

UNDERSTANDING STUDENT NURSE LEARNING

A COMPARATIVE STUDY OF LEARNING THROUGH NURSE EDUCATION PROGRAMMES
FOR THE REPUBLIC OF IRELAND AND NORTHERN IRELAND

by

Seamus Cowman, RGN, RPN, RNT, DipN (London), PGCEA, MSc

Dublin City University, Collins Avenue, Dublin 9

Thesis submitted to Dublin City University, in fulfilment of the requirements for the degree of
Doctor of Philosophy

September 1994

Research conducted in the School of Educational Studies, Dublin City University

Head of School Doctor Peter McKenna

Supervisor of Research Doctor Peter McKenna

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: Seamus Cowman
Seamus Cowman

I.D. No.: 91701121

Date: 27/9/1994

CONTENTS

	Page
Abstract	(i)
Acknowledgements	(ii)
INTRODUCTION	1
The future nursing environment	2
The challenges to nurse education	3
Learning as a focus in education	5
The study	5
The research objectives	6
Outline of the Thesis	7
SECTION 1: THE LITERATURE REVIEW	
Introduction	10
CHAPTER 1 HISTORICAL DEVELOPMENTS	
Overview	12
Legislative Control	20
Formal reports on nurse education	24
European Council Directives	29
CHAPTER 2 THE LEARNING MILIEU	
The learning environment	30
Theory and practice	33
Curricular activities	39
A teacher focused or student centred education	44
CHAPTER 3 UNDERSTANDING LEARNING	
Setting a scenario	51
Theoretical perspectives on learning	53
Learning styles and preferences	55
Approaches to learning	61
Assessment and examinations	66
Teaching style and teaching method	66
CHAPTER 4 LEARNING STYLES AND APPROACHES IN THE HEALTH CARE PROFESSIONS	
Overview	69
Learning styles and approaches in professions allied to nursing	71
Learning styles and approaches in nursing	73
Conclusions	82

SECTION 2: RESEARCH DESIGN AND METHODOLOGY

CHAPTER 5 THE RESEARCH FOCUS

Introduction	84
The frame of reference	84
The propositions	86
The research objectives	87
The population	88
Access and ethical considerations	89

CHAPTER 6 THE RESEARCH PARADIGM

Background	92
The Qualitative Quantitative debate	93
The emerging paradigm Triangulation	94
Advantages and disadvantages of triangulation	97

CHAPTER 7 DATA GATHERING TECHNIQUES

Approaches to studying questionnaire (ASI)	99
1 Reliability and validity of the ASI	101
2 The ASI scales and subscales	103
3 Pretesting the ASI	106
Course Experience Questionnaire (CEQ)	106
1 Reliability and validity of the CEQ	107
2 The CEQ scales	109
Teaching/Learning Strategies Inventory	110
The Interviews	110
1 The interview procedure	111
2 The interview transcripts	113

SECTION 3: THE QUANTITATIVE DATA ANALYSIS

Introduction	114
Statistical Analysis	115

CHAPTER 8 APPROACHES TO LEARNING (ASI) ANALYSIS

Overview	116
The demographic profile	117
Republic of Ireland/Northern Ireland	118
Discussion	119
The age factor	121
The 24 and under age group	122
The 25 and over age group	122
Discussion	123
The Republic of Ireland	124
Discussion	127
TABLES	127

	Page
CHAPTER 9 TEACHING/LEARNING STRATEGIES ANALYSIS	
Overview	140
Republic of Ireland/Northern Ireland	141
The age factor	142
The Republic of Ireland	143
Discussion	143
TABLES	147
CHAPTER 10 COURSE EXPERIENCE (CEQ) ANALYSIS	
Overview	152
Demographic profile	153
Republic of Ireland/Northern Ireland	153
The age factor	156
The Republic of Ireland	158
Discussion	159
Tables	161
Conclusions	172
SECTION 4 THE QUALITATIVE DIMENSIONS	
Introduction	172
CHAPTER 11 CONSTRUCTING A BASIS FOR THE QUALITATIVE DIMENSION	
Overview	174
Heuristic model of learning	175
The theoretical basis	176
CHAPTER 12 QUALITATIVE ANALYSIS (Republic of Ireland)	
Perceptions of the course	180
Teacher/Student relationships	184
Levels of understanding	186
Teaching/learning strategies	188
Curriculum influences	192
Discussion	196
CHAPTER 13 QUALITATIVE ANALYSIS (Northern Ireland)	
Perceptions of the course	200
Teacher/student relationships	204
Levels of understanding	206
Teaching/learning strategies	207
Curriculum influences	209
Discussion	211
Conclusions	214

SECTION 5: SUMMARY AND CONCLUSIONS

Overview	217
----------	-----

CHAPTER 14 THE FINDINGS

New perspectives in nurse education	220
Implications for nurse education	233
Limitations of the study and recommendations for further research	238

APPENDICES

<u>Appendix A</u>	Information and instructions to students on approaches to learning questionnaire	241
<u>Appendix B</u>	Information and instructions and students on course experience questionnaire	242
<u>Appendix C</u>	Approaches to learning questionnaire	243
<u>Appendix D</u>	Course experience questionnaire	251
<u>Appendix E</u>	Teaching/learning strategies inventory	254
<u>Appendix F</u>	Schedule of questions for interviews	255

REFERENCES	257
-------------------	-----

ABSTRACT

There is an increasing emphasis on accountability in all public services, which in nursing is based on the desired political objective of aligning nursing more closely with the goals of health services. This study fundamentally is derived from the increasing demand for economic models of nurse education as a process within a wider economic agenda which converts inputs (example training costs) into outputs (example registered nurses).

