nursing. The Link Lecturers' role was to act as an intermediary between the clinical placements and the school to provide course information and evaluative feedback, and to support mentors in their role. None of the mentors in the study (stages one and two) approached the school directly or their Link Lecturer to discuss how they should support a student with specific learning needs. Nor did the mentors seek information from the University Student Support Unit, where there were designated Dyslexia Tutors. This latter point was due mainly to the fact that the mentors reported they were unaware that the facility was available. Nor did the mentors seek help from within

the Human Resources Departments in the Trusts where there are officers responsible for supporting employed disabled workers. Again this is likely to be that the mentors were unaware. Shaun's mentor in year two said she said she was *"quite up on policies and wasn't aware of anything"*.

Steve's mentor in year two, on reflection, thought it would have been helpful to her if she had met with Steve's personal tutor prior to and during the placement. Part of the problem she experienced supporting Steve while on placement was that she had not been aware of all of his difficulties until the end, when it was too late to do anything about it. She said she felt sure that had she had meetings there would have been fewer problems.

It is unclear why the mentors chose not to proactively seek additional guidance and support when faced with mentoring a student with specific needs. It is likely that given the mentors' limited knowledge about the difficulties experienced by the students they were unaware that they might need support to meet their needs. It was interesting to observe that following the interview with Shaun's mentor in year one she said my research interest in Shaun and my interview with her had made her think about her role in supporting students who are dyslexic.

7.5.2.3 The nature of nursing – professional gatekeeper

In stage one, the data gathered from the lecturers and mentors suggested that there was tension in their role as professional gatekeepers. Meeting the needs of the individual student against the potential risk that individual could pose if allowed to register as a nurse causes the tension. This tension exists in decisions about all students (see figure 6.2 in chapter 6, page 152).

It could be argued that lack of understanding about the nature of the difficulties experienced by individuals who are dyslexic may lead to increased uncertainty for staff that have a professional gatekeeper role. To explore whether this was a reasonable assumption, the mentors interviewed in stage two were asked what they felt about a dyslexic person becoming a nurse.

Grace' mentor in the community placement was herself dyslexic and was very positive about her role in nursing. She said she had "*learned to cope with my dyslexia... know my limitations*"

Of the other six mentors only Shaun's mentor in the Psychiatric Crisis Intervention Team expressed any concern. She said she was a little concerned because "*documentation was so important*" and was a legal requirement. She was concerned that the person may miss something that could affect patient care. She would not go as far as to say someone who is dyslexic is not fit to be a nurse, but she had concerns, "*The nature of nursing is so demanding.*" It might be that the intensive environment in which she worked and the importance of using the written assessment tool as a basis for determining subsequent intervention, gave rise to her concerns.

The remaining mentors were either completely unconcerned or gave qualified answers eg, "*I'm OK with it, provided they know they have a problem and get support*" (Steve's mentor year one), "*If they are willing to learn and develop their practice, I can see no problem...provided they are motivated and have support, anyone should be able to become a nurse*" (Steve's mentor year two).

As suggested in stage one, individual beliefs might play an important part in determining the gatekeeper's attitude towards a student with specific needs. For example, Molly's mentor commented, "*Although there is a lot of paperwork, the caring aspect of nursing is the most important thing.*" Therefore, she "*can't see any difference*" whether the person is dyslexic, they can be "*just as good a nurse as anyone*". Molly's mentor appeared to value the caring aspect of nursing over practical abilities such as documenting care, thus her concerns were diminished.

Experiences of working with other individuals also influenced the mentors' attitudes. For example, Steve's mentor (year one) had prior experience of working with people with specific learning difficulties and she had noticed, "*They tended to work a bit harder than other students and put the effort in*".

It would appear that the mentors' lack of knowledge and preparation for their role did not lead to increased concern about whether individuals who are dyslexic should register as a nurse. All but one were either neutral or positive that with support anyone could register as a nurse. It is recognised that this is a small sample of mentors and that it is inadvisable to draw conclusions from this without further study.

7.5.2.4 Failing to fail

One of the prime areas of concern for the Nursing and Midwifery Council is that nurse registrants are 'fit for practice' at point of registration. Registrants must meet the academic requirements and demonstrate clinical competence, as set out in the standards of proficiency. Since the late 1990s there has been evidence that clinical mentors are sometimes reluctant to fail a student who has not met the required standard of clinical competence. In Watson and Harris' (1999) study, out of 272 mentors questioned, 125 mentors (46%) agreed with the suggestion that students were sometimes passing the clinical component of the course when in fact their performance was unsatisfactory. This study acted as a trigger for a Nursing and Midwifery Council funded research report by Duffy (2003) to explore why mentors were 'failing to fail' students. Although Duffy's study could be criticised due to the limited number of participants (14 lecturers and 26 mentors), it gives some insights and supports Watson and Harris' findings. The mentors in Duffy's study found "*failing a student was a difficult thing to do and that personal, emotional, as well as, practical issues influenced the outcome of their judgements regarding students' clinical performance*" (2003, p5). Duffy also reports that weak students are often given the benefit of the doubt, particularly if they had difficult personal circumstances and were allowed to progress through the programme. The Nursing and Midwifery Council's concern in this area was ongoing at the time of writing this thesis, with a major review running from 2005 to 2007.

With this backdrop of concern over 'fitness for practice' at the point of registration it was interesting that Grace's mentor in community, who was herself dyslexic, raised the issue of signing off competencies. The mentor described Grace's difficulties in writing up the competency statements in her clinical assessment record (used to record her competence in practice). She said she was surprised

that previous mentors had not told Grace to have her competency statements checked by someone else. She wondered whether some mentors might be afraid to tell Grace that she needs to do it better and to point out her errors. She also wondered whether competencies were being signed off inappropriately because of the mentor's discomfort about failing her.

There was no evidence to suggest that the mentors supporting the students in either stages of this study had acted inappropriately, in fact there was evidence that Steve's mentors were refusing to sign off his competencies during his 'difficult' placements in his final year. It does, however, identify a potential difficulty for mentors if they fear that they might be accused of acting in a discriminatory way if they failed a disabled student or one with specific learning needs. This issue was not covered specifically by Duffy's (2003) work, merely suggested by the acknowledgement that mentors are more likely to give a student the benefit of the doubt if they have difficult personal circumstances.

7.5.3 The environment

Under the main category heading of the environment, the factors that made an environment enabling or more challenging for the students who were dyslexic were considered. I also returned to the school and Trust policies to determine whether the reality of the students' and mentors' experiences reflected the organisations' aspirations described in the policies and how the policies reflected the requirements stipulated under legislation and regulation.

7.5.3.1 Enabling and disabling environments

During the interviews with the students and their mentors for stage two a number of themes emerged related to the nature of the placements. All four students consistently identified placement characteristics that they found either enabling or more challenging in their achievement of clinical competencies. Unlike stage one where students were asked to reflect on the course as a whole, in stage two the students commented on each placement, at or soon after completing their time there. The feelings expressed were therefore contemporaneous to the experience.

The characteristics of a 'good' placement cited by the students were:

- **Working within small closely knit teams of staff** that accepted and supported the student, e.g. long stay learning disability community home, mental health Crisis Intervention Team, Postoperative Recovery Unit; or on a one-to-one basis as found in the community. Small teams allowed the student to get to know the staff members well and there was no difficulty in remembering staff names; poor short-term memory made remembering names a problem for all four students.
- **Areas that had open, friendly, relaxed and calm atmospheres**, where the student felt comfortable in asking questions, had a good relationship with their mentor and felt happy disclosing that they were dyslexic. As seen in the section 7.5.1 on the students' experiences, stressful environments made the students less able to cope with their dyslexia. This supports Kolanko's (2003) findings that an accepting environment where students can disclose their diagnosis is essential. For Steve, having an area with a relaxed atmosphere was key as he stated this would be the main thing he looked for when choosing his first permanent post on qualifying.
- **Working with small numbers of clients, preferably where there were clear protocols for care or structured routine; or in areas where client changeover was infrequent** so that the student got to know the clients well, e.g. learning disability long stay unit or stroke rehabilitation unit; or working with one client at a time as in community or a postoperative recovery unit. There was a sense that the student could focus their attention on the client without having to worry about remembering various other tasks. For example, Grace said she particularly liked working in the postoperative recovery unit as it was a small team and she felt comfortable asking them questions. She also liked giving one-to-one care. At the end of the shift all the patients were transferred back to the wards/units and there was no nagging doubt that she had forgotten to do something.
- **Minimal report writing**, preferably on standardised forms where little free text was required. In keeping with the preference for a relaxed work atmosphere, the students preferred not to be pressured to complete the

writing tasks or have someone *“looking over their shoulder”*. Molly found working on night duty easier as there was more time to write reports and this extra time meant Molly could return to the patient’s report and add things if she wanted to.

Shaun particularly liked one of his community placements because he and his mentor did the house calls and dealt with any arising problems during the week and set aside a period of time to write up the clients’ records in full at the end of the week, typically Friday. The mentor had an office within the Centre where she and Shaun could do the reports without outside interruptions. Shaun sat across the desk from his mentor and was able to have the reports he had written checked and signed off by the mentor straight away. There were no distractions and there was no pressure in respect of completing the task within a specific time period.

- **Areas that used aids** for their staff to assist them in identifying clients and to give appropriate care. One acute 30-bedded hospital ward used printed handover sheets listing the patients to be cared for on that shift. The sheet also identified which team of nurses was caring for them and specific instructions or conditions that should be noted. This print out came from the computerised patients records generated on the ward and its use reduced the need for each nurse/student to take down individual dictated notes at handover between shifts to act as aide-mémoire during the shift. Other units, particularly in areas where clients have communication difficulties, placed pictures of the clients on their drug charts to aid identification.
- **Students preferred substantial continuous placements** during their course rather than ones broken up by visits, other short placements, holidays or theory weeks. The students also preferred going to areas where they had a clear idea about what to expect.

The clinical areas that were more challenging

These were areas that had variable, unpredictable and pressured work, where the student would need to remember a range of activities and had to prioritise their workload; report writing required large amounts of unstructured free text; areas that had a lot of unfamiliar terms, equipment, instruments and procedures, e.g. operating room or intensive care; and areas where there were staff tensions resulting in an unsupportive atmosphere.

Grace explained that her emergency care placement was structured so that she had two weeks in A&E, a theory block week, returning to A&E, which included one week with the paramedics. She said the amount of different things she had to cope with, the type of work being highly varied and unpredictable, made her feel a little frightened about returning. For the first time she was “*dreading going to a placement*”. Grace had no complaints about the support she was receiving and thought her mentor was helpful; it was the type of environment that worried her.

Steve had an unhappy placement in a large mental health/learning disability secure unit in the second year of his branch programme. He described the atmosphere as “*aggression and conflict, almost claustrophobic*”, which was in direct contrast to Steve’s previous placement. He commented that, “*They have forgotten what they are there for*”. Meaning he thought that they were supposed to be providing him with a learning experience. He noticed that the staff watched each other “*like hawks*” and he detected tension within the unit.

7.5.3.2 Institution and Trust Policies

The Special Education Needs and Disability Act 2001 (SENDA) stipulates that Higher Education Institutions as “responsible bodies” have an “anticipatory duty” towards the requirements of all disabled students going on course placements and to make “reasonable adjustments” for those that might otherwise be substantially disadvantaged. In other words, institutions must take anticipatory action to ensure that disabled students have the same opportunities as other students to benefit from course placements. This is a significant and important change in responsibility for institutions.

In 2002, the Department of Education and Skills published a comprehensive guide entitled *Providing work placements for disabled students: a good guide for further and higher education institutions*. This document highlights a number of activities:

- Meet with the student to discuss the placements requirements, implications of their disability and specific support needs
- Discuss disclosure issues with the student
- Select an appropriate placement to meet the course outcomes
- Undertake review of the placement – make reasonable adjustments or agree specific support for the student – have in place an agreement about who is responsible for making adjustments – flexibility is key
- Student receives specific guidance prior to attending the placement – pre-placement preparation
- Institution considers providing disability awareness training for placement staff
- Placement provides an induction for the student
- Student receives contact from the institution during the placement to ensure needs are met
- Institution monitors placement to ensure they are working well for disabled students.

The above good practice activities are evident in the internal report document: *SENDA, Compliance in Higher Education: Audit and guidance tool for accessible practice in teaching and learning* (2004) developed by the University of Glynrith to ensure that the institution is meeting its new responsibilities under the Act. The document is also cross-referenced to the Quality Assurance Agency Code of Practice for Students with Disabilities (1999). The School of Nursing, University of Glynrith, was actively considering its response to and use of the audit and guidance tool during the time data was being collected for stage two of this study (data collection ran from September 2003 to July 2005).

There was little evidence gathered from the students and mentors in stage two to demonstrate that the School was putting the good practice activities in place.

There was evidence that all students (not just those with specific needs) were being placed in areas primarily to meet the course outcomes (this was annually monitored by agents from the Nursing and Midwifery Council). Some placement areas provided students with an induction covering things like Health and Safety; and from the data gathered in stage one there was evidence that the School Specific Needs Officer discussed generally with the students about disclosing that they were dyslexic while in clinical practice and about informing their mentors that they had specific needs. There was no evidence, however, that placements were deliberately chosen to best accommodate disabled students' specific needs, nor was there any evidence that mentors received any disability awareness or other preparation for their role in respect of supporting students with specific needs. There was no evidence that issues around making reasonable adjustments were discussed between the School and the staff in the clinical placements, any change was instigated by the individual mentor, as described in the section on the mentors' experience (see section 7.5.2.1, pages 210 - 211). Although the NHS Trusts used in the study were aware of their responsibilities under the Disability Discrimination Act (1995) and each had posted on their respective websites statements about equality and diversity, there was no information about the role of clinical staff in supporting disabled students on placements, nor was there any reference to the issue of making reasonable adjustments.

The data from the policy documentation and interviews with students and mentors suggests that education and service providers were aware at a strategic level of their responsibilities in respect of legislation, but this had yet to translate into consistent collaborative working practices to ensure reasonable adjustments are made for disabled students.

Section 7.5.3.1 (see page 215), clearly identifies types of areas which the students in this study found it easier to work and were more enabling in developing their clinical competence. It is reasonable to suggest from this that in following the good practice guidelines described in this section, it should be possible to select clinical placements whose characteristics assist disabled students rather than cause additional difficulties for them.

7.5.4 Researcher influence

In undertaking a longitudinal study I was conscious from the outset that I would need to build a relationship with the students in order to enter their worlds repeatedly over the 2-year period of data collection. It was also likely that in developing this relationship and gaining insight into the students' experiences I would influence or affect the students in some way or through association with the students be affected myself. As Hand (2003, p17) rightly observes "*researchers both influence and are influenced by the process of engaging in research*". The term 'reflexivity' is frequently used within social research literature to refer to the recognition that researchers are integral parts of the context being studied and that this reciprocal relationship between researcher and the social world they are studying should be made explicit (Lamb and Huttlinger 1989; Ersser 1996). This section will provide a short reflexive account of the observed effects on the participants and the researcher in conducting a longitudinal study.

As a registered nurse, with many years of working within nurse education, I could be described to an extent as an 'insider' or part of the subject field I was studying (Adler and Adler 1994). This insider knowledge afforded me a greater understanding of UK nursing culture and the health and education organisations being studied. It also contributed to my gaining access to the education and clinical areas, and acceptance by the lecturers and mentors encountered in both stages of the study. However, as I was not dyslexic or otherwise disabled, nor currently working in the School of Nursing, University of Glynrith or in any of the NHS Trusts taking part in the study, in respect of this study it would be reasonable to class me as an 'outsider'. Northway's (2002) view is that being either an insider or an outsider each has advantages and disadvantages with neither role emerging as most desirable. It could be argued that the level of professionalism of the researcher would have a bearing on this.

The 'outsider' status had one particular advantage in that the students said they felt comfortable in telling me things that had happened in the knowledge that "*it would not get back to the school*" (Shaun). Collins (1998) reflects on a series of interviews he conducted with individuals experiencing chronic job insecurities and observes that he was considered as a "*benign stranger*" or "*sympathetic ear*"

which allowed the respondents to share thoughts and feelings safely with him. In this study Steve in particular used me as a sympathetic or benign listener with whom to share thoughts and feelings. It was evident that as he began having trouble in clinical practice during the final year of his course he looked for a number of avenues to talk through his experiences and concerns. In one instance after he had experienced an unhappy time in one unit and had arranged to leave the placement early, he contacted me by telephone in order to reflect on his experiences and feelings. Steve was the only student to initiate contact with me outside the agreed contact timetable. During my interactions with Steve during this final year I had to make a conscious effort not to adopt a therapeutic counselling role with him. I instead recommended that he seek help from the School or University's counselling services; advice he chose to act on.

In the final joint meeting with the students after their course had finished, Shaun stated that he had found reflecting on his experiences in the meetings he had with me to be very helpful to him personally and he had used the insights gained in the reflective accounts he had to submit for the course. Grace also felt that talking through her experiences had been helpful to her. There was no evidence to suggest that taking part in the study had adversely affected the students in any way.

The data gathered in stage one acted as a guide to the type of data collected in stage two. One consequence of this was that specific questions were posed to the students and mentors which forced the individuals to consider areas that they might not have otherwise done. For example, Shaun reported that he had been having difficulty in working out drug dosages when in a busy 'depo' clinic. I asked him had he used a ready reckoner or other aid to help with the sliding scale of dosages used. This was something I had observed others using but was not something that Shaun had previously considered. Thus my focussed questioning on a specific coping strategy was potentially influencing his future behaviour. Similarly, Grace was experiencing problems in remembering to undertake activities while working on a busy orthopaedic ward. I asked her had she used a palm held computer or other aid to list tasks to be done, as I had observed how useful this had been for Shaun when out on community placement. Grace said she

had not thought about it before and that she would experiment with this as a means of coping. This suggestion did not lead her to fully use the palm held computer in practice. Two mentors commented that because of my interview with them, they had thought more about their role in supporting students who were dyslexic and how they would behave in future. Although the focussed questions might have influenced the participants, in that they began to consider new options and behaviours, they were still at liberty to accept or reject the possibilities put to them.

Seed (1995) observes that during her three years of fieldwork following a cohort of pre-registration nursing students through their programme, her evolving relationship with the students was of central importance. At the beginning she feared the group members might reject her so she invested considerable energy in developing a rapport with them. Towards the end of her study she increasingly identified with the students and sprang to their defence when colleagues were over critical of the students. My experiences in this study mirror many of Seed's observations. At the beginning of the study I made an effort to get to know the students and to put them at their ease. To do this I sought common areas of interest and made some self-disclosures in order to connect with the students at a personal level, I also fostered an open and friendly atmosphere during interactions. As my relationship with the students developed I also began to identify more with the students. I began to see the world through their eyes rather than as an experienced nurse educationalist. However, I believe that my relationship with the students had a minimal impact on their behaviour, particularly as I was not present with them in the clinical areas.

I felt genuine pleasure in seeing Shaun, Grace and Steve successfully complete the programme and register as nurses.

7.6 CHAPTER SUMMARY

The two-year longitudinal study completed in stage two, provided the opportunity to explore in depth the areas of difficulty dyslexic students experience in practice. It also enabled a full exploration of the coping strategies and support structures that were helpful to the students in overcoming these difficulties.

The information gathered in stage two confirmed the range and type of specific difficulties students experienced in practice, identified in stage one. In addition, data from this stage provided examples of how poor short-term memory affected many aspects of the students' performance, e.g. remembering clients' names or remembering to carry out specific tasks. These difficulties were summarised under the following headings (see section 7.5.1.4, pages 188-198):

- Dealing with information,
- Performing the role,
- Doing drug calculations.

It is reasonable to conclude that individuals who are dyslexic will have specific problems in clinical practice when working to develop the clinical competencies needed to register as a nurse. However, the range and severity of these difficulties will be individual to the student, in turn requiring any support to be individually tailored to the student's needs.

Analysis of the data indicates that there were specific supporting measures that assisted the students while in practice. These included the use of informal support networks, accessing the designated university support officers, using IT equipment such as palm held computers, and personal strategies such as rehearsing difficult tasks like handover report. From the interviews with the seven mentors it became clear that in addition to their stipulated education and assessment role, they also provided specific support to the students that assisted them to cope in practice (see section 7.5.1.5 on mentors, pages 202-205). The mentors determined this specific support themselves, as none had received training or guidance in this area. All bar one, who was herself dyslexic, admitted to having little or no knowledge about dyslexia (see section 7.5.2.1, page 210).

By interviewing the students after each of their six substantive clinical placements during the two year branch programme, it was possible to build up a picture of the types of environment which the students found it easier or more difficult to cope (see section 7.5.3.1, page 215). This suggests that it might be possible to organise the students' programme to offer practice placements where students with specific needs, such as dyslexia, had the best chance of developing competencies.

In section 7.5.4 (see page 221), a reflexive account is provided of the observed effects on the participants and the researcher in conducting a longitudinal study. I gained some insight and understanding about the students' lived experiences by having regular contact with them throughout the two years of their branch programme, which had a direct effect on my personal views. The students felt they had not been adversely affected and in some instances felt they had benefited from participating in the study.

In conclusion, it would appear that dyslexic nursing students do have specific difficulties in practice. Their response to these difficulties was individual and support should be tailored to meet their specific needs. The next chapter will bring the two stages of the study together, and use a theoretical framework to discuss the broader implications of the evidence that has emerged.

CHAPTER 8: DISCUSSION AND RECOMMENDATIONS

8.1 INTRODUCTION

The purpose of this study was to explore the problems dyslexic nursing students have in achieving clinical competence and how they develop coping strategies, to determine how they might be supported in practice, enabling them to meet the standards to register as a nurse. This is an important area of research as the inappropriate support and education of nursing students has direct implications for public protection and the quality of patient/client care. In addition, disability discrimination legislation has for the first time put clear responsibilities on regulators, education providers and employers, which include making anticipatory reasonable adjustments in the workplace and a requirement to act in a non discriminatory way. Individuals and organisations such as the Disability Rights Commission (DRC) could challenge non-compliance with this legislation, which, if upheld, may prove costly for institutions. It is interesting to note that the DRC launched a twelve months Formal Investigation in the public sector in May 2006:

“The regulations and procedures governing entry to, and work in, teaching, nursing and social work are to be subjected to the first detailed legal review of their compliance with the Disability Discrimination Act.”

Because:

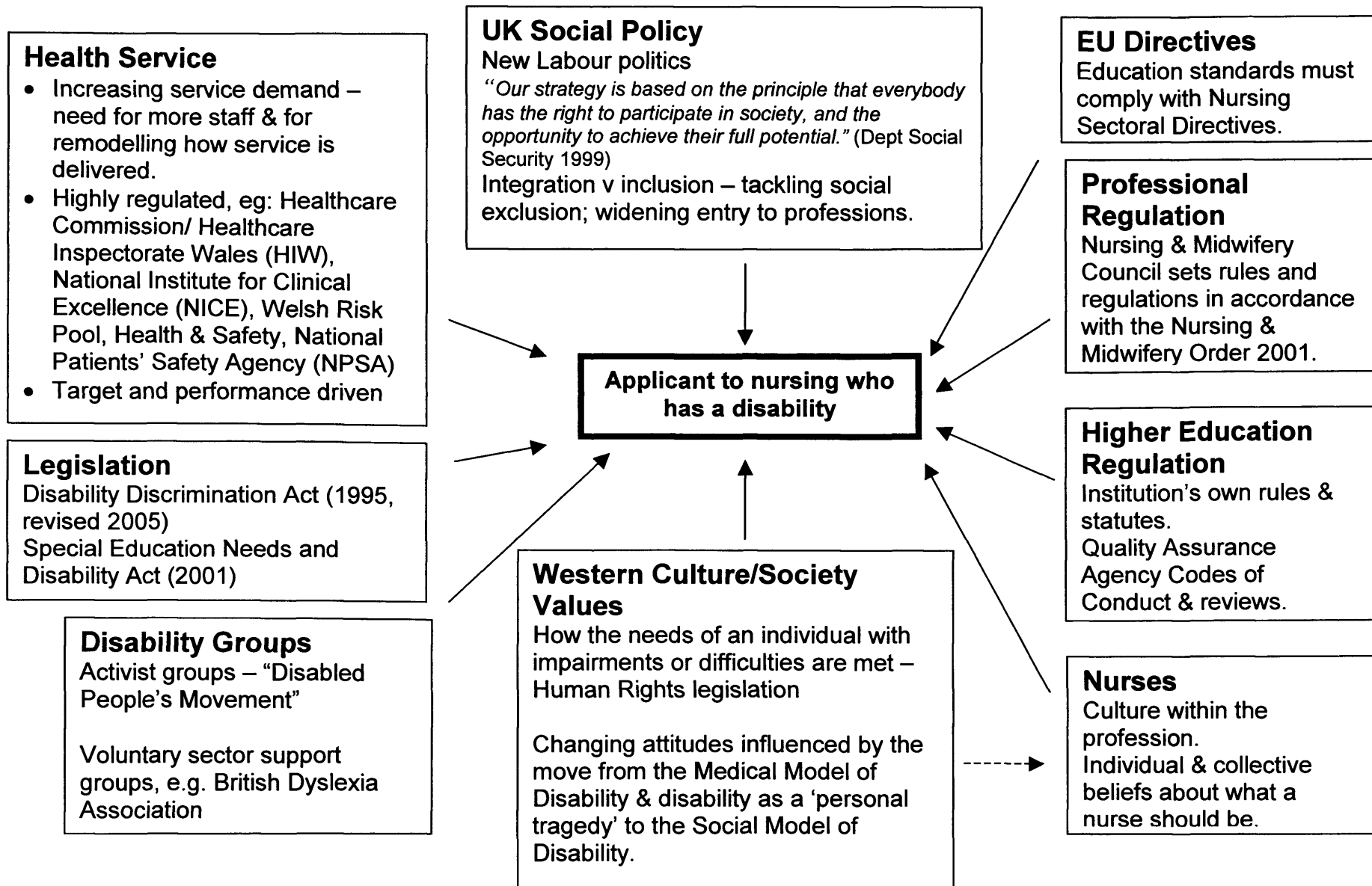
- *“Disabled people are far less likely to be working in professional occupations like teaching, nursing and social care than non-disabled people;*
- *disabled people are still less likely than non-disabled people to be employed in the public sector; and*
- *employers, colleges and regulatory bodies have difficulty deciding who is fit to work, study or register, and cases that we have seen show there is a potential for disability discrimination when these decisions are made.” (DRC, WWW, 2006).*

During the time of this study greater attention was being focussed on the needs and rights of disabled individuals seeking to enter the nursing profession than at any time in the past.

Nurse education does not occur in a vacuum but is influenced by the prevailing political and cultural climate, demands within the health service, and controlled by legislation and regulation. Increasingly the effect of the diversity and equality

agenda is changing the selection, education and employment of disabled individuals seeking to become health professionals. These factors are summarised on figure 8.1 overleaf.

Figure 8.1: Factors that influence an individual with a disability entering the nursing profession



This is not a fixed picture, but one that is constantly evolving. While some changes could occur rapidly, such as a change in the dominant political party in government, cultural and societal belief systems change more slowly.

In the case of dyslexia, the picture is slightly more complicated as there is no agreed view of what dyslexia is or how children and adults should be taught and supported. White (2006a) reports on the Channel 4 Dispatches programme entitled 'The Dyslexia Myth' aired in September 2005. The presenters postulate that the common understanding of dyslexia is not only false but makes it more difficult for some children to receive appropriate help with learning to read. The furore that followed the showing of the programme culminated in Lord Addington tabling a motion in the House of Lords in December 2005 about helping people deal with dyslexia throughout their educational and working lives. Part of the conclusion of this debate was the Government's acceptance of the British Psychological Society (1999) definition of dyslexia and recognition that dyslexia is

"a complex neurological condition and people with dyslexia need proper support to develop reading, writing and comprehension skills essential to succeeding in school, in work and in life" (p17).

The findings from this study, therefore, have relevance to policy makers, regulators and providers of nurse education (academic and health service), as well as for individual dyslexic nurses or for individuals who work closely with other practitioners who are dyslexic. Chapter 9, section 9.2 (see page 254) outlines how the Nursing and Midwifery Council and Health Professions Council used work from this study during 2006, as they revised their guidance in line with the Disability Discrimination Act (2005).

The discussion in this chapter will begin with a summary of the main findings reported in chapters six and seven, followed by acknowledgment of the limitations of this work. Subsequently a systems model of human development will be used to explain how the findings from this study can be applied.

8.2 SUMMARY OF THE MAIN FINDINGS

Chapter six set out a largely descriptive account of the data gathered in stage one of the study, i.e. data were gathered from seven 2nd and 3rd year nursing students

who were dyslexic, eight admissions lecturers, three special needs officers, nine mentors, and school, trusts and university policies. In chapter seven, a 'fine grain' analysis of the data gathered from the two year longitudinal study of four dyslexic nursing students and a sample of seven of their mentors, which built on the findings from stage one, was presented. The main findings from the analysis of the data from the two stages of the study are:

8.2.1 All students in the study had difficulty in clinical practice attributable to the nature and severity of their dyslexia. These difficulties involved dealing with verbal and written information, comprehension of information, constructing reports, remembering things, and being able to prioritise and organise their work within specific timeframes. Some of the students, who were also dyscalculic, had difficulties with drug calculation. Problems were exacerbated by time pressures to complete tasks; being distracted by things going on around them; the speed with which others imparted information; and negative or unsupportive attitudes and behaviour of others, as this affected confidence and self-esteem. These findings support published studies in the clinical experiences of dyslexic nursing students (Tumminia and Weinfield 1983; Shuler 1990; Shellenbarger 1993; Kolanko 2003; Sanderson-Mann et al 2004; Morris and Turnbull 2006) and Illingworth's (2005) study of five dyslexic qualified nurses and two dyslexic nursing assistants. The need for time to process and complete specific activities such as report writing was a common theme linking this study to Kolanko's (2003), Sanderson-Mann et al's (2004) and Morris and Turnbull's (2006) studies. Illingworth's (2005) study indicates that the pressure of work within the health service affects all grades of staff and exacerbates problems experienced by individuals with dyslexia.

8.2.2 The diagnosis of dyslexia impacted negatively on the students' self-image, particularly affecting those diagnosed as adults, which in turn impinged on their feelings of self-worth and performance in practice. The emotional aspect of being a dyslexic student nurse reflects the work of Morgan and Klein (2000) and was evident in Morris and Turnbull's (2006) study of 18 dyslexic student nurses, where they observed that

“being a dyslexic student in clinical practice was emotionally challenging... most [participants] experienced feelings of hurt, shame, embarrassment and anger in the workplace. Stress, fear of ridicule and failure forced some to use strategies of avoidance” (p244).

- 8.2.3 Disclosure decisions by students were influenced by past disclosure experiences, which can be expressed in terms of a positive feedback loop (see figure 6.1 on page 150). For example, if they had experienced a negative reaction previously, they became more cautious or reticent about disclosing, fearing negative consequences to their disclosure and concern about how the disclosure would affect their relationships with the people they planned to disclose to. In some cases hearing stories of discrimination or observing how others were treated also affected disclosure decisions. In May 2005, a case was reported to the Royal College of Nursing Association of Nursing Students Executive about a student with dyslexia who had been forced to wear a badge during their placement which said, *“I am a disabled student”* (News Section, Nursing Standard 2005a, p7). Examples of discriminatory behaviour such as this act as a strong disincentive for students to disclose.
- 8.2.4 The admission lecturers’ selection decisions related directly to how they reconciled the tension they felt about upholding the rights of the individual student to be offered the opportunity to become a registered nurse against the potential risk they thought the student posed to patients/clients because of their specific learning need. This tension was typical in selection decisions where applicants have physical or mental health problems or disability as reported at the Health Professions Wales stakeholder conference on 8th December 2005 on *Making reasonable adjustments in clinical practice for disabled health students* (White 2006b, White 2006c) (see appendix xx. for the position paper produced from the conference).
- 8.2.5 The Nursing and Midwifery Council (2002; 2004e) standards for clinical mentor preparation do not include outcomes for working with students with disabilities. The mentors in this study had therefore not received instruction

on supporting the learning and assessment of students with specific learning needs. The mentors stated that they were unprepared for their role and uncertain how they should act.

8.2.6 Timing and type (nature of the work) of clinical placement either assisted or further challenged dyslexic students as they worked to develop clinical competence. For example, areas such as A&E Departments where there was fast paced change with a broad range of problems to be dealt with, were more challenging to the student than long stay units with slow turn over of clients who had mostly chronic conditions. Illingworth's (2005) study cites the operating room within the theatre department as a challenging place to work. Grace, in stage two, said she found the operating room environment very difficult to manage, mostly due to the number of terms used for procedures and instrumentation.

8.2.7 The students and their mentors recognised that dyslexic students had a responsibility to develop a range of coping strategies to function as a registered nurse, particularly as support was likely to diminish once they were qualified. The students demonstrated a heightened awareness and vigilance particularly in respect of patient safety, especially drug administration. This challenges the assumption held by many nurses that dyslexic individuals are inherently a risk to patient safety (Wright 2000).

8.2.8 The students identified a range of coping strategies they developed in practice, including the use of informal support networks such as family and friends, which depended on their own circumstances and the environment in which they worked. The students sought support from officers with whom they had established a positive relationship, not just those who had a role in supporting students with specific learning needs. The relationship the students had with their mentors was key to developing their clinical competencies. The findings from this study support those reported by Sanderson-Mann et al (2004) and Morris and Turnbull (2006). They are also applicable to the wider body of disabled students as there is resonance with the findings of Wright and Eathorne's (2003) workshop report on

Supporting students with disabilities; the Health Professions Wales' stakeholder conference *Making reasonable adjustments in clinical practice for disabled health students*, held in 2005 (White 2006b, White 2006c); and Wray et al's (2005) PEdDS Project, which looked at disabled social work students and placements.

8.2.9 The students expressed a desire for the formation of peer support groups. This had not been put in place by the schools in this study due to the perceived need to preserve student confidentiality. There were no reported examples of peer support of this nature in the literature reviewed for this study; support offered by the universities tends to be on an individual student basis (Wright 2000).

8.3 LIMITATIONS OF THE RESEARCH

Dyslexia is a 'hidden' disability, therefore, as previously noted, only those students who had been diagnosed by the end of the common foundation programme and had disclosed to the university, were eligible to be included in this study. It is likely that some individuals were excluded because they were unknown to the designated officers in the two schools who recruited the students on my behalf. This assumption was supported by the fact that students in both stages spoke about other students who had chosen not to be assessed or disclose their difficulties. It would have been interesting to capture their views and reasons for non-disclosure.

It was unfortunate that one of the consequences of ensuring student confidentiality was that I was not permitted to know the number of students who were dyslexic at Glynrith until after ethical permission had been granted and I had set up the study. It became apparent later in the study that there were a greater number of dyslexic students at the neighbouring University of Pimbury. Setting the case study at Pimbury rather than Glynrith from the outset might have enabled me to recruit more students to the study. However, this is far from certain because I would have needed to have gone through the same 'gatekeeper' at the University of Pimbury, the Deputy Head of School, who only recruited four out of a possible forty nursing students who had declared they were dyslexic to stage one of the study.

It is acknowledged that having seven students in stage one and four students in stage two, one of whom dropped out of the study during the first year, is too small a number on which to base generalisations for a wider population. However, the students' experiences in this study have resonance with other reported studies and therefore may be symptomatic of the experiences of other dyslexic students. It is further acknowledged that basing the study in a particular geographical area, involving two schools and their associated clinical placements also has implications for the wider generalisation of the work.

There were approximately seventy lecturers employed in the School of Glynrith at the time I recruited eight admissions lecturers to the study. While not all of the teaching staff were routinely involved in admissions, some had research roles or senior management positions, the majority did conduct selection interviews. It was therefore disappointing that the response to the request to take part was low, just sufficient to conduct the study. With the university's attention focussed on non-discriminatory practice through the Special Educational Needs and Disability Act (2001) and Quality Assurance Agency's Codes of Conduct (1999), coupled with the quality assurance role I had at the time of data collection, suggests that lecturers who had strong feelings that students with disabilities should not be training to become nurses, may have excluded themselves from the study. Even those lecturers who did take part may have tempered their views when being interviewed by me. Evidence from the interviews with the students indicated that some lecturing staff were not supportive of disabled students. Unfortunately it is possible that these negative views and the underpinning concerns held by some lecturers were not fully captured in this study.

The University of Glynrith employed a number of officers in their Student Support Unit to assist disabled students. Although I was able to interview one of the dyslexia tutors who had had some contact with nursing students, the Special Needs Officer who had offered the main support to the School of Nursing refused to be interviewed. I did interview one of her colleagues who was able to outline the University's policies in this area, however, the refusal of the University Special Needs Officer to speak to me did diminish the quality of information gained from

this source. I was never offered an explanation for her refusal to be interviewed, nor was she willing to speak with me to raise issues of concern she might have, which at the time was frustrating.

By insisting that the students maintained control over who knew about their diagnosis of dyslexia, meant that the students effectively filtered which mentors in stage two were interviewed. Although it would appear from the data gathered from the mentors that they held a range of views, there was a possibility that by the students selecting 'good' mentors I would not have the opportunity to explore more negative aspects of mentors' views and behaviours.

8.4 DISCUSSION

I began this study with the belief that while dyslexic individuals possessed personal traits and abilities, and previously acquired knowledge and skills that could affect how they developed the competencies to become a registered nurse, I also believed that the context in which they studied was a strong determinant as to whether they were successful or not. It was for this reason that I chose case study methodology with data gathered from a number of sources and not just focussed on the students' experiences. In some ways the approach to the study echoes the principles of the 'Social Model of Disability' – I recognised that students had individual difficulties due to dyslexia, however I also wanted to determine what or who enabled or disabled the student in the environments in which they were studying.

The findings from the study, summarised in section 8.2, have implications at several levels:

- individual student and mentor level,
- school and trust level,
- national policy and UK regulator level.

I therefore returned to the literature to consider different theoretical frameworks that would assist me in viewing the findings from different perspectives. In the following section, the 'contextual' theories of human development are briefly discussed.