This thesis provides an understanding of student nurse learning as it occurs through nurse education programmes for the Republic of Ireland and Northern Ireland.

A research design of triangulation including quantitative and qualitative measures was utilised to provide a greater breadth and depth of understanding on contrasting philosophies, objectives and practices arising from the two different models of nurse education.

The cohort included all student nurses (1122) who commenced a nurse education and training programme in October 1991 in the Republic of Ireland (714 nurse student nurses) and Northern Ireland (408 student nurses).

The findings demonstrate significant differences in regard to learning between student nurses from Northern Ireland and between student nurses from general, psychiatric, mental handicap and sick childrens, in the Republic of Ireland and between younger and older student nurses.

The study does however, identify a number of key factors which emerged from all measurements and transcended all programmes and therefore appear to be fundamental to student nurse learning. These are presented as a twelve factor heuristic model of student nurse learning. The central tenet of the study is that student nurse learning is context dependent. Students' constructs of learning are dependent on their interpretation of the demands of the task, influenced by the assessment and teaching, their previous knowledge, experience and personal characteristics.

It is concluded that the profession of nursing must be deliberate in pursuing quality learning in nurse education and must be determined in its explicit procurement of the type of education desirable for the future practice of nursing.

ACKNOWLEDGEMENTS

I wish to acknowledge the help and support of a number of people and organisations that in a variety of ways assisted me in the completion of this thesis

Firstly, Dr Peter McKenna to whom I am indebted for his mentorship, scholarly guidance and consistent support throughout all phases of the thesis Vincent Brehe-ny who commented on a final draft of the thesis and Gerry Cunningham who helped with the statistics

To nurse tutors/teachers in the Republic of Ireland and Northern Ireland for their cooperation and support

Ms Sarah McCormack who typed this manuscript speedily and efficiently

To a number of organisations on whose financial support I relied heavily, including

3M
An Bord Altranais
Convatec
Irish Matrons Association
Irish Nurses Organisation and Council of Nurses
Irish Nursing Research Interest Group
Milupa
NHSB (Northern Ireland)
S I P T U National Nursing Council

Finally and most importantly to my wife Nenette and children Natasha, Jonathan and Rebecca, to whom the work is dedicated for their infinite patience, and unqualified support

"The contemporary concern in education for learning rather than teaching clearly has behind it the important principle that learning is logically necessary to education whereas teaching is not"

(Hirst & Peters 1980 p 77)

INTRODUCTION

This study essentially aims to provide an understanding of student nurse learning. It is particularly concerned with identifying significant factors which during the pre-registration nurse education and training programme shape the learning approaches and experiences of student nurses. The central thesis of the research is that the quality of student nurse learning is primarily determined by how the student interprets the requirements and demands of the learning situation, therefore, learning is context dependent. The study of the application of two quite different models of nurse education in Northern Ireland and four different types of nurse education programmes for General, Psychiatric, Mental Handicap and Sick Children's nursing in the Republic provided a rich basis for comparative analysis.

On the basis of previous research undertaken (Cowman 1985) and in identifying a lack of nursing research on learning, the researcher considered that an understanding of student nurse learning was fundamental to nurse education at this period in its evolution. The researcher was further motivated by the fact that nurse education was now at a crossroads and the apprenticeship system of nurse education which has been in existence for over a century was now being disbanded in favour of more academic models of nurse education. Northern Ireland has replaced the apprenticeship system with Project 2000. The Republic has published the findings of a major review on the future of nurse education and training. Both reports ('Project 2000' in Northern Ireland and 'The Future of Nurse Education and Training in the Republic') have argued a strong case for change in educational structures, however, in the context of both reports there remains a lack of clarity on student nurses learning approaches and experiences. The researcher, in recognising this void of research, believed that an understanding of student nurse learning was fundamental to judgments on nurse education and training. The researcher also believed that research of this nature provided a key to ensuring quality in nurse education in a climate of accountability.

It is argued (Parlett and Hamilton 1972) that a "powerful check on a study's validity"

is whether or not it presents "recognisable reality" to those that read it?" For the researcher, the outcomes of this study do confirm and substantiate many of the basic assumptions that the author had formed regarding nurse education and training. The finding of learning differences in students from various programmes of nurse education and training highlights the contextual dependence of learning approaches and experiences. The finding of a greater preference for teacher controlled learning situations and the influence of exposure to a dominant teaching approach calls for greater diversification in teaching/learning strategies. Literature has grown up on adult learning approaches in nurse education. By identifying a consistent pattern of differences between older and younger students across a range of measurements, this research adds to that literature. This study therefore does present "recognisable reality" to the author and the findings do create further agendas at the level of policy formulation and curriculum evaluation.

The Future Nursing Environment

Nursing theorists have discussed the epistemological basis of nursing and created debates on paradigmatic differences between education and training in nursing. Such debates have suggested that the traditional training paradigm in nursing does not overtly encourage the development in nurses of skills related to problem solving, critical and analytical thinking innovation, research and creativity. It is concluded that essentially nurse education should not be an end in itself. It should be set in a context of changing health services. Nursing is a practice discipline and theory and practice are intrinsically related. Nursing theory is intimately related to practice and theory grows out of practice. Nursing today operates in a complex environment where constant change is taking place in societal and health care trends. The nursing profession therefore has a responsibility to look to the future to ensure that its potential continues to be realised in the context of changing health services. Many changes in the later half of this century brought about by social, technological and medical change have presented the nursing profession with challenges requiring nurses to be flexible and adaptable. The health care systems of today are complex ones. Health care issues involving new and different demands from informed consumers,

economics of health, health service resourcing, issues related to accountability and legislation are all influencing and transforming the role of the nurse. The next decade is expected to be a time of rapid global change. It is clear that technology and scientific advances will provide a different environment for nursing in the future. The future will bring further advances in information technology used in data bases to accommodate knowledge related to clinical, epidemiological and environmental factors. Artificial intelligence will lead to sophisticated systems for clinical and administrative decision making. The advances of biomedical and psycho-social knowledge in recent decades has created much broader horizons for health care professionals, including nurses. Sophisticated knowledge, clinical reasoning, problem solving and decision making will be crucial in arriving at sound clinical nursing judgments. Nurses therefore can no longer approach their practice from a task oriented perspective, nurses need to be educated and prepared to adapt to the changing health care environments. It is therefore reasonable to suggest that the nurse's role will change in accordance with the emerging health services. Besides increased levels of clinical expertise, new and enhanced roles can be envisaged in areas related to health promotion, innovation research and management. However, in a context of the future, the profession needs to be mindful of Fretwell's (1985) insightful reflection on nursing developments when she identified in nursing "an inbuilt desire for routine order and conformity which militates against change". She suggested that nurses have been good at providing "a veneer of change" through documentation while leaving underlying practices unchanged.

The Challenges to Nurse Education

Traditionally, nurse training has predominantly followed a medical model of nurse training based around the care of sick people in hospital. However nursing now operates in an environment where constant change is required and health needs are diverse. In responding to this challenge it has been felt necessary to reorientate approaches to nurse education. Such changes have resulted in closer links and integration into higher education with a resulting academic validation for nurse education and nursing qualifications. It was suggested by McFarlane (1987) amongst others that

the graduate nurse will have the powers of critical analysis and a knowledge base for nursing prescription and action necessary for a competent clinical nursing role. McFarlane in arguing the case for a graduate nursing profession stated, 'the skills which the health service will require from nurses in the year 2000 are those which only the graduate can bring. What we have to learn is the intense practicality of theory in a practice discipline and its power to transform practice.'

Nurse education has a major role to play in ensuring that nursing practice is sensitive, relevant and capable of responding to the wide range of health and social needs of society. Nurse education must also ensure that nurses have the capacity to adjust where and when appropriate to changing circumstances. The diversity and complexity of nursing in today's health care services makes it necessary to prepare nurses who are innovators, who can think critically and creatively and who have a substantial education in nursing related sciences and the humanities. The nurse must also possess the motivation for life long learning and the ability to transfer new knowledge and skills into health care for individual families, groups and communities in all settings in which health care services are needed.

It is considered vital in today's health services that programmes of professional education should instil positive attitudes about continuing education. Continuing change in today's health care environments imposes greater responsibilities on nurses in their practice. These responsibilities are both legal and professional. Young (1991) in reviewing case law identified the legal responsibility of the nurse in maintaining up to date research based knowledge and skills. Professional imperatives are imposed on nurses by a code of professional conduct. Nurse education therefore, can be regarded as a continuum, not something that begins on entry to the nurse training programme and ends at the point of registration as a nurse. The limited lifespan of knowledge has been recognised and it has been stated that professional knowledge has a half-life of about 2.5 years before it becomes outmoded and obsolete (Barker 1985). Therefore, in order to advance professional competence and prevent obsolescence, continuing education and lifelong learning is essential for active practitioners of the profession.

Learning as a Focus in Education

Reviewing the extending base of knowledge leads to fundamental questions about nursing values and where the educational focus should lie within the nursing curriculum. It may be argued that traditionally a greater focus has been placed on teaching rather than learning. Nurse educators have tended to use didactic methods of teaching and learning in nurse education. However, there is now an emphasis on nurse education as a process which incorporates a facilitative approach including student centred methods and the concept of learning how to learn. Problem solving, self directed learning, interpersonal development and contract learning are all very much a part of the associated nomenclature. Based on a study of the workplace, Cheren (1990) highlighted the importance of these educational concepts and principles to quality, performance and practice. The study identified that learning how to learn was the most important basic skill to be acquired. Twelve other skills are identified: listening, oral communication, problem solving, creative thinking, self esteem, goal setting/motivation, personal negotiation, organisational effectiveness and leadership. The traditional debate on training versus education may now be considered to be rather sterile because discussions appear to have progressed on to the centrality of the learner and learning in education, this has brought about a particular focus on the process of learning and the effects of teaching, the curriculum and the learning environment.

The individual's perception of the learning context is central to understanding student nurse learning. A combination of antecedent variables such as previous experience, personal characteristics and the presentation and conduct of programmes, primarily influence the individual's learning approaches and experiences of the course.