8.4.1 Contextual Theories of Development

There are a number of theoretical approaches in developmental psychology, which includes the 'contextual' theorists. In contrast to work by theorists such as Piaget, who sees development as primarily an individual activity, merely influenced by the environment, the contextual theorists see the individual as embedded in the social context and think that human behaviour cannot be understood independently from this context (Miller 1993). While the theme of social context as a determinant in development is common to all contextualists, a number of different perspectives act as a drive for their research. For example, Rogoff uses anthropological and cultural research to inform her research. Her premise is that

“people develop as participants in cultural communities. Their development can be understood only in the light of the cultural practices and the circumstances of their communities – which also change.” (Rogoff 2003, p4)

In terms of this study this would mean exploring the culture and practices of nursing to consider how these affect the development of the nursing student with dyslexia. This approach would pose interesting questions about the effects of socialisation of the dyslexic student into the nursing profession but may not fully explain all of the factors affecting their development of clinical competence.

Vygotsky's Social Development Theory of Learning includes the proposition that cognitive development and social learning is influenced by social interaction, which he calls the Zone of Proximal [nearby] Development (Vygotsky 1978). He postulates that when a more competent person collaborates with a child they can help the child move to the next level through prompting, explanation and role modelling. His view is that learning takes place when the gap from what is known to what can be known is bridged. Although this notion of a zone has been criticised as vague and does not include things such as style of learning, degree of motivation or learning ability (Miller 1993), in the context of this study this proposition has clear relevance to the role of the mentor working with the dyslexic nursing student. The mentor is able to collaborate with the student to help create meaning from their experiences in practice, acquire new knowledge and clinical competencies through spending time with the student to provide explanation and demonstration of the skills, and more generally act as a role model. However,

Vygotsky's work, while useful at the level of student and mentor/teacher, does not explain how the wider context influences the students' development.

At the suggestion of my supervisor, I reviewed the work of Uri Bronfenbrenner, a developmental psychologist, who created the discipline of human ecology and proposed a systems model of human development in his seminal work in 1979: *The ecology of human development*. Bronfenbrenner's approach is unique in that he looks not only at the relationship between the developing person and their immediate environment (proximal relationships), e.g. family, school, but also how the relationships between these settings and the larger context affect the person. I considered that this framework, which includes the wider contextual drivers, would be useful in exploring the implications arising from this study.

8.4.2 Bronfenbrenner's Bioecology Theory of Human Development

Bronfenbrenner describes the "*ecological environment*" as a "*nested arrangement of concentric structures, each contained within the next*" (1979, p22). These structures, working from the inner most circle which contains the individual, outwards, are referred to as: microsystem, mesosystem, exosystem and macrosystem.

In the following descriptions of these systems proposed by Bronfenbrenner (1979), I have taken the factors and drivers for change identified in figure 8.1 and applied them to the different levels.

Microsystem: "*A pattern of activities, roles and interpersonal relationships experienced by the developing person in a given setting with particular physical and material characteristics*" (Bronfenbrenner 1979, p22). In this study, this referred to the roles and personal interactions the dyslexic student nurse had with their peers, mentors, lecturers, special needs officers, patients, health workers in the clinical environment, family and friends.

Mesosystem: "*Comprises the interrelations among two or more settings in which the developing person actively participates*" (Bronfenbrenner 1979, p25).

Examples in this study were the relationship between the University Student

Support Services and the School of Nursing, and the relationship between the School and the clinical placements.

Exosystem: *“One or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person”* (Bronfenbrenner 1979, p25). In relation to this study, this referred to the way the health service and higher education sector responded to the Disability Discrimination Act (1995) and Special Educational Needs and Disability Act (2001); the role and function of the regulatory authorities, i.e. the Quality Assurance Agency and Nursing and Midwifery Council and the response of the education providers to the standards set by the regulators; the standards and regulations that influenced care delivery, e.g. Healthcare Commission, Welsh Risk Pool, National Institute of Clinical Excellence (NICE), that were used by the clinical staff in their practice.

Macrosystem: *“Consistencies, in the form and content of the lower-order systems that exist, or could exist, at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies”* (Bronfenbrenner 1979, p26). In this study this included the wider political context, e.g. Labour Government’s drive for social inclusion and the influence this had on widening the entry gate to health professional training; the UK disability discrimination legislation; beliefs held within the nursing profession, at UK, European and international level about the role of nurses and who should be a nurse; national and international economic forces and changes in age demographics in Western societies that were driving migration of the nursing workforce; Western society beliefs about the rights of the individual and the translation of this into the equality and diversity agenda that underpinned national and local government practices in the UK; and the influence of the activist and voluntary disability groups.

Bronfenbrenner’s original theory has gone through a number of revisions and was renamed as the ‘Bioecological’ model in 1998 (Bronfenbrenner and Morris 1998). Bronfenbrenner responded to criticism by researchers such as Cairns and Cairns (1995) who highlights the importance of time as a determinant in an individual’s

development. Bronfenbrenner also recognises that the biological, genetic and trait characteristics of the individual plays an important part. The model was restated again in 2001 as the 'Bioecological Theory of Human Development' (Bronfenbrenner 2001).

In his last publication prior to his death in September 2005, he restated his beliefs about human development as:

"the phenomenon of continuity and change in the biopsychological characteristics of the human being, both as individuals and groups. This process extends over the life course, across successive generations and throughout historical time, both in the past and in the future".
(Bronfenbrenner 2005 p. xxviii)

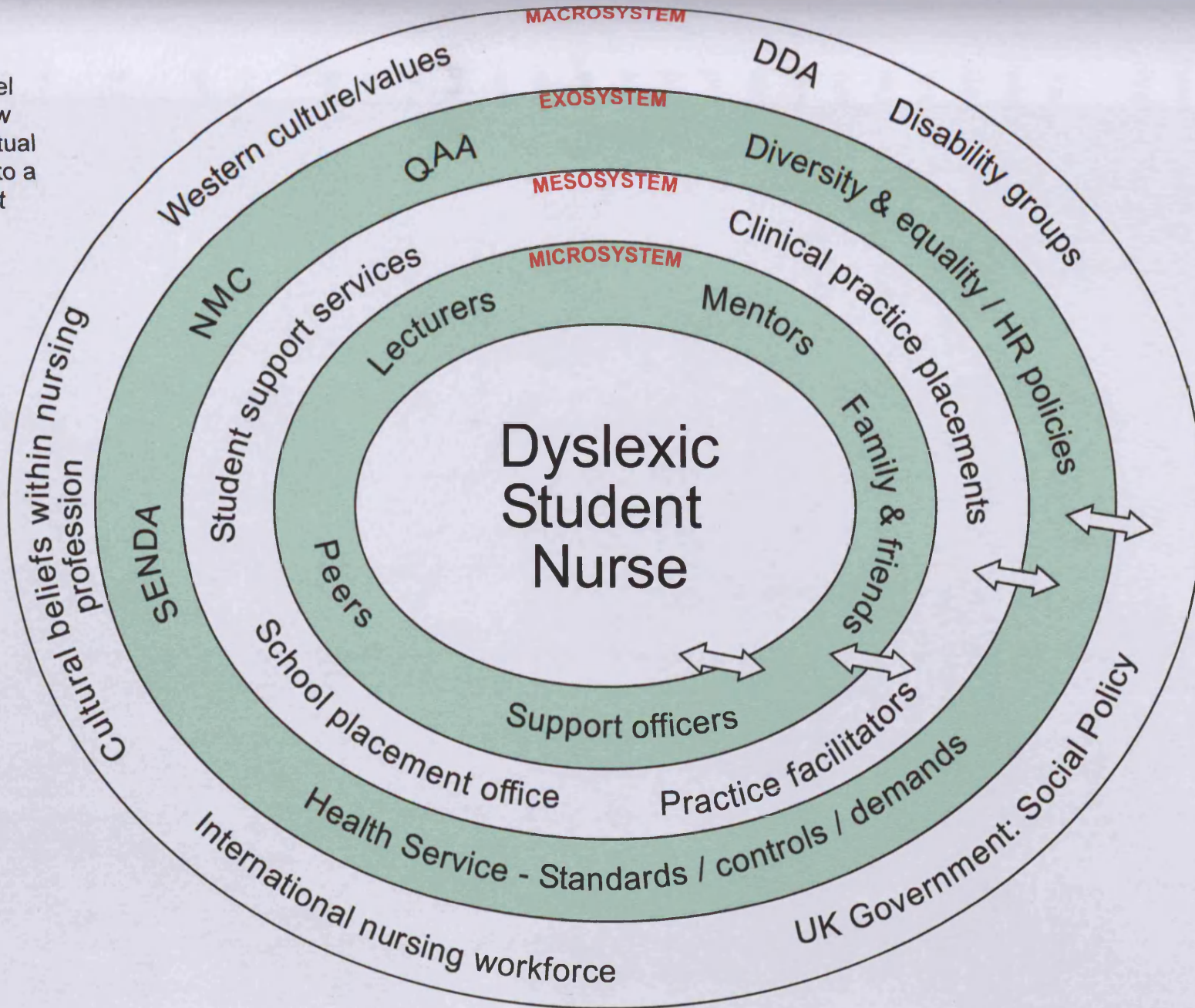
This statement is interesting, as the concept of time has been extended outside that of the individual's life course to include generational and historical events. Moen and Erikson (1995) use Bronfenbrenner's model and views on intergenerational factors to explore the issue of individual psychosocial resilience – the social resources or social connectedness with family, friends and other support networks to withstand stressful events and the personal resources such as self-reliance, self-understanding, values, priorities and maturity. Their study looked at the experiences of mothers and daughters and found that having a mother with high psychological or social resources and observing their mother coping with adversity improved the daughters' resilience. The experiences of the daughters in adulthood also affected their resilience, those who achieved a stable relationship and professional occupational status moderated the effects of having mothers with few social resources, showing that development continues into adulthood.

This work has relevance to this study, as the students needed resilience to cope with nurse training while managing their specific learning difficulties. If we consider the students in stage two, Grace was diagnosed as a child and received support from her family and school. Her parents, especially her mother, were a strong positive influence on her ability to accept her diagnosis and develop coping strategies. She had observed her older sister, who was also dyslexic, overcome her difficulties to become an actor. During the course Grace continued to live at home supported by her family. Grace had the most difficulties out of the four students, as she was moderately dyslexic, dyscalculic, mildly dyspraxic and

epileptic, however she appeared to be the most resilient. In comparison, Steve had a troubled and unstable childhood, was not diagnosed as dyslexic until well into his adulthood and experienced marital breakdown during the course and appeared to be the least able to cope. The implications for this are that when schools are faced with determining the support needed for students with specific learning needs or disabilities they must consider wider issues such as the factors that might influence the individual's resilience or likely resilience to the stresses on the course.

Figure 8.2 overleaf provides an illustration of the Bioecological model of human development adapted to show how the wider environmental contexts and systems interact with a dyslexic nursing student.

Figure 8.2 Bio-ecological model adapted to show how the contextual systems relate to a dyslexic student nurse.



↑
TIME

Bronfenbrenner's research interest was focussed primarily on child development and education, particularly the development of theory and the application of theory to the practical setting. However, he recognised that his work was salient for adults particularly those who faced role transitions or other life changing events, which makes his Bioecological model widely applicable.

To illustrate the applicability of the model, the following are examples of research where the model has been used in the health and social care field. For example, Chapados (2000) considered the experiences of teenagers undergoing treatment and surgery for cleft lip and/or palate and the role of the nurse. This work illustrates the importance in recovery of the proximal relationships between the nurse and patient and their family, the support network between the hospital and home, and the individual understanding the teenagers had about their problems. Grzywacz and Fuqua (2000) use the model to consider how treatment and prevention of poor health could be improved. They identify a number of leverage points and linkages, i.e. socio-economic status, family, work and school, for improving health. Corcoran et al (2000) examined the ecological factors that successfully predicted pregnancy and parenting status in teenagers. They considered predicting factors at three levels, at microsystem level: psychological variables of self-esteem, depression and stress levels experienced and social psychological variables of alcohol and drug abuse; at mesosystem level: variables of family structure, family functioning, problems with friends, the neighbourhood, and the school, as well as social support structures; and the macrosystem level; variables of household income, parents' occupations and race.

The following section will discuss the implications of the findings from this study using Bronfenbrenner's model as a framework and make recommendations.

8.5 APPLICATION AND RECOMMENDATIONS

In considering the findings from the study through Bronfenbrenner's Bioecological systems model (figure 8.2), it can be seen that interactions exist between different levels, from those directly in contact with the students, such as the relationship they had with their mentor, to those far removed, for example the role of the

Disability Rights Commission or UK Government's social policy, which had direct or indirect influence on the education and experience of the dyslexic student. The findings from this study support Bronfenbrenner's assertions about the "*the principle of interconnectedness applying not only within settings but with equal force and consequence to linkages between settings*" (1979, p7), and indicate that while the traits and characteristics of the individual student are important, the relationships within their immediate environment and the external influences that affect that environment are equally as important.

In the following sections the implications arising from the findings from the study, identified in section 8.2, are considered under Bronfenbrenner's differentiated levels: microsystem, mesosystem, exosystem and macrosystem. Development over time is acknowledged as a factor and is identified where appropriate. Recommendations are made under each of the following sections in respect of proposed actions to select and support dyslexic nursing students in practice. Recommendations in respect of the academic element of the programme have not been made as this was outside the remit of this study.

Many of the recommendations arising from this study would improve the learning experience for all student nurses and not just those with a disability or learning need.

8.5.1 Microsystem

The key features at this level are the traits and characteristics that make up the individual and the relationships the individual has within their immediate surroundings. Bronfenbrenner and Evans (2000) use the term proximal process to describe the dynamic transfer of energy between the developing person and the people, objects and symbols that surround them.

The most important and dynamic relationship for the student in practice was with their mentor, who was there to support, teach and assess their competence. However, they also had relationships with the admissions lecturers during the selection process; some had relationships with the university and school special needs officers, and with university and school student counsellors; all had

relationships with academic teaching staff in the roles of teacher, pastoral support, programme manager and link lecturer to placements; and all encountered other health workers, including students, in clinical practice.

It is useful at this point, prior to identifying recommendations applicable at this level, to emphasise the individual factors affecting how dyslexic nursing students in this study developed clinical competence:

- The degree and nature of the specific learning needs.
- The timing and process of diagnosis.
- The support received following diagnosis, including educational and emotional social support from family and friends.
- The individual's confidence, self-esteem and feeling of self-worth following diagnosis and following interactions where they had disclosed they were dyslexic.
- Psychosocial resilience (see page 239)
- Previous experiences and existing coping strategies, which acted as a platform on which to develop clinical competencies.
- Their aptitude, experience and motivation in learning to use information technology and other aids to support them in practice.

Recommendations:

- I. Education providers (school and clinical placements) should recognise that individuals with dyslexia have unique needs. Selection and subsequent support arrangements should take account of the individual's needs. General assumptions about abilities, difficulties and support arrangements should be avoided.
- II. If a student is diagnosed while on the course, the education provider should put in place emotional support mechanisms for the student, recognising that diagnosis has a negative impact on confidence, self-image and feelings of self-worth.

- III. Mentors should establish relationships with the students that are open, non-judgemental, friendly, relaxed and where the students feel able to disclose that they are dyslexic and discuss their learning needs. Dyslexic students should be collaborative partners in determining how their learning needs should be met. They must be encouraged to develop appropriate coping strategies in order to safely function as a registered nurse, where levels of support may be diminished. Students should take responsibility for their own learning needs.
- IV. The mentors need to spend dedicated support and teaching time with the student to explain, demonstrate and role model behaviour.
- V. Mentors and other practitioners involved in teaching and assessing students with specific learning needs in practice should have appropriate preparation and on-going support for their role. This support could be provided by the higher education institutions and through roles such as Practice Facilitators, who are employed specifically to provide support in practice.
- VI. Peer support groups should be established, facilitated initially by designated special needs support officers, but ideally once established, run by and for the students themselves. This may encourage students who have not disclosed to the university/school that they are dyslexic to access support from their peers and may influence future disclosure decision.
- VII. With support from their personal tutors, students should carefully consider where they would seek employment on registration and restrict their choice to areas where they know they can safely practise.

It is accepted that this last recommendation may prove difficult in some areas, due to the financial restrictions some NHS organisations are working under with many jobs frozen. Students may have little choice on qualifying about what jobs are available for them to apply for. So while they have a duty under the Nursing and Midwifery Council Code of Conduct (2004a) to work within their sphere of competency, the pressure to secure a job may mean some individuals get jobs in

areas that will prove challenging due to their dyslexia. 'Restricted registration' is unlikely to be taken up by the Nursing and Midwifery Council, as is currently the case within the teaching profession in the Republic of Ireland, where, for example, unless the teacher has a degree of fluency in Irish Gaelic their practice is restricted. Therefore, to ensure public safety, mentors and other teaching staff 'signing off' students at the end of training must be convinced that they are competent to practice. In the case of the dyslexic student, this means they must have developed coping strategies to enable them to practise safely and competently wherever they end up working.

8.5.2 Mesosystem level

At this level the important relationships identified in the study were between the University Student Support Services and the School of Nursing, and between the School and the Health Service who provided clinical placements. There was no direct relationship between the University Student Support Services and the mentors supporting learning in clinical practice.

Students undergo a process of socialisation into the nursing profession through their exposure to nursing practice in the clinical environments. The culture and accepted practices within the various placements are mainly determined by the wider organisation in which that clinical area sits, e.g. the Trust in which a ward is located.

Recommendations

- VIII. Staff in clinical practice should work with the school to consider ways to adjust the environment to accommodate the students' needs while ensuring standards of patient/client care remain unaffected. Students with specific learning needs should not be seen as a 'problem'.

- IX. Mentors should access expert advice and support from the University Student Support Services and be able to contact designated special needs officers within the school to assist in the teaching, support and assessment of students with dyslexia in practice.

- X. Mentors should access support when faced with difficulties in determining student competence or lack of it. This support could be from specific Practice Facilitator officers employed to support mentors or from link lecturers or other academic officers.

- XI. Guidance or support should be available for teaching and clinical staff involved in admissions to assist them in selection decisions. Schools should establish links with institution wide Student Support Services, and with organisations such as SKILL: National Bureau for Students with Disabilities.

- XII. Schools need to consider the structure of the pre-registration programme, particularly to ensure reading time before assignment submission, and the targeted allocation of placements to be used for dyslexic students.

- XIII. Education providers need to consider the culture within the respective organisations and the impact this has on students' disclosure decisions. Students must be supported so that they can disclose without fear of discrimination.

- XIV. Ideally all officers involved in the teaching and assessment of pre-registration nursing students need to be aware of individuals who require additional specific support.

- XV. Education providers and the clinical placement providers need to have an open discussion about the approach they will take to selecting, teaching and supporting students with disabilities.

8.5.3 Exosystem level

This level includes the role of the regulators and other bodies that set standards for practice or employment. It also includes the consequences of the UK wide agenda to modernise the health service, which has driven changes in the way the health workforce is trained and employed. Demands placed on clinical staff to change the pattern of care delivery, including taking on new roles, can change the quality and type of clinical learning experience the student has in practice. Equally

important is the response made by the education providers (theory and practice) to the disability discrimination legislation and the requirements of the diversity and equality agenda, which determines activities like the human resource practices in an organisation, as this directly affects the staff employed within the settings to which the students are exposed.