The study

The specific focus in this study is student nurse learning. A total of 1122 students are included in the study. This represents all students who commenced nurse training in

October 1991 in the Republic of Ireland (n = 714) and in Northern Ireland (n = 408). A descriptive type research approach was used. The research design was longitudinal and incorporated methodological and data triangulation. By undertaking comparative analysis the influence of different programmes was examined. The comparative analysis included the Republic and Northern Ireland, the four different programmes of nurse training in the Republic, and an age criterion distinguishing those students aged 24 years and under from students 25 and over.

This study focuses on the uniqueness of students' experiences and on the variety and quality of factors influencing them as learners. Fundamentally it is concerned with explaining student nurse learning from the "inside" through striving to understand students' own descriptions of what learning means to them and of their learning approaches and experiences.

The Research Objectives

- 1 To investigate the approaches to learning of student nurses from Northern Ireland and the Republic and to describe significant differences
- 2 To investigate the course experiences of student nurses from Northern Ireland and the Republic and to describe significant differences
- 3 To investigate the teaching/learning preferences of student nurses from Northern Ireland and the Republic and to describe significant differences
- 4 With regard to the Republic of Ireland cohort to identify differences between student nurses from general, psychiatric, mental handicap and sick children's nursing in relation to
 - a) approaches to learning
 - b) course experiences
 - c) teaching/learning preferences

- 5 To identify if age is a significant factor in relation to student nurse learning approaches, course experiences and teaching/learning preferences
- 6 To provide information on the implications of nurse education policies as implemented in Northern Ireland and the Republic
- 7 To provide feedback on nurse education which might inform policy formulation and implementation

OUTLINE OF THE THESIS

The thesis is presented in five sections. Each section is made up of a number of chapters.

Section 1

The first section of the study includes chapters which review the literature. Chapter 1 provides an historical overview and reviews significant events in the development of nurse education. Chapter 2 examines the range of research conducted on nurse education and aspects which were considered relevant to this study are explored in greater detail. Particular emphasis is placed on matters related to the curriculum, the learning environment and the integration of theory and practice in nurse education. Chapter 3 establishes a theoretical basis for the study and reviews the research on learning outside nurse education. The theoretical constructs and findings of the Lancaster Studies on student learning which are central to this research are discussed. Chapter 4 provides a more specific focus on the research into learning which has been conducted among the health care professions, including medical, paramedical and nursing.

Section 2

The second section of the report describes the research basis for the study. The

propositions and research objectives for the study are outlined. The research design of triangulation and its inherent advantages in a study of learning are explored. The range of data gathering techniques involving the three questionnaires and focused interviews are outlined. Aspects related to their validity and reliability are discussed.

Section 3

The third section of the report is concerned with quantitative aspects of the study and is presented in three chapters. The results obtained from the (i) approaches to learning, (ii) teaching learning strategies and (iii) course experience, questionnaires are presented. The comparative analysis undertaken is structured as

- a) Northern Ireland and the Republic,
- b) Age Groups 24 and under, 25 and over, and
- c) Four groups of student nurses in the Republic of Ireland

On the basis of the findings, a twelve factor, heuristic model of learning in nurse education is presented.

Section 4

The fourth section of the report discusses the qualitative elements of the study. The theoretical basis (as derived from the quantitative findings) for the focused interviews is discussed. The various themes emerging from the interviews and their importance in the context of enriching the quantitative data is highlighted.

Section 5

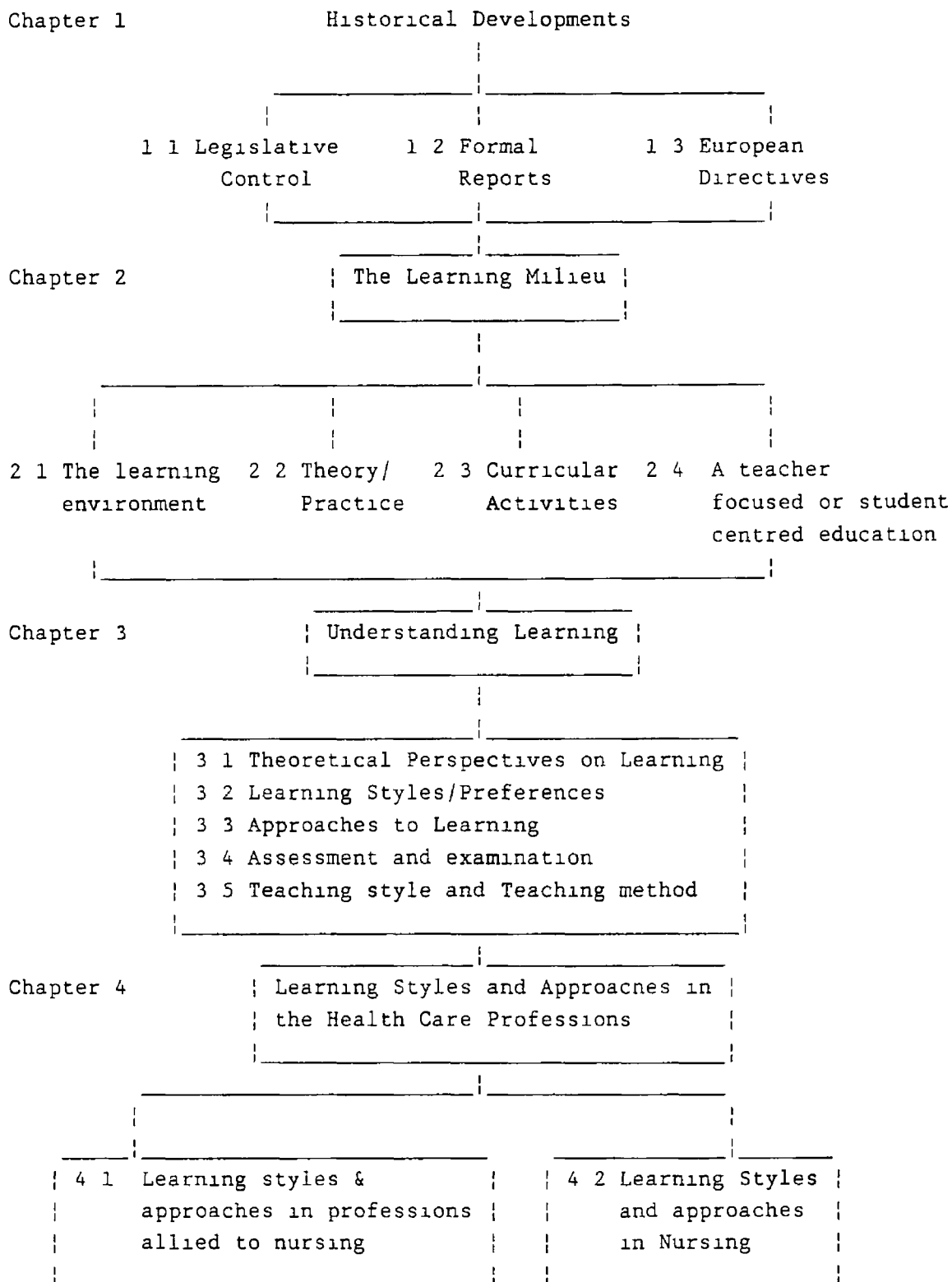
As the final section, it explores the findings of the study and draws conclusions. The importance of the findings as an evaluative statement on nurse education and as a benchmark for future education developments is argued. In a context of future policy on nurse education, the implications of the study are discussed and certain recommendations are made about the formulation of such policy.

SECTION 1

THE LITERATURE REVIEW

FIGURE 1

LITERATURE REVIEW SUMMARY MATRIX



THE LITERATURE REVIEW

Introduction

The literature review represents an essential basis from which any research study can develop. Besides reviewing the research problem and obviating duplication, a literature search can also serve to stimulate the research imagination. Castles (1987) suggests "No investigator works in isolation", the researcher therefore uses conclusions from previous research as a base line for determining the significance and importance of their findings. It is clear that a review of literature needs to be systematically structured with a planned, properly informed and ordered approach so as to ensure comprehensiveness. Benton and Cormack (1991) distinguished between a literature search and a literature review. A literature search was described as, "the process of systematically identifying published material which met a set of pre-determined criteria." The literature review was stated as, "to systematically read, critically appraise, then synthesise into a coherent structure a logical review of the literature."

The search and review of literature in this section in complying with conventionally stated approaches, adopted in the first instance, a relatively mechanical set of steps to obtain relevant books, articles and research reports. These were then reviewed and analysed with relevant positions and arguments being commented on. In searching the literature, various facilities were utilised. Libraries which contained relevant books, journals and nursing indices were searched as were readily available data bases on CD-ROM including MEDLINE, CINAHL, and ERIC.

This section of the report outlines the range of findings from the available literature which are relevant to this study. The review of literature is presented in six chapters with an approach which is general in the first instance and is then cumulatively aimed at building up a very specific understanding of the relevant literature. A schematic overview of the literature review presentation style is provided in [Figure 1](#). In the first two chapters, a rather general approach is taken. Chapter 1, provides a historical overview and highlights the unstructured approaches of the earliest developments in



nurse education and training. It particularly highlights aspects related to the apprenticeship type system, the various reports on nurse education and the influence of nursing legislation.

In Chapter 2, the significant aspects which are deemed important from the general range of research on nurse education are reviewed. In this chapter, it becomes clear that during the 1970s and 80s there was voluminous research conducted on nurse education which details findings related to theory and practice, learning environment and curricular activities. However, there appears to be a general lack of specific research on understanding learning among student nurses in Ireland and the United Kingdom. The remaining chapters, 3 and 4, discuss specific aspects related to learning in higher education and learning in nursing. In Chapter 3, a theoretical perspective for the study of learning is discussed. This is further developed in Chapter 4 by focusing on seminal research, on student learning in higher education which was undertaken in universities in Gothenburg and Lancaster. The wide array of research on learning styles and approaches as conducted among health care professionals is discussed in Chapter 5. Most of this research is American in origin as there is a paucity of research on student nurse learning approaches and experiences in British and Irish nurse education.

CHAPTER 1

HISTORICAL DEVELOPMENTS

Overview

In Ireland the tradition of caring for the sick dates back to pre-Christian times. The earliest form of care was given by relatives of people suffering from diseases of natural causes. The evolution of nursing can be traced from the arrival of the Celts and the Brehon Laws, to the contribution to the care of sick offered by the Christians and deaconesses. Examination of the ancient Brehon Laws indicates that those who tended the mentally ill, for instance, were given special standing in the community or even exempted from the laws' attentions. Later the religious orders provided care and refuge on a charitable basis until the suppression of the religious houses in the sixteenth century.