The Nursing and Midwifery Council as the UK regulator for nursing and midwifery, sets the standards for education and practice of nurses, and as such has a key role in determining how education providers accommodate students with specific learning needs. As has been previously observed in the literature review, during the time of this study the Nursing and Midwifery Council provided little guidance to the schools in respect of how they should deal with disabled students merely stating that the universities must comply with the Disability Discrimination legislation.

It is important to note that the role of the regulator is to set standards for registration but that does not confer automatic rights of employment for the individual. In essence, the Nursing and Midwifery Council ensures fitness for practice at the point of registration. The broader issue of fitness for purpose relates to competency to perform specific roles and is the responsibility of the employer to ensure that the individual is fit to undertake the job in question.

Recommendations

- XVI. Diversity and equality awareness training should be mandatory for all health workers.

- XVII. Health service providers need to promote a culture within practice that accepts diversity in its workforce, with accommodation of individual students and staff with specific needs.

- XVIII. Service providers, supported by organisations such as Informing Healthcare [Welsh Assembly Government agency supporting use of technology in Wales NHS], should consider the use of information technology in practice; for

example, increasing the use of hand held and desktop equipment by students and staff in care settings to record patient care.

- XIX. The Nursing and Midwifery Council should produce detailed guidance for education providers in supporting students with specific needs, including reference to the support they should receive in practice. Such guidance should also be available for the public, particularly for individuals who may wish to seek a career in nursing. The guidance must acknowledge what is reasonable and practicable in clinical practice, and indicate that not everyone will be able to become a registered nurse, even with adjustments. The rights of the patient to receive competent quality care must override all other considerations.

8.5.4 Macrosystem level

This level encompasses the broader political and cultural context in which nurse education is embedded.

There is evidence that the nursing workforce is influenced by economic, political and demographic changes. This includes the increasing migration of workers (Adams and Stilwell 2004), for example, the European Union (EU) was enlarged in 2004 and is continuing to enlarge as more countries accede. Accession gives automatic rights to its workers to seek employment without barriers in other countries in the Union. EU initiatives such as the Bologna Declaration (1999), which set in motion work to harmonise higher education across the Union and also includes the 'Tuning' project (2000) which seeks to harmonise nursing competencies at the point of registration, should allow greater movement of nurses. Nurses from outside the EU also seek to work in the UK. From 2005 this has meant Nursing and Midwifery Council approved applicants need to undertake an 'Overseas Nurses programme' in order to register. The consequence of migration is that not only will schools and service providers need to have in place policies for home grown students and staff who have specific learning needs, but also individuals whose first language may not be English, and who may have had very different schooling experiences. This issue lies outside the scope of this study but does indicate an area for future work at a macrosystem level.

There are some tensions in the drivers for change at this macrosystem level; for example, the Labour Government's determination to tackle social exclusion has influenced institutions and regulators to widen the entry gate to professional training. Until 2004 all nursing applicants for a pre-registration nursing diploma programme had to have attained 5 GCSEs at C grade or above. However, when the revised Nursing and Midwifery Council *Standards of Proficiency for Pre-registration Nursing* (2004c) were introduced to coincide with the launch of the new professional register, the standard simply stated that applicants were required to provide evidence of literacy and numeracy sufficient to undertake the academic and practice elements of the course, rather than attainment of specific academic qualifications. This came at a time when nurses were taking on more complex and specialised roles, including nurse prescribing and nurse led services, where it could be argued that greater evidence of academic ability prior to entry should be required. Additionally Wales moved to all degree level training in 2004, which meant that the individual universities, rather than the regulator, set the entry criteria. From a dyslexic student's point of view this change of entry criteria by the regulator should be beneficial, as many will have struggled with qualifications where examination is a key feature. Evidence to support this comes from the higher percentage of entrants who are dyslexic who use the Access to Higher Education programmes to enter nurse education (HESA 2003). However, it could mean that some individuals are admitted onto programmes who subsequently find they are unable to meet the academic demands of the course.

As the information technology (IT) revolution continues to change modern life, its impact will be increasingly felt in the health sector. Work on such things as the Electronic Patient's Record and development of an electronic based Unified Assessment Process (UAP), which allows sharing of patient/client information across health and social services, will mean that increasingly nurses record patient care electronically. This would certainly assist individual practitioners who are dyslexic as the technology provides spelling and grammar checks, as well as the ability to copy and paste from other reports, thus avoiding the need for copious hand written reports. The students in this study certainly benefited from IT in their academic work, but were far less successful in using electronic aids in practice.

The trial of alternative technologies by the dyslexic students in practice was outside the remit of this study.

Recommendations

- XX. Regulators and education providers need to respond positively to any recommendations arising out of the Formal Investigation undertaken by the Disability Rights Commission (2006/07).

- XXI. The national NHS programmes established to develop methods, tools and technologies such as Informing Healthcare in Wales should consider how technology could assist disabled health workers in practice.

8.6 AREAS FOR FUTURE STUDY

The key relationships for nursing students in clinical practice are those they have with their mentors and other staff who support their learning (Twentyman et al 2006). As previously stated during the three years the student studies in order to develop the competencies of the registered nurse, dyslexic students need to receive guidance and practical support in developing coping strategies to overcome their learning difficulties, which are specific in nature to each individual nurse. This study identified the need for mentors and teaching staff to be prepared to enable this development to happen. What this study was not able to address in the time permitted was how the mentors and lecturers should best be prepared for this role.

While the new *Standard to support learning and assessment in practice* (2006), developed by the Nursing and Midwifery Council includes reference to the preparation of mentors and teaching staff to work with disabled students, it does not advise on the method of preparation or content to be delivered. This suggests that further work is needed in this area.

The *Standard for supporting learning and assessing in practice* (NMC 2006) also introduces the concept of a 'Sign-off' mentor from September 2007. This is a mentor who has had additional training to prepare them to undertake the final assessment of a student's competence at the end of the 3 years nurse training

programme. This role was introduced as a response to reports such as Duffy (2003), which highlighted the difficulty mentors had in failing a student in practice. The analysis of the data from this study suggests that some mentors and lecturers have concerns about the ability of dyslexic students to practise safely because of their learning difficulties. It was mooted that staff may fear being accused of discriminatory behaviour if they fail disabled students and that this may result in students inappropriately being 'signed off' as competent. Confidence in the mentors' decision in determining whether individual students are competent in practice is paramount in terms of protecting the public. Therefore, evaluation of the impact of the 'sign-off' mentor role, particularly decisions for disabled students needs to be undertaken in future.

8.7 CONCLUSION

Evidence generated in this study has identified the types of difficulties and challenges faced by dyslexic individuals during the three year pre-registration nursing programme. It has provided valuable insight into the tensions that exist within educational systems about selecting and supporting dyslexic students, particularly in clinical practice. It appears that some members of the nursing profession are fearful of the consequences of permitting dyslexic individuals to register as nurses due to what they perceive as a potential risk to patient/client safety. These fears are often not founded on evidence but can create a culture and environment where discrimination can occur.

The disability legislation means that health education providers (theory and practice) have a duty to individuals with specific learning needs seeking to become nurses. Dyslexic nursing students are entitled to have reasonable adjustments made in the clinical placement areas, wherever possible, and should receive adequate support to enable them to develop clinical competency. However, although support and adjustments can be put in place, the ultimate responsibility remains with the dyslexic person to develop robust coping strategies that will enable them to safely practise.

CHAPTER 9 POSTSCRIPT

9.1 PERSONAL REFLECTIONS

When I began this study in 2002, like many other nurses I had genuine concerns about whether people who had specific learning difficulties that affected their ability to process information would be able to safely function as a registered nurse. At that time I was rather ignorant about the subject and had no personal experience of family or friends affected by this condition on which to draw. The subject was an emotive one as it encompassed issues of individual rights, stigmatisation, discrimination, the potential for employment, legislation, protection of the public and rights of patients for high quality care, making it difficult to discuss the issue dispassionately with my colleagues.

I was not alone in my concerns as is evident from the fact that the subject is frequently discussed in the nursing journals, often in fervent terms. These letters are often sparked by suggestions of changes in legislation or regulation or by an example of discrimination, e.g. In September 2005 the news section of the Nursing Standard reported that the Council for Healthcare Regulatory Excellence was *“considering whether people who have dyslexia should be allowed to join any health profession...Council members were concerned that people with dyslexia may make mistakes”* (2005b, p5). There followed from this a number of letters from dyslexic nurses (O’Dowd 2005, Rigby 2005, Mullally 2005, Somers 2005, Morgan 2005), challenging the negative perception people held about dyslexic nurses. It also sparked a response from Kathy George the Director of Standards and Registration at the Nursing and Midwifery Council in which she stated,

“the NMC does not believe it would be a good idea to bar all people with dyslexia from nursing... However, we are also aware that we have received complaints from a small number of employers about a handful of nurses’ fitness for practice on the grounds of their dyslexia” (2005, p38).

The second half of this statement has continued to fuel nurses’ and managers’ concerns, as for the first time there is small but tangible evidence that there is a problem with some practitioners. These cases are not in the public domain so further comment on them in this study is difficult.

My research journey over the period of the study and particularly from the insights I gained from the students in stage two, has modified my views and removed some of the uncertainty I felt about dyslexic individuals entering nursing. I now believe that dyslexic individuals who are mildly or moderately affected can be supported and are capable of functioning effectively as registered nurses. However, this view is tempered by several factors, especially the need for the individual to take responsibility and ownership of their learning needs, recognise where they have problems and actively develop appropriate coping strategies; and that individuals on qualifying should seek employment in environments where they will be able to function safely to meet their professional accountability – in other words be fit for the purpose and practice of nursing.

There is also clearly a need for the health service to respond to the requirement of making reasonable adjustments to accommodate the needs of its staff.

9.2 POLICY INFLUENCE

During 2005 I was an invited member of the Health Professions Council Partnership Liaison Group, which was set up to establish guidance for the thirteen professional groups it regulates, in respect of the Disability Discrimination Act (2005). Two documents: *A disabled person's guide to becoming a health professional* and *Information about the health reference*, were developed by the group, which were consulted on in 2006 with an anticipated implementation in 2007. These documents provide far greater guidance, with illustrative case studies, than that offered by other health regulators, such as the Nursing and Midwifery Council. The group used evidence from this study, in the development of the two documents. As this style of guidance is new, evaluation will need to be undertaken in future and good practice shared across the regulators.

At the time of writing this chapter (mid 2006) the Nursing and Midwifery Council was conducting a major review to ensure nursing and midwifery students were fit to practise at the point of registration. I was a member of the Nursing and Midwifery Council Coalition Group, which had UK-wide stakeholder representation, with a remit to provide overall direction to this work. One of the major pieces of work undertaken during this review was the revision of the standards for the

preparation of mentors, practice teachers and lecturers. On my recommendation, arising from the findings in this study, the Nursing and Midwifery Council agreed to include specific instructions that mentors and lecturers should have preparation to work with disabled students. The *Standard to support learning and assessment in practice* was published in August 2006 and comes into effect in September 2007. It includes the following guidance:

“... all mentors, practice teachers and teachers should receive disability equality training. Programme providers should work in partnership to prepare the placement areas for supporting students with disabilities and prepare students for the demands the placements will make of them. In particular learning environments, in practice and academic settings, should enable students to be confident that disclosure of their specific needs will not lead to discrimination. Consideration should be given to allocating time for mentors, practice teachers and teachers to meet the special needs of students with disabilities.” (NMC 2006, p12)

Another piece of work undertaken by the Nursing and Midwifery Council between April and September 2006 was a review of the guidance issued by them for students, higher education institutions and prospective applicants, in light of the Disability Discrimination Act (2005). I was an invited member of the steering group overseeing this review. The recommendations from this study informed the work of the officers revising the guidance. The revised guidance will be published during the 2006/07 academic year and come into effect immediately.

REFERENCE LIST

- Adams A and Stilwell B (2004) Health professionals and migration. *World Health Organisation Bulletin*. 82(8): 559-636
- Adler PA and Adler P (1994) Observational techniques. In Denzin NK and Lincoln YS (Eds) *Handbook of Qualitative Research*. London: Sage (p377-392)
- Allen L (2002) Dyslexia is not a cause for concern – ignorance is. *Nursing Standard*. 16(35): 30
- Anonymous (1994) Dyslexia spells trouble. *Nursing Standard*. 8(15): 52
- Ansari D and Karmiloff-Smith A (2002) Atypical trajectories of number development: a neuroconstructivist perspective. *Trends in Cognitive Sciences*. 6(12): 511-516
- Åstedt-Kurki P and Isola A (2001) Humour between nurse and patient, and among staff: analysis of nurses' diaries. *Journal of Advanced Nursing*. 35(3): 4520
- Bakker DJ (1979) Hemispheric differences and reading strategies: two dyslexias? *Bulletin of the Orton Society*. 29: 84-100
- Barnes C, Mercer G and Shakespeare T (1999) *Exploring Disability: A sociological introduction*. Cambridge: Polity Press
- BBC News Thursday 27th July 2000. *Ex-pupil can sue over dyslexia*. [WWW] <URL: <http://www.news.bbc.co.uk/1/hi/wales/852919.stm> > [Accessed 16.1.03]
- Beck DL and Srivastava R (1991) Perceived level and sources of stress in baccalaureate nursing students. *Journal of Nursing Education*. 30(3): 127-133
- Blankfield S (2002) Greatest problem with dyslexia is attitude. *Nursing Standard*. 16(42): 30-31
- Block JH (1971) *Mastery learning: theory and practice*. New York: Rineholt, Winston and Holt
- Boder E (1973) Developmental dyslexia: a diagnostic approach based on three atypical reading patterns. *Developmental Medicine and Child Neurology*. 15: 663-687
- Bogdewic SP (1999) Participant Observation. In Crabtree BF and Miller WL (Eds) *Doing Qualitative Research*. 2nd Ed. London: Sage Publications (p 47-70)
- British Dyslexia Association [WWW] <URL: <http://www.bda-dyslexia.org.uk> > [Accessed 24.3.03]

British Psychological Society (1999) *Dyslexia, literacy and psychological assessment. Report of a working party of the Division of Educational and Child Psychology*. Leicester: British Psychological Society

Bronfenbrenner U (1979) *The ecology of human development*. Cambridge, MA: Harvard University Press

Bronfenbrenner, U. (2001). The theory of human development. In Smelser NJ and Baltes PB (Eds.), *International encyclopedia of the social and behavioral sciences*. Volume 10. New York: Elsevier (p6963-6970)

Bronfenbrenner U (2005) *Making human beings human*. Thousand Oaks, California: Sage Publishers Inc

Bronfenbrenner U and Evans GW (2000) Development science in the 21st Century: emerging questions, theoretical models, research designs and empirical findings. *Social Development*. 9(1): 115-125

Bronfenbrenner U and Morris PA (1998) The ecology of developmental processes. In Lerner RM (Ed), *Handbook of Child Psychology*. Volume 1. 5th Ed., New York: Wiley (p993-1028)

Bryman A (1999) The debate about quantitative and qualitative research. In Bryman A and Burgess RG (Eds) *Qualitative research: volume 1*. London: Sage Publications Ltd. (p35-69)

Bryman A and Burgess RG (1999) *Qualitative research: volume 1*. London: Sage Publications Ltd.

Burton D (2000) Data collection issues in survey research. In Burton D (Ed) *Research training for social scientists*. London: Sage Publishers (p320-334)

Cairns RB and Cairns BD (1995) Social ecology over time and space. In Moen P, Elder GH and Lüscher K (Eds) *Examining lives in context: perspectives on the ecology of human development*. Washington DC: American Psychological Association (p397- 421)

Castles A and Coltheart M (1993) Varieties of developmental dyslexia. *Cognition*. 47:149-180

Channel 4 Dispatches "The Dyslexia Myth" aired September 2005. [WWW] <URL: http://www.channel4.com/news/microsites/D/dyslexia_myth/ > [Accessed 1.5.06]

Chapados C (2000) Experience of teenagers born with cleft lip and/or palate and interventions of the health nurse. *Issues in Comprehensive Pediatric Nursing*. 23(1): 27-38

Collins P (1998) Negotiating Selves: Reflections on 'Unstructured' Interviewing. *Sociological Research Online*. 3(3) [WWW] <URL: <http://www.socresonline.org.uk/socresonline/3/3/2.html> > [Accessed 23.1.06]

Confederation of EU Rectors Conferences and Association of European Universities (1999) *The Bologna Declaration: on the European space for higher education*. [WWW] <URL: http://ec.europa.eu/education/policies/educ/bologna/bologna_en.html > [Accessed 20.2.06]

Corcoran J, Franklin C and Bennett P (2000) Ecological factors associated with adolescent pregnancy and parenting. *Social Work Research*. 24(1): 29-39

Corlett S (1999) But nurses remain central to the NHS' success. *The Guardian*. 13 January, p 17, cited by Konur O (2002) Access to nursing education by disabled students: rights and duties of nursing programs. *Nurse Education Today*. 22: 364-374

Crowther A (2002) *Why women should be nurses and not doctors – some nineteenth century reflections*. (In collaboration with the Department of Nursing, University of Glasgow.) UK Centre for the History of Nursing and Midwifery. [WWW] <URL: <http://www.ukchnm.org/> > [Accessed on 16.8.05]

Dale M and Taylor B (2001) How adult learners make sense of their dyslexia. *Disability and Society*. 16(7): 997-1008

Data Protection Act (1998) HMSO: Norwich

Davis RD and Braun EM (1994) *The gift of dyslexia*. London: Souvenir Press

De Fries JC (1991) Genetics and dyslexia: an overview. In Snowling MJ and Thomson M (Eds) *Dyslexia: integrating theory and practice*. London: Whurr Publishers Ltd (p21-30).