In the earliest days there was no formal training for any person who provided care to the sick. Knowledge was handed down by word of mouth. In ancient Greece, Hippocrates, (460 B.C.), for instance, was the first to suggest the need for training in the care of the sick. The title "nurse" was attributed to anyone who looked after the sick. Gradually, the title took on a more formal interpretation as applying to professional women whose skilled services extended over a wide area of help for the sick, not just in institutions but also in the home and community. In Ireland the religious orders, from the early nineteenth century onwards had a profound impact on the development of nursing through the work, for instance, of the Irish Sisters of Charity, the Sisters of Mercy and the Brothers of the Order of St. John of God.

In Dublin, plans for instruction in nursing were outlined as early as 1817 however training was relatively unsystematic with no overall pattern. It was only in the latter half of the nineteenth century in Victorian England, during a period of humanitarianism and romanticism in an era conducive to change, that nurse education and training began to be more formalised. Florence Nightingale pioneered a system of classroom

instruction and practical training for nurses in hospitals. Nightingale's scheme of training was exclusively for females and the system was strictly divided to accommodate the upper class lady nurses and the poor law probationer nurses. Her feats in the Crimean War, her dedication and caring, accompanied by her upper class background, became the instruments which allowed nursing to develop as an acceptable occupation. With the support and approval of society came the recognition of the need for the education and training of nurses. The system of nurse education and training that emerged was one of classroom instruction, accompanied by ward experiences and participation in patient care predominantly in a hospital setting. Formal classes would be arranged at a time when the probationer nurses were not too exhausted to benefit from them. Teaching was aimed at writing, general improvement and bible classes given by the home sister which was planned to smooth the intellectual and social crudities of recruits. Whilst there was no attempt to devise a theoretical curriculum, Nightingale expressed the need to provide educational structure and she stated,

"Too much medical reading unguided purposeless reading the most dangerous of all is inducing women to think they know something when they know nothing we give them no system. Their reading is wholly without purpose. If we give them a purpose and a system we might save them from conceit and folly" (Nightingale 1875)

The system of nurse training as it developed was considered to be one of apprenticeship, yet, it did not fulfil the highest ideals of apprenticeship, which is the certainty of a learner working with a master craftsman. Nightingale's system of nurse training was specifically for what we now call general nurses, while towards the end of the nineteenth century the Medico-Psychological Association co-ordinated the training of psychiatric nurses and the awarding of certificates.

Maggs (1980) outlined the characteristics of nurse training as it evolved between 1881 and 1914. He suggested that probationers were subjected to an informal socialisation process loosely and erroneously termed an 'apprenticeship'. The process

which was ward-based was aimed at producing standard nurses from a common mould. Maggs identified demands which were placed on probationers during this period. Those who stayed the course were vindicated by the criticisms aimed at those who left. One matron referred to nurse training as "the survival of the fittest".

The historical events and developments in nursing during the Nightingale era have had a pervasive influence on nursing and nurse education for more than 150 years. The formalising of nurse education was undoubtedly perceived as a deliberate and positive act in a historical context. However, the narrow and confining interpretation of the type of education that nurses required has left a legacy of unanswered questions which have served to haunt and stunt the development of nursing as a profession in later years (Prince 1982).

Nightingale's failure to define the elements of nursing and to lay the foundations for the integration of theory and practice remained as a distinct anomaly in the provision of probationer or student nurse education and training. Just as the balance between theory and practice in nurse education has never been rationalised, neither has the adequacy or inadequacy of a 3 year nurse training period. As regards the duration of training, Abel Smith (1975) stated

"Over the past seventy years there has been an immense expansion of the technical procedures and theoretical knowledge which can be taught to nurses. If three years of training was needed in 1890 the period of training (still three years) must now be too short. If three years are adequate now three years was too long sixty years ago." (P 243)

The underlying ethos of the nurse education and training system as it developed had a strong basis of discipline and spirituality (Seymer, 1960). As to the process of education and training, one nurse educator wrote "Metal must be hammered into shape and human beings must be subjected to discipline and severe training if they are to develop the highest type of character and the highest mental attainments".

(Mollet 1913) Prince (1984) suggested that the provision of lectures for probationer nurses was a recruiting device and not an educational one. The Nightingale Fund Committee which was established to co-ordinate and finance the Nightingale school of nursing took no action to improve technical nursing nor the knowledge base of nurses' work, nor to define the role of the professional nurse. As Prince (1984) argued, the halo surrounding the name of Nightingale and her skill in dealing with incipient criticism and publicity ensured the public acceptance of a sham. The controlling influence of medicine over nursing was evident from the earliest days of nursing. Henry Bonham Carter, a member of Parliament and Secretary to the Nightingale Fund Committee thought that medical men had no conception of what was wanted in nursing. Yet knowledge, what it was, what was relevant, how it should be transferred, and the testing of its acquisition, was under the control of the medical staff (Prince 1984).

In translating this early period of nursing history into modern day nursing, Baly (1981) suggested that the profession has tended to look back to its days of glory and has chosen not to reform. The period at best has been described as a superficial contrivance characterised by confusion and dissent. Nurse education at its commencement was established on an unclear theoretical basis through a model that had a basic philosophy of training rather than education and which left many unresolved dilemmas. As Abel Smith (1975) noted what the nurse was taught, who taught her, who examined her, are all questions which were left unanswered. However, this period of history in nursing did alter the course of nursing as an occupation, gone was the Sarey Gamp image, no longer were nurses thought of as drunken and promiscuous. Instead nursing had now cultivated a controlling, caring image aimed at providing a distinguishable level of service to those in need.

Historically nursing has been very much influenced by its emergence as a women's occupation in the nineteenth century. It may be argued that one of the results of these historical influences was that much of nurse "education" took the form of training rather than education. This notion was supported by Maggs (1978) when he stated

"In exchange for stable employment opportunities, limited further education and training, social approval for their work and limited technical functioning in cure and care, nurses became representatives of contemporary beliefs about women "

The development of nursing as an acceptable occupation for women is inextricably linked to the doctor/nurse relationship. The doctor/nurse relationship replicated the male/female roles of Victorian society, one of male dominance and female subservience with the nurse perceived as a medical auxiliary. Doctors expressed little interest in having well trained nurses. They shared the ideology that nurses are born not made and need intuition and character, learning obedience rather than professional expertise (Leeson & Gray, 1978)

In providing a cohesive structure for nurse education Nightingale's intent was clear. Writing to one of her former pupils in 1867 she said

"the whole reform in nursing both at home and abroad has been to take all power out of the hands of men and put it in the hands of one female trained head and make her responsible for everything (regarding internal management and discipline) being carried out. Do not let the doctor make himself head nurse!"

Closely linked to the development of nursing as a caring profession was the contribution of the religious orders to the care of the sick. The Sisters of Charity of St Vincent de Paul had been nursing the poor since 1649. The Brothers of the Order of St John of God devoted their skills to the care of the insane and the mentally afflicted. The Sisters of Mercy founded in Dublin in 1831 were pioneers of domiciliary nursing care in Ireland.

The notion of nursing as a vocation or calling was also very evident outside of the

religious orders. This quasi-spiritual calling related to the carrying out of disreputable tasks associated with patient care, and served to justify nursing as an acceptable occupation. Links were forged between the work of nurses and mid-Victorian religiosity which ensured the respectability of nursing (Dingwall & McIntosh, 1978).

The desire for professionalisation conflicted with the notion of vocationalism and female servility. In this sense, Smith (1982) pointed out that the two notions of vocation and professionalism influenced education. Smith went on to argue that traditional nurse education, that is, nurse education which is hospital based and involves service commitments, incorporates both professional and vocational ideologies. The vocational aspect is concerned with producing a "good bedside nurse" while clinical competence through skilled performance and observation represents the professional component.

The training principles constituting apprenticeship nurse education laid down in this period of history became the accepted pattern for Ireland and the United Kingdom. Fundamentally it operated on the belief that nurses automatically learn as they work and that to place them as a member of rostered duty staff in a ward full of patients made a valuable contribution to their training.

Historically Northern Ireland and the Republic of Ireland have had a similar model of nurse education and training, i.e. apprenticeship. The apprenticeship model was discontinued in Northern Ireland in 1990 with the commencement of Project 2000.

Following the Nurses Registration Act (1919), the training of nurses was relatively unstructured and took the format of a practical syllabus of tasks to be achieved by nurse learners. It was published in booklet form and issued to each learner. The theoretical instruction given was limited and tended to be the odd lecture given by the matron or doctor when available. Gradually the examination system became more structured and formalised and in the 1950's national policies were established. Assessment techniques also developed rapidly and in the sixties the established tradition of doctors setting examinations for nurses began to be questioned.

The mechanics of assessing clinical and practical nursing skills also underwent change. In the earliest days it took the form of a practical room in a hospital unknown to the nurse, a totally artificial setting. The student on entering the practical room was asked to identify instruments, demonstrate certain skills and select correct equipment and medical instruments as requested by the assessor.

In the UK during the seventies, the General Nursing Council discontinued the practical room assessment technique and local assessment of clinical nursing skills was advocated. In Northern Ireland clinical assessment of student nurses following 1969 was locally conducted with each nurse education centre taking responsibility for the arrangements and conduction of learner assessment. In the Republic of Ireland it wasn't until the early 1980's that clinical assessment for learners was devolved to the hospital with the introduction of clinical proficiency assessment for student nurses.

In the U K during the 1980s, schools of nursing had greater powers invested in them through the national boards. By the mid 1980s, schools of nursing were required to establish an education committee. The national boards created policy and provided guidance to schools of nursing to undertake their own style of assessment and examination. The final registration examination which was previously set and controlled by the National Boards was devolved to the schools of nursing.

Because of the employee status of the student nurse many problems were encountered with the ward based technique of assessment. These have been highlighted consistently for more than two decades. Castledine (1979) reported problems with allocation of learners to ward areas and facilitating assessment, increasing numbers of new student nurses arriving on wards with each requiring formal assessment put extra pressure on qualified staff. Lack of qualified assessors in some clinical areas and the pedantic attitudes and unnecessary behaviour of some examiners who conjured up a range of stress provoking situations were highlighted by Castledine. The many concerns surrounding unfavourable conditions for ward learning led to a statement of policy by the General Nursing Council in 1979 (G N C 77/19/A).