Department of Education and Skills (UK) (2002a) *Consultation on descriptions of SEN categories to be used in the pupil level annual schools census from 2004*. [WWW] <URL: http://www.dfes.gov.uk/sen/documents/classification_of_SEN.htm > [Accessed 25.3.03]

Department of Education and Skills (UK) (2002b) *Providing Work Placements for disabled students: a good practice guide for further and higher education institutions*. Nottingham: DfES [WWW] <URL: <http://www.lifelonglearning.co.uk/placements/placeme1.pdf> > [Accessed 8.1.06]

Department of Education and Skills (UK) (2006) *Trends in education and need: Special Educational Needs* [WWW] <URL: <http://www.dfes.gov.uk/trends/index.cfm?fuseaction=home.showIndicatorandcid=3andiid=13> > [Accessed 10.8.06]

Department of health (2000) *An organisation with a memory*. London: The Stationery Office

Department of Health (2001) *Research Governance Framework for Health and Social Care in England*. London: Department of Health

Department of Health (2006) *Consultation: The regulation of the non-medical healthcare professions*. Leeds: Department of Health

Department of Health and Social Services (2001) *Research Governance Framework for Health and Social Care in Northern Ireland*. Belfast: Department of Health and Social Services

Department of Trade and Industry (2004) *Fairness for all: a new commission for equality and human rights* [White paper] Norwich: HMSO

Denzin NK and Lincoln YS (1994) Introduction: entering the field of qualitative research. In Denzin NR and Lincoln YS (Eds) *Handbook of qualitative research*. London: Sage publications (p1-17)

Denzin NK and Lincoln YS (1998) *Collecting and interpreting qualitative materials*. London: Sage Publications

Disability Rights Commission (2005) *Case report on Nikki Heazell* [WWW] <URL: <http://www.drc-gb.org/newsroom/videodetails.asp?id=8> > [Accessed 16.8.05]

Disability Rights Commission (2006) *DRC launches first formal investigation into public sector fitness standards* [WWW] <URL: http://www.drc-gb.org/newsroom/news_releases/2006/2006-05-16.aspx > [Accessed 1.8.06]

Disability Rights Task Force (1999) *From Exclusion to Inclusion* [WWW] < URL: http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/divisionhomepage/611413.hcsp > [Accessed 9.4.06]

Disability Discrimination Act (1995) Norwich: HMSO

Disability Discrimination Act (2005) Norwich: HMSO

Duffin C (2001) Staff with dyslexia need more support at work. *Nursing Standard*. 16(13-14-15): 6

Duffy K (2003) *Failing students: a qualitative study of factors that influence the decisions regarding assessment of students' competence in practice*. London: NMC [WWW] <URL: <http://www.nmc-uk.org/aArticleSearch.aspx?SearchText=failing%20to%20fail> > [Accessed 28.3.06]

Dunne K, Sullivan K and Kernohan G (2005) Palliative care for patients with cancer: district nurses' experiences. *Journal of Advanced Nursing*. 50(4): 372-385

Eisenhardt KM (1999) Building theories from case study research. In Bryman A and Burgess RG (Eds) *Qualitative research: volume 1*. London: Sage Publications (p135-159)

- Eliason MJ (1992) Nursing students with learning disabilities: appropriate accommodations. *Journal of Nursing Education*. 31(8): 375-376
- Ersser S (1996) Ethnography in clinical situations: an ethical appraisal. In De Raeve L (Ed) *Nursing Research: An ethical and legal appraisal*. London: Bailliere Tindall (p42-56)
- European Commission (2000) *Tuning educational structures in Europe*. [WWW] <URL: http://ec.europa.eu/education/policies/educ/tuning/tuning_en.html > [Accessed 20.2.06]
- Evans BJW and Drasdo N (1991) Tinted lenses and related therapies for learning disabilities: an overview. *Ophthalmic and Physiological Optics*. 2: 206-217
- Evans BJW (1994) The intuitive colorimeter: friend or foe? Part 1. *Optician*. 207(5436): 18-22
- Everatt J, Steffert B and Smythe I (1999) An eye for the unusual: creative thinking in dyslexics. *Dyslexia*. 5(1): 28-46
- Field PA and Morse JM (1991) *Nursing research: The application of qualitative approaches*. London: Chapman and Hall
- Firth JA (1986) Levels and sources of stress in medical students. *British Medical Journal*. 292: 1177-1180
- Firth U (1997) Brain, mind and behaviour in dyslexia. In Hulme C and Snowling M (Eds) *Dyslexia: biology, cognition and intervention*. London: Whurr (p1-19)
- Firth U (1999) Paradoxes in the definition of dyslexia. *Dyslexia*. 5: 192-214
- Fletcher JM (2002) The nature of learning disabilities. In Dickman GE, Hennessy NL, Moats LC, Rooney KJ and Tomey HA (Eds). *The International Dyslexia Association: response to OSEP summit on learning disabilities*. (p3-12.) [WWW] <URL: <http://www.interdys.org> > [Accessed 25.3.03]
- Fontana A and Frey JH (2000) The interview: from structured questions to negotiated text. In Denzin NR and Lincoln YS (Eds) *Handbook of qualitative research*. 2nd Ed. London: Sage publications (p645-672)
- Francks C, MacPhie IL and Monaco AP (2002) The genetic basis of dyslexia. *Lancet Neurology*. 1(8): 483-490
- Galaburda AM (1989) Ordinary and extraordinary brain development: anatomical variation in developmental dyslexia. *Annals of Dyslexia*. 39: 67-79
- Galaburda AM and Livingstone M (1993) Evidence for a magnocellular defect in developmental dyslexia. In Tallal P, Galaburda AM, Limas RR and von Euler C

(Eds) *Temporal information processing in the nervous system: special reference to dyslexia and dysphasia*. New York: The New York Academy of Science. (p70-82)

Galambos D (1998) *To disclose or not to disclose – a question for adult learners with learning difficulties*. Unpublished PhD thesis, Graduate Dept of Human Development and Applied Psychology, Ontario Institute for Studies in Education, Toronto University

George K (2005) Blanket ban on those with dyslexia could be unlawful. *Nursing Standard*. 20(6): 38

Gergen MM and Gergen KJ (2000) Qualitative inquiry: tensions and transformations. In Denzin NR and Lincoln YS (Eds) *Handbook of qualitative research*. 2nd Ed. London: Sage publications (p1025-1046)

Gersons-Wolfenberger DCM and Ruijssenaars WAJMM (1997) Definition and treatment of dyslexia: a report by the Committee on Dyslexia of the Health Council of the Netherlands. *Journal of Learning Disabilities*. 30(2): 209-213

Gilroy DE and Miles TR (1996) *Dyslexia at college*. 2nd Ed. London: Routledge

Gleeson BJ (1997) Disability Studies: A historical materialist view. *Disability and Society*. 12(2): 179-204

Goffman E (1959) *The presentation of self in everyday life*. New York: Anchor Books, Doubleday

Goffman E (1963) *Stigma: notes on the management of spoiled identity*. Harmondsworth, England: Penguin Books

Gribbs GR (2002) *Qualitative data analysis: Explorations with NVIVO*. Buckingham, UK: Open University Press

Grzywacz JG and Fuqua J (2000) The social ecology of health: leverage points and linkages. *Behavioural Medicine*. 26(3): 101-15

Guba EG (1990) *The paradigm dialogue*. Newbury Park, CA: Sage publications

Hammersley M (1996) The relationship between qualitative and quantitative research: paradigm loyalty versus methodological eclecticism. In Richardson JTE (Ed) *Handbook of research methods for psychology and social sciences*. Leicester: BPS Books (p159-174)

Hammersley M (1999) Deconstructing the qualitative-quantitative divide. In Bryman A and Burgess RG (Eds) *Qualitative research: volume 1*. London: Sage Publications (p70-83)

Hand H (2003) The mentor's tale: a reflexive account of semi-structured interview [reflexivity in research]. *Nurse Researcher*. 10(3): 15-27

Hatcher J, Snowling MJ and Griffiths YM (2002) Cognitive assessment of dyslexic students in higher education. *British Journal of Educational Psychology*. 72: 119-133

Health and Safety Executive (2000). *The scale of occupational stress: The Bristol stress and health at work study*. Contract report 265/2000 HSE Books: London

Health and Safety Executive (2006) *Work-related stress page* [WWW] <URL: <http://www.hse.gov.uk/stress/> > [Accessed 2.4.06]

Health Professions Council (2005a) *A disabled person's guide to becoming a health professional* [WWW] <URL: <http://www.hpc-uk.org/publications/> > [Accessed 1.8.06]

Health Professions Council (2005b) *Information about the health reference* [WWW] <URL: <http://www.hpc-uk.org/publications/> > [Accessed 1.8.06]

Henderson V (1960) *Basic principles of nursing care*. London: ICN

Henwood KL and Pidgeon NF (1993) Qualitative research and psychological theorising. In Hammersley M (Ed) *Social research: philosophy, politics and practice*. London: Sage Publications. (p14-32)

Higher Education Statistics Agency. (2003) *Entrants to undergraduate programmes by level, entry qualification and disability 2000/2001*. [WWW] <URL: <http://www.hesa.ac.uk> > [Accessed 29.3.03]

Higher Education Statistics Agency (2006) *First year UK domiciled HE students by qualification aim, mode of study, gender and disability 2004/05*. [WWW] <URL: <http://www.hesa.ac.uk> > [Accessed 1.8.06]

HM Treasury (2002) *Securing Our Future Health: Taking a Long-Term View*. Norwich: HMSO

Hogg MA and Vaughan GM (2002) *Social Psychology*. 3rd Ed. Harlow, England: Pearson Education Limited

Illingworth K (2005) The effects of dyslexia on the work of nurses and healthcare assistances. *Nursing Standard*. 19(38): 41-48

Individuals with Disabilities Education Act (amendments of 1997). 105th US Congress, Public Law 105-117 [WWW] <URL: http://www.ed.gov/offices/OSERS/Policy/IDEA/the_law.html > [Accessed 12.03.03]

Individuals with Disabilities Education Act (amendments of 2004). 108th US Congress, Public Law 108-446 [WWW] <URL: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_cong_public_laws&docid=f:publ446.108 > [Accessed 12.09.06]

International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) (1996) *Guidelines for good clinical practice E6(R1)*. [WWW] <URL: <http://www.corec.org.uk/applicants/help/guidance.htm#consent> > [Accessed 1.8.06]

International Council of Nurses (1987) *Position statement*. Geneva: ICN

International Council of Nurses (1998) *Scope of nursing*. Geneva: ICN

International Council of Nurses (2002) *The ICN definition of nursing*. Geneva: ICN [WWW] <URL: <http://www.icn.ch/definition.htm> > [Accessed 10.8.06]

International Dyslexia Association. [WWW] <URL: <http://www.interdys.org> > [Accessed 12.3.03]

Janesick VJ (2000) The choreography of qualitative research design: minuets, improvisations, and crystallizations. In Denzin NR and Lincoln YS (Eds) *Handbook of qualitative research*. 2nd Ed. London: Sage publications (p379-400)

Jones MC and Johnston DW (1997) Distress, stress and coping in first-year student nurses. *Journal of Advanced Nursing*. 26(3): 475-482

Jones EE and Pittman (1982) Toward a general theory of strategic self-presentation. In Suls J (Ed) *Psychological perspectives on the self*. Volume 1, Hillsdale, New Jersey: Erlbaum (p231-62.)

Jorgensen DL (1989) *Participant Observation: A methodology for human studies*. Newbury Park, CA: Sage Publications

Kolanko K (2003) A collective case study of nursing students with learning disabilities. *Nursing Education Perspectives*. 24 (5): 251-256

Lamb GS and Huttlinger K (1989) Reflexivity in nursing research. *Western Journal of Nursing Research*. 11(6): 765-772

Learning Disabilities Associations of America (2002) *Specific Learning Disabilities: Finding Common Ground*. [WWW] <URL: http://www.ldanatl.org/legislative/joint_activities/commonground.asp > [Accessed 10.8.06]

Lee P (2002) Shooting for the Moon: politics and disability at the beginning of the twenty-first century. In Barnes C, Oliver M and Barton L (Eds) *Disability Studies Today*. Cambridge: Polity Press (p139-161)

Magilvy JK and Mitchell AC (1995) Education of nursing students with special needs. *Journal of Nursing Education*. 34(1): 31-36

Manis FR, Seidenberg MS, Doi LM, McBride-Chang C and Petersen A (1996) On the bases of two subtypes of developmental dyslexia. *Cognition*. 58: 157-195

Martin N (2001) Dyslexia – A universal language deficit? *The Psychologist*. 14(6): 318-319

Mason J (1996) *Qualitative researching*. London: Sage Publications

Masutto C, Bravar L and Fabbro F (1994) Neurolinguistic differentiation of children with subtypes of dyslexia. *Journal of Learning Disabilities*. 27(8): 520-526

May L (1999) Call for clearance on occupational health. *Nursing Standard*. 13(16): 9

Mayring P (2001) Combination and Integration of Qualitative and Quantitative Analysis. *Forum: Qualitative Social Research*. 2(1) [WWW] <URL: <http://www.qualitative-research.net/fqs-texte/1-01/1-01mayring-e.htm> > [Accessed on 27.3.05]

McVicar A (2003) Workplace stress in nursing: a literature review. *Journal of Advanced Nursing*. 44(6): 633-642

Meng H, Smith SD, Hager K, Held M, Liu J, Olson RK, Pennington BF, DeFries JC, Gelernter J, O'Reilly-Pol T, Somlo S, Skudlarski P, Shaywitz SE, Shaywitz BA, Marchione K, Wang Y, Paramasivam M, LoTurco JJ, Page GP, and Gruen JR (2005) DCDC2 is associated with reading disability and modulates neuronal development in the brain. *Proceedings of the National Academy of Sciences of USA*. 102 (47): 17053-17058

Miles TR (1993) *Dyslexia: the pattern of difficulties*. 2nd Ed. London: Whurr Publishers

Miles TR and Haslum NM (1986) Dyslexia: Anomaly or normal variation? *Annals of Dyslexia*. 36: 103-117

Miller PH (1993) *Theories of developmental psychology* 3rd Ed. New York: WH Freeman and Company

Mitchell JC (1999) Case and situational analysis. In Bryman A and Burgess RG (Eds) *Qualitative Research*. Volume 1. London: Sage Publications (p180-200)

Moen P and Erikson MA (1995) Linked lives: a transgenerational approach to resilience. In Moen P, Elder GH and Lüscher K (Eds) *Examining lives in context: perspectives on the ecology of human development*. Washington DC: American Psychological Association (p169-210)

Moody S (1999) *Dyslexia in the workplace*. London: Dyslexia Assessment Consultancy. [WWW] <URL: <http://www.workingwithdyslexia.com/docs/dyslexia-in-the-workplace.pdf> > [Accessed 12.3.03]

Morgan E and Klein C (2000) *The dyslexic adult in a non-dyslexic world*. London: Whurr Publishers

Morgan, V (2005) I have dyslexia but my patients are not at risk. *Nursing standard*. 20(4): 38

Morris D and Turnbull P (2006) Clinical experiences of students with dyslexia. *Journal of Advanced Nursing*. 54(2): 238-247

Morrissey JJ (2004) Mobile phones in the hospital: improved mobile communication and mitigation of EMI concerns can lead to an overall benefit to healthcare. *Health Physics*. 87(1): 82-88

Morse JM and Field PA (1996) *Nursing Research: the application of qualitative approaches*. Cheltenham: Stanley Thomas

Morton LL (1994) Interhemispheric balance patterns detected by selective phonemic dichotic laterality measures in four clinical subtypes of reading disabled children. *Journal of Clinical and Experimental Neuropsychology*. 16(4): 556-567

Morton J and Firth U (1995) Causal modelling: a structural approach to developmental psychopathology. In Cicchetti D and Cohen DJ (Eds) *Manual of Developmental Psychopathology*. New York: Wiley (p357-390)

Mullally S (2005) Dyslexia did not stop me from becoming a chief nursing officer. *Nursing Standard*. 20(6): 38.

Multi-centre Research Ethics Committee. *General Guidance for Researchers patient information sheet and consent form guidance*. [WWW] <URL: www.ggp22.dial.pipex.com/index.htm > [Accessed on 28.11.04]

National Assembly for Wales (2003) *The review of health and social care in Wales (Wanless review)*. Cardiff: National Assembly for Wales

National Assembly for Wales (2003) *Wales: A Better Country*. Cardiff: National Assembly for Wales

National Patient Safety Agency [WWW] <URL: <http://www.npsa.org.uk> > [Accessed on 21.4.03]

Neary M (1994) Teaching practical skills in colleges. *Nursing Standard* 27: 35-38

Neary M (2000) *Teaching, assessing and evaluation for clinical competence: A practical guide for practitioners and teachers*. Cheltenham: Nelson Thornes

Neary M (2002) *Curriculum studies in post-compulsory and adult education: teacher's and student teacher's study guide*. Cheltenham: Nelson Thornes

NHS (Wales) Student Award Unit (2005) *Financial help for healthcare students in Wales*. Cardiff: National Assembly for Wales ([WWW] <URL: <http://www.wales.nhs.uk/sites3/docmetadata.cfm?orgid=484andid=55513andpid=12957> > [Accessed 2.8.06]

- Nicolson RI and Fawcett A (1995) Dyslexia is more than a phonological disability. *Dyslexia*. 1: 19-37
- Nicolson RI and Fawcett A (1999) Developmental dyslexia: the role of the cerebellum. *Dyslexia*. 5(3): 155-177
- Northway R (2002) Insider-outsider perspectives: commentary. *Nurse Researcher* 9(4): 4-6
- Nursing and Midwifery Council (2002) *Standards for the preparation of teachers of nursing and midwifery*. London: NMC
- Nursing and Midwifery Council (2004a) *Code of Professional Conduct*. London: NMC
- Nursing and Midwifery Council (2004b) *Guidance 06/04. Requirements for evidence of good health and good character*. London: NMC
- Nursing and Midwifery Council (2004c) *Standards of proficiency for pre-registration nursing education*. London: NMC
- Nursing and Midwifery Council (2004d) *NMC position statement: Disability Discrimination Act*. London: NMC
- Nursing and Midwifery Council (2004e) *Standards for the preparation of teachers of nursing, midwifery and specialist community public health nurses*. London: NMC
- Nursing and Midwifery Council (2006) *Standard to support learning and assessment in practice*. London: NMC
- Nursing and Midwifery Order (2001) Norwich: HMSO
- Nursing Standard News (2005a) Student with dyslexia forced to wear badge. *Nursing Standard* 19(34): 7
- Nursing Standard News (2005b) Regulators discuss dyslexia. *Nursing Standard*. 20(2): 5
- O'Dowd A (2005) Don't pick on us. *Nursing Standard*. 20(10): 22-23
- Office of Special Education Programs, US Department of Education (2002) *Specific learning disabilities: finding common ground*. Washington: Author
- Oliver M (1983) *Social Work with Disabled People*. Basingstoke: Macmillan
- Oliver M (1990) *The politics of disablement*. Basingstoke: Macmillan
- Oliver M and Barnes C (1998) *Disabled people and social policy: from exclusion to inclusion*. London: Longman

- Ott P (1997) *How to detect and manage dyslexia*. Oxford: Heinemann
- Pang SMC, Wong TKS, Wang CS, Zhang ZJ, Chan HYL, Lam CWY, Chan KL (2004) Nursing theory and concept development or analysis: towards a Chinese definition of nursing. *Journal of Advanced Nursing*. 46 (6): 657-670
- Parahoo K (1997) *Nursing research: principles, process and issues*. London: Macmillan Press Ltd.
- Persaud D and Leedom CL (2002) The Americans with Disability Act: effect on student admission and retention practices in California nursing schools. *Journal of Nursing Education*. 41(8): 349-352
- Polit DF and Hungler BP (1999) *Nursing research: principles and methods*. 6th Ed. Philadelphia, USA: Lippincott
- Prime Minister's Strategy Unit (2005) *Improving the life chances of disabled people* [WWW] <URL: http://www.strategy.gov.uk/work_areas/disability/ > [Accessed 3.5.06]
- Pumfrey P (1994) The management of specific learning difficulties (dyslexia): challenges and responses. Unpublished paper 'Towards a wider understanding' Third International Conference of the British Dyslexia Association, Manchester cited by Ott P (1997) *How to detect and manage dyslexia*. Oxford: Heinemann
- Pumfrey P and Reason R (1991) *Specific learning difficulties (dyslexia): challenges and responses*. London: Routledge
- Quality Assurance Agency (1999) *Code of practice for the assurance of academic quality and standards in higher education, section 3: students with disabilities*. Gloucester: Author
- Raddick B (1996) *Living with dyslexia*. London: Routledge
- Reason R (2001) Education practice in dyslexia. *The Psychologist*. 14(6): 298-301
- Reid G (1998) *Dyslexia: A practitioner's handbook*. 2nd Ed. Chichester: John Wiley and Sons.
- Reid G and Kirk J (2001) *Dyslexia in adults: education and employment*. Chichester: John Wiley and Sons
- Rice M and Brooks G (2004) *Developmental dyslexia in adults: a research review*. London: National Research and Development Centre for Adult Literacy and Numeracy
- Riddick B (2000) An examination of the relationship between labelling and stigmatisation with special reference to dyslexia. *Disability and Society*. 15(4): 653-667

- Riddick B (2003) Experiences of teachers and trainee teachers who are dyslexic. *Journal of Inclusive Education*. 7(40): 389-402
- Riddick B, Sterling C, Farmer M and Morgan S (1999) Self-esteem and anxiety in the educational histories of adult dyslexic students. *Dyslexia*. 5(4): 227-248
- Rigby J (2005) Our profession should not discriminate against dyslexia. *Nursing Standard*. 20(6): 38
- Rogers A (1996) *Teaching Adults*. 2nd Ed. Buckingham: Open University Press
- Rogoff B (2003) *The cultural nature of human development*. New York: Oxford University Press
- Royal College of Nursing (2003) *Defining nursing*. London: RCN
- Ryan A, Child K, Thomas R and Edwards R *Disability – Dyslexia/learning difficulties*. [WWW] <URL: <http://www.swan.ac.uk/disability/dyslexia.html> > [Accessed 26.5.02]
- Salovey P, Rothman AJ, and Rodin J (1998) Health behaviour. In Gilbert DT, Fiske ST and Lindsey G (Eds) *The handbook of social psychology* (4th Ed) Vol 2, New York: McGraw-Hill (p633-83)
- Sanderson-Mann J, McChandless F and Wharrad H (2004) *DysPEL – Dyslexia and Practice Environment Learning*. Unpublished conference paper presented at RCN International Research Conference 21st – 24th March 2004, Cambridge, UK.
- Scottish Executive Health Department (2001) *Research Governance Framework for Health and Social Care in Scotland*. Edinburgh: Scottish Executive Health Department
- Scottish Executive Education Department statistics (2006) *Special Educational Needs* [WWW] <URL: <http://www.scotland.gov.uk/Topics/Statistics/Browse/School-Education/TrendSpecialEducation> > [Accessed 10.8.06]
- Seed A (1995) Conducting a longitudinal study: an unsanitized account. *Journal of Advanced Nursing*. 21(5): 845-852
- Selekman J (2002) Nursing students with learning disabilities. *Journal of Nursing Education*. 41(8): 334-339
- Shaywitz SE, Shaywitz BA, Fletcher JM and Escobar MD (1990) Prevalence of reading disability in boys and girls – results of the Connecticut longitudinal study. *Journal of the American Medical Association*. 264: 998-1002
- Shellenbarger T (1993) Helping the dyslexic nursing student. *Nurse Educator*. 18(6): 10-6

- Shepherd K (2002) People with dyslexia are quite capable of nursing. *Nursing Standard*. 16(36): 30
- Shuler S (1990) Nursing students with learning disabilities: guidelines for fostering success. *Nursing Forum*. 25(2): 15-18
- Siegal LS (1988) Evidence that IQ scores are irrelevant to the definition and analysis of reading disability. *Canadian Journal of Psychology*. 42: 201-215
- Siegal LS (1992) An evaluation of the discrepancy definition of dyslexia. *Journal of Learning Disabilities*. 25: 618-629
- Siegal LS and Himel N (1998) Socioeconomic status, age and the classification of dyslexics and poor readers: the dangers of using IQ scores in the definition of reading disability. *Dyslexia*. 4(2): 90-104
- Simmons F and Singleton C (2000) The reading comprehension abilities of dyslexic students in higher education. *Dyslexia*. 6(3): 178-192
- Singleton C (1998) *Dyslexia in higher education: policy provision and practice*. Hull: University of Hull
- Smith A, Brice C, Collins A, Matthews V and McNamara R (2000) *The scale of occupational stress: A further analysis of the input of demographic factors and type of job*. Norwich: HSE Books. [WWW] <URL: <http://www.hsebooks.com/Books/product/product.asp?catalog%5Fname=HSEBooksandcategory%5Fname=andproduct%5Fid=3576> > [Accessed: 15.5.06]
- Solity J (1996) Discrepancy definitions of dyslexia: an assessment through teaching perspective. *Educational Psychology in Practice*. 12(3): 141-151
- Somers, Kay (2005) Prejudice against dyslexia will put people off nursing. *Nursing Standard*. 20(4): 38-39
- Sowers JA and Smith M (2002) Disability as difference. *Journal of Nursing Education*. 41(8): 331-332
- Special Educational Needs and Disability Act 2001. [WWW] <URL: <http://www.hmso.gov.uk/acts/acts2001>> [Accessed 14.9.02]
- Spradley J (1979) *The ethnographic interview*. New York: Holt, Rinehart and Winston
- Stake RE (1994) Case Studies. In Denzin NK and Lincoln YS (Eds) *Handbook of Qualitative Research*. London: Sage Publications (p236-247)
- Stake RE (1995) *The art of case study research*. London: Sage Publications

- Stannovich KE (1996) Towards a more inclusive definition of dyslexia. *Dyslexia*. 2(3): 154-166
- Stannovich KE (1998) Refining the phonological core deficit model. *Child Psychology and Psychiatry Review*. 3(1): 17-21
- Steele CM (1988) The psychology of self-affirmation: sustaining the integrity of the self. In Berkowitz L (Ed) *Advances in experimental social psychology*. Volume 21 New York: Academic Press (p261-302)
- Stein J (2001) The magnocellular theory of developmental dyslexia. *Dyslexia*. 7(1): 12-36
- Stephenson C (1999) Ban on people with dyslexia is ridiculous. *Nursing Standard*. 13(17): 10
- Struebert HJ and Carpenter DR (1999) *Qualitative Research in Nursing: Advancing the Humanistic Imperative*. 2nd Ed. Philadelphia, USA: Lippincott
- Stroh M (2000) Qualitative Interviewing. In Burton D (Ed) *Research training for social scientists*. London: Sage Publishers (p196-124)
- Sturges JE and Hanrahan KJ (2004) Comparing Telephone and Face-to-Face Qualitative Interviewing: a Research Note. *Qualitative Research*. 4(1): 107-118
- Swain J, French S and Cameron C (2003) *Controversial Issues in a disabling society*. Buckingham: Open University Press
- Tallal P, Miller SL, Jenkins WM and Merzenich MM (1997) The role of temporal processing in developmental language-based disorders: research and clinical implications. In Blachman BA (Ed) *Foundations of reading acquisition and dyslexia: implications for early intervention*. Mahwah, New Jersey, USA: Lawrence Erlbaum Associates. (p49-66)
- Taylor KE and Walter J (2003) Dyslexia and occupation *Dyslexia*. 9(3): 177-185
- Thomas C (2002) Disability theory: key ideas, issues ad thinkers. In Barnes C, Oliver M and Barton L (Eds) *Disability Studies Today*. Cambridge: Polity Press
- Timmins F and Kaliszer M (2002) Absenteeism among nursing students – fact or fiction? *Journal of Nursing Management*. 10(5): 25-264
- Tumminia P and Weinfield A (1983) Teaching the learning-disabled student. *Nurse Educator*. 8: 12-14
- Twentyman M, Eaton E and Henderson A (2006) Enhancing support for nursing students in the clinical setting. *Nursing Times*. 102(14): 35-37

United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) (1999) *Fitness for Practice: The UKCC Commission for Nursing and Midwifery Education*. London: UKCC

UPIAS (1976) *The fundamental principles of disability*. London: Union of the Physically Impaired Against Segregation

University of Sheffield (2003) *Dyslexia Information Site*. [WWW]<URL: <http://www.shef.ac.uk/~dis/student/placement.htm> > [Accessed 17/1/03]

US Department of Education (2000) *Twenty-Second Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* [WWW] <URL: <http://www.ed.gov/about/reports/annual/osep/2000/index.html> > [Accessed 8.1.06]

Vygotsky LS (1978) *Mind and society: The development of higher mental processes*. Cambridge MA: Harvard University Press

Wales Office of Research and Development in Health and Social Care (2001) *Research Governance Framework for Health and Social Care in Wales*. Cardiff: National Assembly for Wales

Wales Office of Research and Development in Health and Social Care (2003) *Implementing the Research Governance Framework for Health and Social Care: A Review of NHS Trusts*. National Assembly for Wales: Cardiff

Watson PG (1995) Nursing students with disabilities: A survey of baccalaureate nursing programs. *Journal of Professional Nursing*. 11: 147-153

Watson HE and Harris B (1999) *Supporting students in practice placements in Scotland*. Glasgow Caledonian University: School of Nursing and Community Health

Welsh Assembly Government (2002) *All Wales Fitness for Practice Document*. Cardiff: Welsh Assembly Government

Welsh Assembly Government (2005) *Pupils With Statements of Special Educational Needs: January 2005*. [WWW] <URL: <http://www.wales.gov.uk/keypubstatisticsforwalesheadline/content/schools-teach/2005/hdw200506283-e.htm> > [Accessed 10.8.06]

White J (2006a) Supporting pre-registration nursing students who are dyslexic in clinical practice. *Nursing Standard*. (In press)

White J (2006b) Catering for disabled students. *Health Service Journal*. 30th March 2006.

White J (2006c) *Position paper: Making reasonable adjustments for disabled health students*. Health Professions Wales, 13th March 2006.

Wiles J (2001) In good company. *Nursing Standard*. 15(48): 23

Witt H (2001) Strategies in Qualitative and Quantitative Research. *Forum: Qualitative Social Research*. 2(1) [WWW] <URL: <http://www.qualitative-research.net/fqs-texte/1-01/1-01mayring-e.htm> > [Accessed on 27.3.05]

Wolff U and Lundberg I (2002) The prevalence of dyslexia among art students. *Dyslexia*. 8(1): 34-42

Wray J, Benedict F, Stanley N, Manthorpe J, Coyne E (2005) *The PEdDS Project: disabled social work students and placements*. (HEFCE funded project.) University of Hull [WWW] <URL: <http://www.hull.ac.uk/pedds/> > [Accessed 4.1.06]

Wright D (1999a) *A guide for student nurses and midwives with dyslexia*. Department of Mental Health and Learning Disability, School of Nursing and Midwifery, University of Sheffield.

Wright D (1999b) *A guide for lecturers who support student nurses and midwives with dyslexia*. Department of Mental Health and Learning Disability, School of Nursing and Midwifery, University of Sheffield.

Wright D (2000) Educational support for nursing and midwifery students with dyslexia. *Nursing Standard*. 14(41): 35-41

Wright D and Eathorne V (2003) Supporting students with disabilities. *Nursing Standard*. 18(11): 37-42

Wright D, Nunes JM and Katechia S (2000) WWW support for nursing students with dyslexia and their tutors. *Health Informatics Journal*. 6(2): 91-99

Yasutake D and Bryan T (1995) The influence of affect on the achievement and behaviour of students with learning disabilities. *Journal of Learning Disabilities*. 28(6): 329-334

Yin R K (1994) *Case study research: design and methods*. 2nd Ed. London: Sage Publications

DISABLED STUDENTS' ALLOWANCE

TYPES OF EQUIPMENT AND SOFTWARE PURCHASED WITH ALLOWANCE IN WALES

Laptop or PC
Monitor Upgrade
External Mouse or Rollerball Mouse
External keyboard
Laptop stand
Printer
Scanner
Zip Drive
Zip Discs
USB Hub/USB Cable
C-pen 800
Plug Extension
Gel Filled Wrist Rest
Gel Filled Mouse Rest
Alphasmart Notetaker
Windows Operating System
Office XP Student Licence
TextHelp Read and Write
FineReader Pro
Dolphin Lunar
Textbridge Pro
ViaVoice
Palm top
Dragon Naturally Speaking Preferred
OmniPage pro V12
Inspiration
Dictionary and Thesaurus CD ROM
Medical Spell Checker
Collins Concise English Dictionary
Mavis Beacon Teaches Typing
Nortonv5 Anti Virus
Laptop Starter Pack
Digital Mini Disk Recorder
Mini Disks
Headphones
Franklin Spellchecker
Carry case
Warranty
Delivery & installation charges
Set up charges

INFORMATION SHEET

1. Research Study Title:

**Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to participate in this study because of your role in the School's admissions process, specifically in selecting students for entry on to the Pre-registration Diploma in Nursing and Bachelor of Nursing (Honours) programmes.

Cardiff University is the public name of the University of Wales, Cardiff, a constituent institution of the University of Wales.

Prifysgol Caerdydd yw enw cyhoeddus Prifysgol Cymru, Caerdydd, un o sefydliadau cyfansoddi Prifysgol Cymru.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your work.

6. What will happen to me if I take part?

You will be invited to take part in an interview with the researcher, Jean White. She will ask you questions in relation to your experiences during the admissions process in selecting students who are dyslexic for the pre-registration Diploma in Nursing and BN (Hons) programmes.

The interview should last up to 30 minutes. The interviewed will be tape recorded. You may request that the recorder be switched off at any time in which case notes will be taken by the researcher.

You will be one of a sample of eight lecturers, involved in the admissions process, who will be invited to participate in this stage of the research project.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study.

There should be no expense incurred by the participants of the study. The timing of the interview will be co-ordinated with you to cause the least inconvenience. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study, the answers given by participants will not be attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. Your answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXXXXXXX Local Research Ethics Committee
- XXXXXXXXXXXX Local Research Ethics Committee
- School of Nursing Research Ethics Committee

11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

12. Who is organising and funding the research?

The researcher is Jean White, who is currently registered as a part time PhD student at Cardiff University. Her employer supports her to undertake this study.

Jean is employed as a Professional Adviser for Adult Nursing at Health Professions Wales. She may be contacted at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX. Telephone: 029 20261400, Email: jean.white@hpw.org.uk.

In her role as Professional Adviser she has professional links with the five schools offering pre-registration nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White

ADMISSIONS TUTORS INTERVIEW SCHEDULE

(General introduction to set the scene. Explanation of the purpose of the interview.
Gain consent for the interview.)

1. Please tell me what role you have in selecting nursing students.
2. Have you ever been involved in the selection of a student who was dyslexic?
 - a. If yes, tell me what happened?
 - b. If no, what do you think you would do?
3. What are your views on screening potential applicants?
4. What are your views on individuals who are dyslexic entering the nursing profession?
5. What do you understand by the term 'dyslexia'?
6. Have you ever had any training or received information about dyslexia? If yes, what form did it take?
7. How satisfied are you with your level of knowledge about specific learning difficulties like dyslexia?
8. What changes, if any, has the introduction of the Special Educational Needs and Disability Act (2001) made to your role as admissions teacher?
9. Are there any other comments you would like to make on this subject?

**Research Study Title:
Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

**CONSENT FORM FOR
STAGE ONE OF THE STUDY**

In signing this document, I am giving my consent to be interviewed by Jean White, as part of her PhD study. I understand that I will be taking part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.



I understand that I will be interviewed at a time and place convenient to me. I understand that I was selected to participate in this study because of my knowledge and/or experience of the subject matter.

This interview is granted freely. I have been informed that the interview is entirely voluntary, and that even after the interview begins I can refuse to answer any specific questions or decide to stop the interview at any point. I understand that the interview will be tape recorded and that I may request that the recorder be switched off at any time in which case notes will be taken by the researcher. I understand that the answers I give will not be attributable to me by name and that my answers will not be shared with others without my permission. I have been informed that my participation or non-participation in this study will have no detrimental effect on my work or study.

I understand that Jean White acts as a professional adviser to the School of Nursing and that in this role she cannot influence the outcome of the course for an individual student.

I understand that Jean White will give the results of this study to me if I ask for them. I can contact Jean White at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX, tel: 029 20261400, email: jean.white@hpw.org.uk.

Participant's Signature.....

Researcher's Signature.....

Date.....

Notes: Consent Form to be used for:

- Admissions Lecturers within the School of Nursing.
- School designated Lecturer for Specific Needs.
- University of Glynrith Specific Needs Support Officer.
- University of Glynrith Dyslexia Tutor

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INFORMATION SHEET

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2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to participate in this study because of your role as Special Educational Needs Officer in the School of Nursing, University of XXXXXXX.

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5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your work.

6. What will happen to me if I take part?

You will be invited to take part in an interview with the researcher, Jean White. She will ask you questions in relation to the University and School's policies and provision in relation to students who are dyslexic. She will also ask about your role in supporting Pre-registration Diploma in Nursing and BN (Hons) programmes students who are dyslexic.

The interview should last approximately 30-45 minutes. The interviewed will be tape recorded. You may request that the recorder be switched off at any time in which case notes will be taken by the researcher.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study.

There should be no expense incurred by the participants of the study. The timing of the interview will be co-ordinated with you to cause the least inconvenience. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study the answers given by participants will not be attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. The answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXXXXXXX Local Research Ethics Committee
- XXXXXXXXXXXX Local Research Ethics Committee
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11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

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In her role as Professional Adviser she has professional links with the five schools offering nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White

SUPPORT OFFICER INTERVIEW SCHEDULE

(General introduction to set the scene. Explanation of the purpose of the interview. Gain consent for the interview.)

1. Please tell me about your role.

2. Have you ever been involved in the supporting of a nursing student who was dyslexic?
 - a. If yes, tell me what happened?
 - b. If no, what do you think you would do?

3. What are your views on screening potential applicants for dyslexia?

4. What are your views on individuals who are dyslexic entering the nursing profession?

5. What do you understand by the term 'dyslexia'?

6. Have you ever had any training or received information about dyslexia? If yes, what form did it take?

7. How satisfied are you with your level of knowledge about specific learning difficulties like dyslexia?

8. What changes, if any, has the introduction of the Special Educational Needs and Disability Act (2001) made to your role?

9. Are there any other comments you would like to make on this subject?

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4. Why have I been chosen?

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6. What will happen to me if I take part?

You will be invited to take part in an interview with the researcher, Jean White. She will ask you questions in relation to the University's policies and provision in relation to students who are dyslexic. She will also ask about your role in supporting Pre-registration Diploma in Nursing and BN (Hons) programmes students who are dyslexic.

The interview should last approximately 30-45 minutes. The interviewed will be tape recorded. You may request that the recorder be switched off at any time in which case notes will be taken by the researcher.

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2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to take part in this study because you are a student on either the Pre-registration Diploma in Nursing or Bachelor of Nursing (Honours) programmes and you are dyslexic.

Cardiff University is the public name of the University of Wales, Cardiff, a constituent institution of the University of Wales.

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In the first instance a member of staff from the School will ask you whether you would be willing to take part. After this point the School will no longer be involved and will not be told if you agree to take part in the focus group.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your studies.

6. What will happen to me if I take part?

You will be invited to take part in a focus group discussion with other 2nd & 3rd year nursing students who are dyslexic. The types of questions the group will be asked to discuss include: What problems, if any, did you experience in clinical practice as a result of your specific learning need? If you did experience problems, how did you overcome them?

The discussion will be tape recorded and subsequently transcribed. You may request that the tape recording is stopped at any time, in which case the researcher will take notes of the discussion.

All 2nd & 3rd year nursing students who are dyslexic will be invited to take part in the focus group. The meeting will be timed to cause the least disruption and will be held outside of course time. The exact timing will be agreed with the participants in advance of the meeting. The discussion should take no more than 30 - 45 minutes. The School will not be informed that you are taking part in this study.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study.

There should be no expense incurred by the participants of the study. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study the answers given by participants will not be

attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. The answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXXX Local Research Ethics Committee
- XXXXXXXX Local Research Ethics Committee
- XXXXXXXX NHS Trust R & D Committee
- School of Nursing, University of XXXXXXXX, Research Ethics Committee
- School of Nursing, University of XXXXXXXX, Research Ethics Committee

11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

12. Who is organising and funding the research?

The researcher is Jean White, who is currently registered as a part time PhD student at Cardiff University. Her employer supports her to undertake this study.

Jean is employed as a Professional Adviser for Adult Nursing at Health Professions Wales. She may be contacted at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX. Telephone: 029 20261400, Email: jean.white@hpw.org.uk.

In her role as Professional Adviser she has professional links with the five schools offering nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White

**Research Study Title:
Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

**CONSENT FORM FOR
STAGE ONE OF THE STUDY**

In signing this document, I am giving my consent to take part in a focus group discussion with other second & third year pre-registration nursing students who are dyslexic. Jean White will facilitate the discussion, the results of which will contribute to her PhD study. I understand that I will be taking part in a qualitative research study that will focus on the experience of nursing students who are dyslexic during the clinical practice element of their pre-registration course. The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

I understand that the focus group discussion will be conducted at a time and place convenient to me. I understand that I was selected to participate in this study because I am dyslexic and studying to become a nurse.

My agreement to take part in the focus group is granted freely. I have been informed that taking part in the focus group is entirely voluntary, and that even after the discussion begins I can refuse to answer any specific questions or decide to stop my involvement in the focus group at any point. I understand that the discussion will be tape recorded and that I may request that the recorder be switched off at any time in which case notes will be taken by the researcher. I understand that the answers I give will not be attributable to me by name and that my answers will not be shared with others without my permission. I have been informed that my participation or non-participation in this study will have no detrimental effect on my work or study.

I understand that Jean White acts as a professional adviser to the School of Nursing and that in this role she cannot influence the outcome of the course for an individual student.

I understand that Jean White will give the results of this study to me if I ask for them. I can contact Jean White at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX, tel: 029 20261400, email: jean.white@hpw.org.uk.

Participant's Signature.....

Researcher's Signature.....

Date.....

Notes: Consent Form to be used for: Pre-registration nursing students - Stage 1

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INTERVIEW SCHEDULE – STAGE 1 STUDENTS

INTRODUCTIONS

- Introductions – researcher and project.
- Confirm that they have all been diagnosed as dyslexic and when. Confirm that they are pre-reg nursing students in branch programmes.

QUESTIONS

- Please tell me what types of things you have found difficult or challenging during the course.
- Tell me about your experiences in clinical practice placements.
(Mentor's knowledge, attitude of others, areas of specific difficulty, did they disclose their diagnosis)
- What type of support have you received and from whom?
(People, IT equipment, time in exams, help with written work)
- What has helped you the most during the course – particularly in clinical practice?

INFORMATION SHEET

1. Research Study Title:

**Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course.

This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to participate in this study because of your role as clinical mentor to students on the Pre-registration Diploma in Nursing and Bachelor of Nursing (Honours) programmes. The clinical area in which you work has previously been used as a placement for students who are dyslexic.

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5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your work.

6. What will happen to me if I take part?

You will be invited to complete a short questionnaire and return it to the researcher, Jean White. The types of questions asked relate to your experiences of mentoring pre-registration Diploma in Nursing and BN (Hons) students who are dyslexic.

You will be one of a sample of six clinical mentors who will be invited to participate in this stage of the research project.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study.

There should be no expense incurred by the participants of the study. A stamped addressed envelope will be provided to return the questionnaire. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study the answers given by participants will not be attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. The answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXXXXX Local Research Ethics Committee
- XXXXXXXXXX Local Research Ethics Committee
- School of Nursing Research Ethics Committee

11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

12. Who is organising and funding the research?

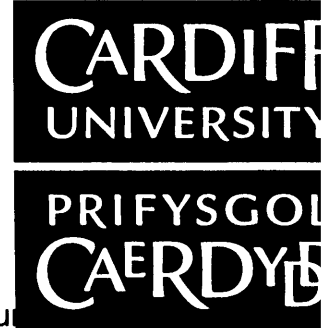
The researcher is Jean White, who is currently registered as a part time PhD student at Cardiff University. Her employer supports her to undertake this study.

Jean is employed as a Professional Adviser for Adult Nursing at Health Professions Wales. She may be contacted at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX. Telephone: 029 20261400, Email: jean.white@hpw.org.uk.

In her role as Professional Adviser she has professional links with the five schools offering nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White



**Research Study Title:
Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

CONSENT FORM

In signing this document, I consent to take part in this study conducted by Jean White, as part of her PhD research. I understand that I will be taking part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nu

I understand that I was selected to take part in this study because of my role as clinical mentor to pre-registration nursing students.

I understand that the answers I give will not be attributable to me by name and that my answers will not be shared with others without my permission. I have been informed that my participation or non-participation in this study will have no detrimental effect on my work. I confirm that I am freely taking part in the study.

I understand that Jean White acts as a professional adviser to the School of Nursing and that in this role she cannot influence the outcome of the course for an individual student.

I understand that Jean White will give the results of this study to me if I ask for them. I can contact Jean White at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX, tel: 029 20261400, email: jean.white@hpw.org.uk.

Participant's Signature.....

Date.....

Notes: Consent Form to be used with the questionnaire for clinical mentors in Stage 1

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**Research Study Title: Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

QUESTIONNAIRE FOR CLINICAL MENTORS

Thank you for agreeing to take part in this study. Please complete the following questions and return the form to Jean White at Health Professions Wales, 2nd Floor, Golate House, 101 St Mary Street, Cardiff CF10 1DX. A stamped addressed envelope is provided for this purpose.

<p>1. Have you ever acted as a clinical mentor to a student who was dyslexic on either the Pre-registration Diploma in Nursing or BN (Hons)?</p> <p>If NO or DON'T KNOW please skip to question 4</p>	<p align="center">YES / NO / DON'T KNOW</p>
<p>2. How did you learn of the individual student's specific learning needs? <i>(eg. from the student, from the School, from some other source?)</i></p>	
<p>3. Did the specific learning needs of individual students who are dyslexic affect the way you conducted your role as mentor?</p> <p>If YES, in what way?</p>	<p align="center">YES / NO / DON'T KNOW</p>
<p>4. Have you observed any students, who are dyslexic, experience any problems related to their specific learning need in developing their clinical competencies?</p> <p>If YES, please give examples.</p>	<p align="center">YES / NO</p>

<p>5. Have you employed any particular strategies to assist students, who are dyslexic, in overcoming problems they experienced related to their specific learning need?</p> <p>If YES, please give examples.</p>	<p>YES / NO</p>
<p>6. What do you understand by the term dyslexia?</p>	
<p>7. What are your views on an individual who is dyslexic seeking to become a nurse?</p>	
<p>8. Are you aware of the Special Educational Needs and Disability Act 2001?</p>	<p>YES / NO</p>

<p>9. Have you ever received training or preparation for supporting individual students who are dyslexic?</p> <p>If YES, what form did it take?</p>	<p>YES / NO</p>
<p>10. Please feel free to make any further comments in relation to this subject.</p>	

Thank you for taking the time to answer this questionnaire.

Please return the completed questionnaire in the envelope provided to:

Jean White
 Health Professions Wales,
 2nd Floor Golate House,
 101 St Mary Street,
 Cardiff, CF10 1DX,

If you have any queries please telephone Jean on 029 20261400 or email her at jean.white@hpw.org.uk

INFORMATION SHEET

1. Research Study Title:

**Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course.

This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to take part in this study because either you are starting as a student on the Pre-registration Diploma in Nursing or Bachelor of Nursing (Honours) programmes, or commencing a branch programme, in the academic year 2003/04 and you are dyslexic.

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In the first instance the School's designated Special Educational Needs Officer will ask you whether you would be willing to take part. After this point the School will no longer be involved and will not be told if you agree to take part in the study.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your studies.

6. What will happen to me if I take part?

The researcher, Jean White, intends to follow all the nursing students who are dyslexic who started their studies/branch programme in the academic year 2003/04 for the duration of their studies.

You will attend a wide variety of clinical placements during the course. It will be for you to decide whether you wish the clinical areas to be told that you are dyslexic. Throughout the research study before the researcher approaches any member of staff or patient the researcher will ask you if you agree to her doing so. The researcher feels that it is very important that you retain control over who knows that you are dyslexic.

If you agree to take part, at the start of your course/branch programme Jean White will record a life history of your special learning needs via an interview with you. This interview will be tape recorded and later transcribed. You may ask that the tape recording be stopped at any time, in which case the researcher will take notes of the meeting.

You will be invited to report on incidents that happen in the clinical practice area, including areas that were difficult due to you being dyslexic and the strategies you employed to overcome these difficulties. For example the first time you assisted in a drug round or had a handover on the ward. The format and frequency of reporting will be agreed with you at the beginning of the study.

The researcher will seek to interview you during and/or following clinical placements to discuss areas you found difficult or challenging due to your specific learning need and strategies that you have employed to overcome the difficulties. These interviews will be recorded either by tape recording or in notes written by the researcher. You may request that the tape recorder is switched off at any time during the interviews.

The researcher would also like to observe you carrying out some specific activities in practice, particularly where you have experienced problems and have developed strategies to overcome them. These activities can be simulated in the clinical laboratory if appropriate. If this activity involves other staff members, the researcher will ask you first if you agree for those involved to know you are dyslexic.

All of the above activities will be timed to cause the least inconvenience to you. Some of the activities will take place in course time, ie observation of activities. The School will not be told that you are participating in the study.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study. There should be no expense incurred by the participants of the study. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study the answers given by participants will not be attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. The answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXX Local Research Ethics Committee
- XXXXXXX Local Research Ethics Committee
- XXXXXXX NHS Trust R&D Committee
- School of Nursing, University of XXXXXXX, Research Ethics Committee

11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

12. Who is organising and funding the research?

The researcher is Jean White, who is currently registered as a part time PhD student at Cardiff University. Her employer supports her to undertake this study.

Jean is employed as a Professional Adviser for Adult Nursing at Health Professions Wales. She may be contacted at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX. Telephone: 029 20261400, Email: jean.white@hpw.org.uk.

In her role as Professional Adviser she has professional links with the five schools offering nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White

Research Study Title: Dyslexia in pre-registration nursing students: strategies for developing clinical competencies.

CONSENT FORM FOR STAGE TWO OF THE STUDY

In signing this document, I am giving my consent to take part in a research project conducted by Jean White, as part of her PhD study. I understand that I will be taking part in a qualitative study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. The purpose of the study is to identify how nursing students who are dyslexic may be assisted in achieving the clinical competencies required to register as a nurse.

I understand that during the three years I am studying to become a registered nurse I have agreed to provide information for Jean White in the following ways:

- At the start of my course Jean White will record a life history of my specific learning needs. I understand that the meeting will be tape recorded and that I may request that the recorder be switched off at any time in which case notes will be taken by the researcher.
- I will report on incidents related to problems experienced in clinical practice and/or strategies I have employed to overcome difficulties experienced in clinical practice. The format and frequency of reporting will be agreed with me at the beginning of the study.
- Jean White will interview me during and/or following clinical placements to discuss areas I found difficult or challenging due to my specific learning need and strategies that I have employed to overcome the difficulties. I understand that the interviews will be tape recorded and that I may request that the recorder be switched off at any time in which case notes will be taken by the researcher.
- Jean White will observe some specific activities I will be involved in during my clinical placement that may, where appropriate, be demonstrated in the clinical laboratory. This activity will be agreed with me prior to the observation taking place.

I understand that all interviews or observations will be at a time and place convenient to me. My agreement to take part in this study is granted freely. I have been informed that taking part is entirely voluntary, and that even after the study begins I can refuse to answer/take part in any specific element of the study or decide to leave the study at any point. I understand that the answers I give will not be attributable to me by name and that my answers will not be shared with others without my permission, this includes any future employer.

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I have been informed that my participation or non-participation in this study will have no detrimental effect on my work or study. I understand that Jean White acts as a professional adviser to the School of Nursing and that in this role she cannot influence the outcome of my studies on the course.

I understand that Jean White will approach the clinical mentors who support me during the course in clinical placements to discuss strategies they have employed to assist my achievement of clinical competencies. I understand that she will only approach the clinical mentors after I have given my express permission to do so.

I understand that Jean White will give the results of this study to me if I ask for them. I can contact Jean White at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX, tel: 029 20261400, email: jean.white@hpw.org.uk.

Participant's Signature.....

Researcher's Signature.....

Date.....

Notes: Consent Form to be used for:

- Pre-registration nursing students who are dyslexic commencing their programme/branch in 2003/04

INFORMATION SHEET

1. Research Study Title:

**Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

2. Invitation

You are invited to take part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. This study is a non-therapeutic research study using a case study approach.

Before you decide whether to take part please take time to read the following information carefully. If you are unclear about any aspect or if you would like more information please feel free to contact the researcher, details listed at the end of this information sheet.

Thank you for reading this.

3. What is the purpose of the Study?

The purpose of the study is to identify how nursing students who are dyslexic may be assisted to achieve the clinical competencies required to register as a nurse.

The preliminary hypothesis is that pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies.

The study asks three questions:

1. Do pre-registration nursing students who are dyslexic experience specific problems related to their specific learning need in developing clinical competencies?
2. What strategies do pre-registration nursing students who are dyslexic employ in order to achieve the clinical learning outcomes of the course?
3. How may pre-registration nursing students who are dyslexic be supported in clinical practice?

4. Why have I been chosen?

You have been chosen to participate in this study because of your role as clinical mentor to students on the Pre-registration Diploma in Nursing and Bachelor of Nursing (Honours) programmes who are dyslexic.

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5. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. Participation or non-participation in this study will have no detrimental effect on your work.

6. What will happen to me if I take part?

You are invited to take part in an interview with the researcher, Jean White. She will ask you questions in relation to your experiences of acting as a clinical mentor to a nursing student who is dyslexic.

The interview should last up to 30 minutes. The researcher will take notes during the interview.

You will be one of a number of clinical mentors who are supporting students who are dyslexic who are invited to participate in this stage of the research project.

7. What are the possible disadvantages and risks of taking part?

There are no foreseeable risks or disadvantages for participating in this study.

There should be no expense incurred by the participants of the study. Please note that there is no compensation or insurance cover for participants of this study.

8. What are the possible benefits of taking part?

It is anticipated that the results of this study will contribute to the debate about how individuals with specific learning needs may be enabled to develop clinical competencies in order to become registered nurses.

9. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Only the researcher and her supervisors will have access to the raw data. Anonymity will be ensured as far as possible. In written reports produced as a result of the study the answers given by participants will not be attributable to them by name, nor will the higher education institution or associated clinical areas be identified by name. The answers will not be shared with others without your permission. The School will not be informed that you are taking part in the study.

10. Who has reviewed the study?

The following ethics committees have reviewed this study:

- XXXXXXXXXX Local Research Ethics Committee
- XXXXXXXXXX Local Research Ethics Committee

- School of Nursing Research Ethics Committee XXXXXXX
- School of Nursing Research Ethics Committee Pimbury
- XXXXXXX NHS Trust R&D Committee

11. What will happen to the results of the research study?

The results of this study will be submitted in a thesis to meet the requirements of a PhD at Cardiff University. It is intended that articles for publication in the nursing press will also be produced. The results of this study will be made available to participants by the researcher if they request it.

12. Who is organising and funding the research?

The researcher is Jean White, who is currently registered as a part time PhD student at Cardiff University. Her employer supports her to undertake this study.

Jean is employed as Director – Quality & Standards at Health Professions Wales. She may be contacted at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX. Telephone: 029 20261400, Email: jean.white@hpw.org.uk

In her role as Director she has professional links with the five schools offering nurse education in Wales. This role does not influence the outcome of individual students studying at the School.

Thank you for taking the time to read this information sheet.

Jean White

**Research Study Title:
Dyslexia in pre-registration nursing students:
strategies for developing clinical competencies.**

**CONSENT FORM FOR
STAGE TWO OF THE STUDY**



In signing this document, I am giving my consent to be interviewed by Jean White, as part of her PhD study. I understand that I will be taking part in a qualitative research study that will focus on the experiences of nursing students who are dyslexic during the clinical practice element of their pre-registration course. The purpose of the study is to identify how nursing students who are dyslexic may be assisted in achieving the clinical competencies required to register as a nurse.

I understand that I will be interviewed at a time and place convenient to me. I understand that I was selected to participate in this study because of my specific role in supporting/supervising the pre-registration nursing students who are participating in this research study. I understand that Jean White may interview me on more than one occasion. I have been told that the student to whom I act as mentor has agreed to the researcher speaking with me about their specific learning needs.

Participation in the study is granted freely. I have been informed that participation in an interview is entirely voluntary, and that even after an interview begins I can refuse to answer any specific questions or decide to stop the interview at any point. I understand that notes will be taken during the interview. I understand that the answers I give will not be attributable to me by name and that my answers will not be shared with others without my permission. I have been informed that my participation or non-participation in this study will have no detrimental effect on my work.

I understand that Jean White has a professional relationship with the School of Nursing and that she cannot influence the outcome of the course for an individual student.

I understand that Jean White will give the results of this study to me if I ask for them. I can contact Jean White at Health Professions Wales, 2nd Floor Golate House, 101 St Mary Street, Cardiff, CF10 1DX, tel: 029 20261400, email: jean.white@hpw.org.uk

Participant's Signature.....

Researcher's Signature.....

Date.....

Notes: Consent Form to be used for: Clinical mentors of the pre-registration nursing students participating in Stage Two

Cardiff University is the public name of the University of Wales, Cardiff, a constituent institution of the University of Wales.

EXAMPLE OF TRANSCRIBED INTERVIEW FROM STAGE I
GROUP INTERVIEW WITH STUDENTS
EXCERPT – COLOUR CODING USED IN THEMATIC ANALYSIS

J: I would like to start off by asking about what types of problems you have experienced as students diagnosed as dyslexic on the course.

Matthew: When I was diagnosed I brought back my results to my personal tutor and to the co-ordinator, and I was called into the office asking...well the first question they asked was, how I got on the course. So I said I done my Access course, was Student of the Year in XX College. So I was asked then to reconsider my position on nursing because they don't encourage...um..well, admitting nurses with disabilities. I was told I could end up killing somebody, actually being in nursing with dyslexia because through problems that dyslexics have got, reading and writing I suppose, d and b back to front...Um...From there then...pr..God...there've been numerous, numerous times they've called me in to try to... in fact they'd organised for me to go over the other side to study the BSc in Sociology and Psychology, and they'd organised that for me to go over and see the personal tutors over there. When I asked that I really wanted to do nursing, again I was asked to reconsider my position, you know what I mean? From there...well does anyone else want to

Pause

J: Yes. Was that your experience? How were you approached when you applied to the school?

Lisa: When I applied to the school I didn't tick yes or no for dyslexia. When I met my personal tutor I did say to her, because she said that she was the disability tutor. I didn't tell anyone else. Most people are pretty supportive. A couple of tutors that are prejudiced who've made a few comments, but most of them are quite supportive.

Michelle: I have just found out in the last three or four months that I've got dyslexia. A lot of the tutors are supportive and my personal tutor isn't at all. I don't find her supportive. In fact she makes things quite difficult. She did say last week, "it's quite frightening to think you'll be a qualified nurse in about a year and a half. I wouldn't let somebody like you nurse me".

J: Does that reflect what you've experienced? (Turning to Matthew)

Matthew: In fact ..my co-ordinator said that the best thing I could do was get a badge to say that I'm a dyslexic student nurse, which might help me on the wards as the patients and the staff I was working with could understand that I've got a disability that could..um..create problems for the patients....So...

J: A badge?

Lisa: Which I have refused, I've refused to wear it because of the labelling. But again this reinforced me to actually read about dyslexia and put myself...self fulfilling prophesy back into the brackets to actually read about it and say right these are the boundaries that I am going to work on. I can't go over these boundaries. I've had nurses...well sisters have come up to me on the first day on the ward, and it's so embarrassing with the patients, and they say, "Right you're the one who can't read or write?" And I'm going, "oh no". It's just

lack of education. But when you come back you daren't say anything because, as the girls were saying there are prejudiced tutors, some nurses don't want you to be on there.

J: Is that only from the school or have you found there's prejudice from the mentors as well?

Matthew: Some mentors, I find it is lack of education, it's not been there like...they don't know what to do with us. Because I was sent home one day because sister wasn't on and the sister came back in and she said right you've got to work with me very, very closely. Where my other colleagues were doing drug rounds they wouldn't put me on the drug rounds because just in case I got it wrong. You know? Well I mean it's only down to my spelling but she perceived that I couldn't read. She started saying, "I'll do all the book work you just...you just care for the patients".

J: A form of overcompensating?

Lisa: Of course it is. Of course then it was reinforcing everything.

J: Is this what happened to you both (Turning to the others in the group)

Michelle: In my last placement I didn't...they didn't think I was dyslexic.

J: Did you share with them?

Michelle: Yeah, I did tell them that I'd just found out, but they weren't bothered at all. They were really good.

Lisa: I tell people straight away, that there is a problem. But sometimes they almost forget that I am dyslexic and I need to learn things differently. Like once they were telling me about a disease, and I said hold on a second I can't just hear it I have to read it as well. So sometimes I go out and I read things just quickly. And they say, "Why don't you just ask? I can tell you, I can tell you about anything." Well no, I just can't take it in. So they do forget. They are a bit dubious about drug rounds, as well.

J: What does that mean. Do they stop you going on the drug rounds?

Lisa: No, they're just...they need reassurance, they're not like as relaxed, say with other students they're quite relaxed.

Michelle: I find that as well I learn through listening to people. I can't read something I've got to be told. So I find it easier on the ward than I do in lectures.

Lisa: I can't learn in a lecture. It goes in one ear and out the other. I can't concentrate.

J: Have you tried tape recording lectures?

Lisa: I'm waiting for a tape recorder at the moment from the university.

HEALTH PROFESSIONS WALES

POSITION PAPER

MAKING REASONABLE ADJUSTMENTS IN CLINICAL PRACTICE FOR DISABLED HEALTH STUDENTS

PURPOSE OF THE PAPER

This paper sets out the main challenges facing health service and education in making reasonable adjustments for disabled health students (and subsequently disabled health workers) in clinical practice and describes areas of good practice.

The content of this paper is based on the outcomes from a conference/workshop hosted by Health Professions Wales on 8th December 2005. Participants included representatives from health and social care services, health education, Disability Rights Commission, Nursing and Midwifery Council, Health Professions Council, SKILL, professional associations and Welsh Assembly Government.

CONTEXT

The 2001 Health Survey of England concluded that 18% of individuals aged 16 and over had a moderate or severe disability – nearly one in five of the total adult population, increasing numbers of who are seeking to work in health. According to the Disability Rights Commission:

- Disabled people are less likely than non-disabled people to be employed in the public sector
- Disabled employees are also less likely to be managers and senior officials
- Disabled people are less likely to be in professional occupations or associate professional or technical positions.

A disabled person is defined as “someone who has a physical or mental impairment which has an effect on his or her ability to carry out normal day-to day activities” (Disability Discrimination Act 1995). The effect on a person’s ability must be:

- Substantial
- Adverse
- Long term

In order for the health and social care sectors to meet the requirements of disability legislation and enable individuals from differing backgrounds and abilities to enter the workforce, barriers need to be addressed and good practice shared.

LEGISLATION

The Disability Discrimination Act (DDA) (1995) states that:

- Organisations have a duty not to treat disabled students less favourably, without justification, for a reason related to their disability; and
- Organisations are required to make reasonable adjustments if their arrangements place disabled people at a substantial disadvantage compared to non disabled people. Reasonable adjustments should be anticipatory. Service providers therefore have a duty to change practices, policies and procedures; provide auxiliary aids and services; and overcome a physical feature by
 - removing the feature;
 - altering it; or
 - avoiding it; or
 - providing services by alternative methods.

The DDA has gone through a series of amendments, the latest of which came into force on 5th December 2005. This amends the definition of 'disability' to cover certain conditions from the point of diagnosis and eases the definition of mental health impairment. It also includes a Disability Equality Duty on public bodies, which comes into force in December 2006. This general duty indicates a shift in the legal framework from one that relies on disabled people complaining about discrimination to one in which the public sector becomes a proactive agent of change, actively promoting disability equality.

The requirements of the DDA are embedded within the Quality Assurance Agency 'Code of Practice for the Assurance of Academic Quality and Standards in Higher Education, Section 3: Students with Disabilities' (1999).

It should be noted that the Data Protection Act 1998 overrides disability legislation, therefore, where disabilities are not obvious, the disabled person can choose to keep a disability confidential from the organisation. (Health and Safety legislation overrides the Data Protection legislation.)

HEALTH AND SOCIAL CARE REGULATORS

The primary purpose of professional regulation is to protect the public. This is achieved through the setting and monitoring of standards for education, proficiency, conduct and ethics; and the maintenance of professional registers.

Registration confirms that an individual has met threshold standards to be considered 'Fit to Practise'. This is not a guarantee of employment... but is **required** for employment. By comparison employment is determined by whether the individual meets the job specific person specification, in other words are they 'Fit for Purpose'. Employers have responsibilities under legislation to make reasonable adjustments to enable a disabled person to work. It is often (wrongly) assumed that registration automatically means that an individual could be employed in any or all areas related to their profession practice.

Staff involved in selecting and supporting students often feel a tension between upholding the rights of the individual student against the potential risk the student

may pose to patients/clients because of their disability. How the staff member resolves this tension relates to their personal interpretation of their role as professional gatekeeper and in some cases this interpretation can lead to discriminatory practices. See appendix 1 for an illustration.

In an attempt to provide guidance to staff, in late 2005 the Health Professions Council (HPC) consulted on "A disabled person's guide to becoming a health professional". Following revision this guidance will be published later in 2006. The Nursing and Midwifery Council are also planning to produce guidance and this should be available at the end of 2006/ early 2007.

DISABILITY RIGHTS COMMISSION (DRC)

The DRC is an independent body set up to support the enforcement of the DDA and to promote equal opportunities for disabled people.

At the HPW hosted conference in December 2005, Will Bee, Director of Disability Rights Commission (DRC) Wales, said that the DRC, under its legislative powers, is to conduct Formal Investigation into discrimination in public sector careers in 2006. The DRC feels that:

- Evidence shows that disabled people are under-represented at professional and associate professional levels of the workforce
- There is also evidence to show that the regulatory frameworks for these professions contribute to discrimination against disabled people (similar frameworks exist across the regulators)
- There are issues about disclosure of impairments and health conditions, linked to their regulated nature.

He concluded by saying that disabled people are more likely to be "cared for" than contributing to health and social care. The health or social care sectors are not particularly out of step with other sectors in regard to including disabled workers. However, this is a clear indication that the issues around supporting disabled students/staff need to be addressed.

CHALLENGES AND EXAMPLES OF GOOD PRACTICE/RECOMMENDATIONS

1. Selection

The challenge for admissions staff is to make transparent selection decisions that are non-discriminatory. There is a degree of subjectivity in selection decisions as staff consider firstly the suitability of the individual to take the course and secondly the potential of each applicant to be able to practise on completion of training against any potential risk this individual may pose to patients/clients. As part of the decision process staff look at the person's attributes, eg intellectual, physical, emotional, interpersonal skills, etc. Individuals who have disability, learning difficulties or health problems pose particular challenge to staff, as each individual's needs would be unique and therefore blanket policy to govern selection is inappropriate. Each applicant needs to be individually assessed. It should also be recognised that not all individuals will be able to undertake specific health programmes.

Good practice & recommendations

- Clinical staff should be involved in the selection process. There must be clear partnership working between education providers and service providers.
- All staff involved in selection decisions should have disability equality training.
- There should be sufficient time built in to the selection process so that 'snap decision' can be avoided.
- There should be guidance or support available to staff involved in admissions to assist them in selection decisions. Schools/training departments should have links with institution wide student support services (where available), and with organisations such as SKILL.
- Staff need to establish with the prospective student what their specific needs are and how they can be enabled to achieve standards of proficiency/competency in practice as well as achieve the academic requirements of the course (assessment centres currently focus more on the latter area when determining what assistance the student should receive; Disability Student Allowance frequently gets spent on computers and other aids for the academic element of the course). Students with specific needs should not be seen as a 'problem'; the 'Social Model' of disability rather than the 'Medical Model' of disability should predominate.
- HPC's document "A disabled person's guide to becoming a health professional" was welcomed by the conference participants and similar guidance was requested for all health professional groups.
- There was a call for a central point/organisation in Wales where staff could seek guidance; this would assist in ensuring consistency across education providers.

2. Preparing clinical mentors/supervisors

The challenge for clinical mentors/supervisors is to act in a non-discriminatory way to provide support for students with specific needs in practice so that they are able to develop the proficiencies/competencies required for the course they are taking. Evidence suggests that the majority of clinical staff that act as mentors/supervisors are not receiving specific training or support for working with students with specific needs.

Good practice & recommendations

- As with the selection stage, during the course there must be clear partnership working between education providers and service providers.

- All clinical mentors/supervisors and practice-based teachers should have disability equality training. They should also receive guidance in relation to how they can support individuals with specific learning needs such as dyslexia. Students with specific needs should not be seen as a 'problem', the emphasis should be on considering ways to adjust the environment to accommodate their needs while ensuring standards of patient/client care remain unaffected.
- Prior to the student arriving in the placement, the education provider should work with the placement area and the mentors/supervisors to prepare for the placement of the disabled student. Wherever possible, disabled students should visit the area prior to their placement to discuss their specific needs with their mentor/supervisor.
- Education and service providers should strive to establish an environment, which enables students to feel confident that disclosure of their specific needs would not lead to discrimination. Mentors/supervisors need to be fully informed about a student's specific needs, which can only be achieved with the student's permission.
- Mentors/supervisors need to have dedicated time to support students in practice.

3. Making reasonable adjustments in practice

The challenge for service providers is to support students with specific needs in practice by making adjustments to practices, policies and procedures, provide auxiliary aids, and overcome physical features that may be a barrier to the student in developing clinical competency, while maintaining standards of patients/client care.

Unfortunately, determining what is a 'reasonable' adjustment in a clinical area is dependent on a number of factors, eg the type of placement (what is acceptable in one area may not be in another type of area), cost implication and who would be liable, availability of staff or other resources, practicality of making the adjustment (is it practical to make a major change if the student is only there for a short observational placement?), the ultimate decision being subjective in nature. Who should determine what is 'reasonable' is also not clear at this point, should it be the education provider, placement provider or a shared decision involving the student? The participants at the conference all agreed that adaptation of practice was appropriate and staff resistance to making changes needs to be overcome.

Good practice & recommendations

The conference participants did not identify specific examples of adjustments to practice, preferring instead to identify principles to underpin good practice in making reasonable adjustments.

- Adjustments should, where possible, be agreed in advance of placement between education, service and the student. Adjustments must be kept under constant review throughout the student's placement and revised where necessary.
- Assumptions about impairments and what adjustments should be made should be avoided. It should not be assumed that what worked for one person with a specific type of difficulty would work for someone else with the same type of difficulty.
- Adjustments need to be flexible in order to meet individual needs while ensuring the student can satisfy the standards of education and training required. Solutions should be reasonable and practicable not just possible. Students, education and service providers should evaluate all adjustments made so that lessons may be learnt.
- Staff need to be open and non-judgemental and be prepared to learn with progress.
- If both service and education agree that an adjustment needs to be made which has a cost implication, an agreement between the education and service provider should be established which indicates who is responsible to bear the cost.
- If a placement provider is not able to make adjustments an alternative placement should be sought. It is important that the student should not be penalised.
- Staff involved in determining what adjustments should be made in a specific placement area should have access to support and guidance. The proposal to have a central point for all health education and their partner service providers in Wales to give such advice would help ensure a consistent approach is taken nationally.
- Establishment of trust based Disability Advisory Groups to advise on and support staff with disabilities. These Groups exist in some trusts in Wales and are very effective. Recommendation is that all trusts should have a similar facility.
- Education and Service Providers should use specialist disability organisations to advise on how best to support students with specific needs in practice placements.

CONCLUSION

This paper highlights the current disability legislation and introduces the 'disability equality duty', which comes into force in December 2006, and considers implications for health education and their partner service providers. The disability legislation means that health education and placement providers have a duty to

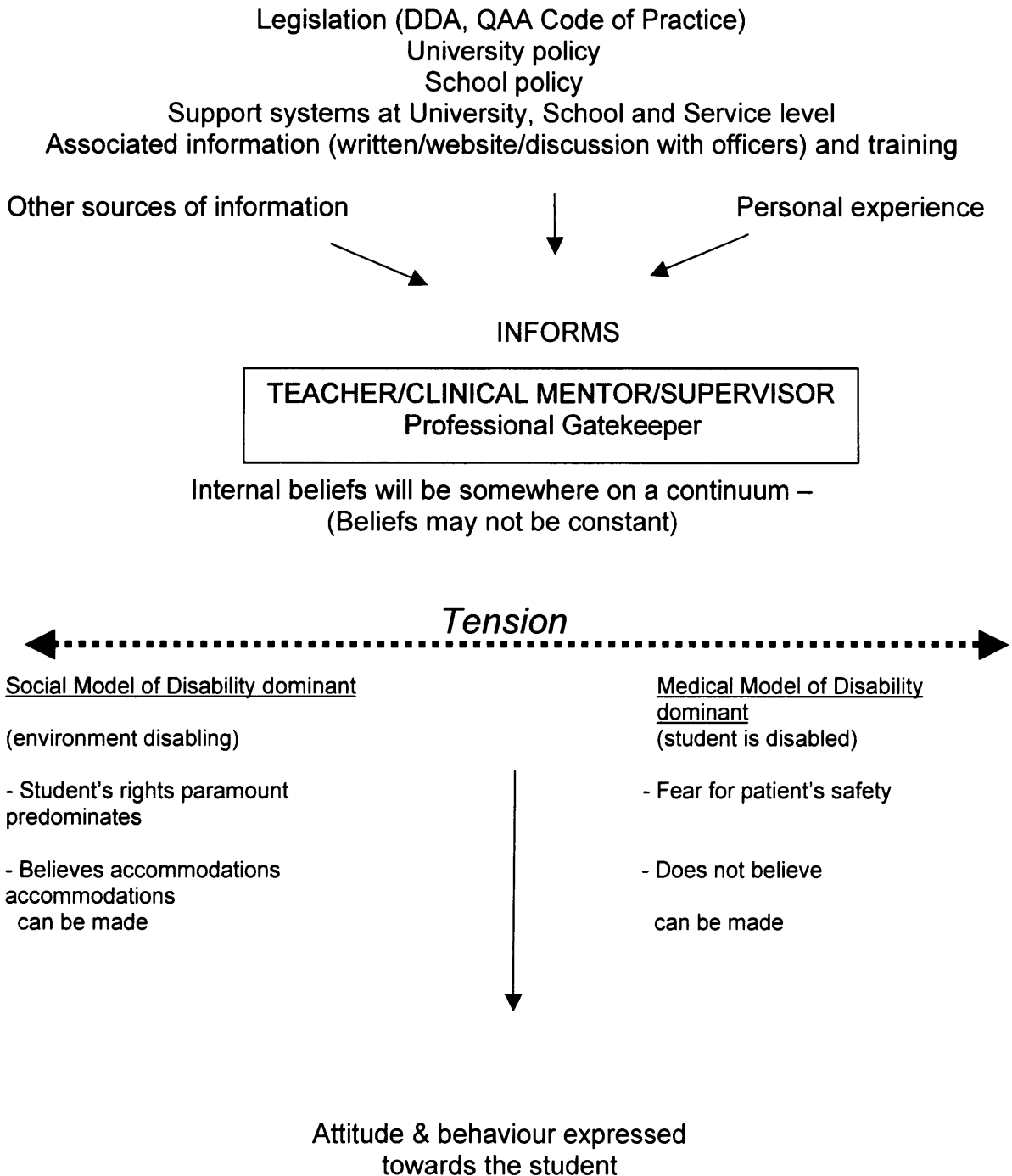
individuals seeking to become health workers. These students are entitled to have reasonable adjustments made in the clinical placement areas, where possible, and they expect to receive adequate support to enable them to develop clinical proficiency/competency. The participants at the HPW hosted conference/workshop identified a number of areas of good practice and made recommendations which need to be considered to ensure health service and education in Wales meets its responsibilities in an open and consistent manner. Participants called for the sharing of information where adjustments have been successful and for further work in this area to be taken forward.

“Removing obstacles and physical barriers will enable you to have an accessible programme, but a change in philosophy and an holistic approach is the step between being accessible and being inclusive.” (SKILL 2005)

Health Professions Wales: 13.3.06
Jean White

Appendix 1

Fig. 1. Tension faced by teachers and clinical mentors/supervisors in determining whether an individual should enter health education/training. (White 2006)



References

Data Protection Act (1998) HMSO: Norwich

Department of Health (2001) *Health Survey of England*. The Stationery Office: London (<http://www.archive2.official-documents.co.uk/document/deps/doh/survey01/disa/disa01.htm> accessed 10.3.06)

Disability Discrimination Act (1995) HMSO: Norwich

Disability Discrimination Act (2005) – *An Act to amend the DDA 1995; and for connected purposes*. HMSO: Norwich

Health Professions Council (2005) *A disabled person's guide to becoming a health professional. Consultation document*. (<http://www.hpc-uk.org/publications/consultations/index.asp?id=82> accessed 16.2.06)

Quality Assurance Agency (1999) *Code of practice for the assurance of academic quality and standards in higher education, section 3: students with disabilities*. Gloucester: Author

SKILL (2005) *SKILL: national bureau for students with disabilities*. Unpublished conference paper presented at the HPW conference "Making reasonable adjustment: enabling disabled workers to deliver health care" 8th December 2005 at Cardiff International Arena.

White J (2006) Unpublished PhD thesis: *Dyslexia in pre-registration nursing students: Strategies for developing clinical competencies*. Cardiff University School of Social Sciences.