The examination system as it evolved consisted of continuous assessment in relation

to determining clinical competence at ward level and a state final examination. Registration as a nurse was granted on successful completion of a dual form of assessment incorporating clinical skills assessment and a written examination. In the Republic of Ireland currently there is continuous assessment of clinical skills in the form of proficiency assessment and a written final registration examination conducted by An Bord Altranais. It has been a source of dissatisfaction that no compensation exists between the two areas of assessment. During the period of three year training, numerous ward reports and assessments are conducted. However, no percentage award is given to clinical assessment in the final examination. Student assessment in the clinical area and written examination are independent of each other and no compensation towards final examination is allowed in the form of continuous assessment. Ultimately, satisfactory completion of the course and the award of nurse registration is granted on success in the final written examination. It is also noted that school assessment methods during the course are generally through the form of written examinations. The Northern Ireland assessment and examination system incorporates a continuous assessment approach. There is an accumulation of credits through the various assessment procedures which ultimately contribute to the final examination result. The Northern Ireland curriculum generally utilises a greater range of assessment techniques throughout the course. Such assessment methods include care studies, case studies, research proposals and multiple choice examinations.

In the Republic, the final examination is controlled and prepared by the regulating body, An Bord Altranais. In Northern Ireland, all examinations including final examinations are controlled and prepared by individual colleges of nursing under the guidance of the National Board.

The first recognition of the need for a nurse teacher came in 1872, when a Home Sister was appointed to assist the Matron with the training of nurses (Hector 1973). The basic educational role of this Sister was to give training in writing and the bible and to supervise the probationers attendance at doctors' lectures. The Home Sister had no special preparation for this role and was subordinate to the doctor and under

the authority of the Matron (Davis 1980)

In the UK the first course for nurse teachers was conducted by the university of London in 1926 as a one year diploma course. In 1947 a one year diploma course for Sister Tutors was established. During the sixties a plethora of courses became available for aspiring nurse teachers through various colleges and universities. These courses, which were accredited as a certificate in education and ensured eligibility for registration as a nurse tutor enabled nurse teachers to be prepared for their role with teachers from other fields.

In the Republic of Ireland Nurse Tutor preparation did not commence until 1960 in University College Dublin. Rules made under the 1950 Nurses Act enabled the registration of Nurse Tutors. This Nurse Tutor course was later developed into a three year, Bachelor of Nursing studies in 1984. This course which is current has an explicit aim to enable experienced registered nurses and midwives to teach in the classroom and the clinical areas and to manage nurse education.

1.1 Legislative Control

The debate concerning registration of nurses established two encampments, those for registration, led by Mrs Bedford Fenwick and those against, led by Florence Nightingale. Those in favour of registration argued that it would unite all nurses in membership of a recognised profession and would provide evidence of their having received a systematic training (Baly 1980). Nightingale, in arguing against registration, suggested that devotion, gentleness, sympathy and other qualities could not be ascertained by public examination (Woodham Smith 1950).

However, as the provision of health care increased, there was a need for a greater regulation of nursing services with a consequent need for legislative control. The first regulatory recognition given to any aspect of nurse training in Ireland came about as a result of the Midwives Act 1902, which, although only applied to England and Wales, recognised midwifery training certificates from certain institutions in Ireland.

The first piece of legislation directly concerned with nursing in Ireland was the Midwives Act 1918 which established the Central Midwives Board. The Nurses Registration Act, 1919, established the General Nursing Council for Ireland.

The General Nursing Council, as a statutory body, exercised a control over nurse training and as part of its functions was charged with the responsibilities of

- 1 compiling a syllabus of instruction
- 2 compiling a syllabus of subjects for examination
- 3 compiling a register of qualified nurses

The 1919 Nurses Act served to be the final focus of common legislation and development for the whole of Ireland. From 1921 to the present day, Northern Ireland and the Republic of Ireland's developmental paths through legislation portray two distinct and separate histories.

As a consequence of the enactment of the Government of Ireland Act, 1920, the joint Nursing and Midwives Council Act (Northern Ireland) 1922, was passed, under which the Joint Nursing and Midwives Council for Northern Ireland was constituted and the register of nurses for the sick in Northern Ireland and the midwives' roll for Northern Ireland was formed.

The 1919, Nurses Act provided for the establishment and maintenance of a register of nurses with five parts

- a) general part
- b) supplementary part for male nurses
- c) supplementary part for nurses trained in the nursing of the mentally ill
- d) supplementary part for nurses trained in the nursing of sick children
- e) any other presented part

Prior to the 1919 legislation there had been since 1891 a co-ordinated training system

and a certificate award for mental nurses organised by the Medico-Psychological Association

An Bord Altranais was established under the Nurses Act, 1950 which repealed previous acts. Under this act a statutory committee of An Bord Altranais was established and was known as the Midwives' Committee. On foot of rules published under this act, five new parts were added to the register, nurses caring for the mentally handicapped 1958, nurse tutors 1964, public health nurses 1966, clinical teachers and advanced psychiatric nursing 1973. It is significant that the first formal recognition for a teacher of nurses in the Republic of Ireland did not occur until 1964 through the creation of a nurse tutor division of the register of nurses.

During the 1980s, new legislation was taking effect in the U.K. (Nurses, Midwives, and Health Visitors Act 1979) and the Republic (Nurses Act 1985). Both pieces of legislation were designed with a specific intention of affording the nursing profession a greater autonomy and control over its affairs through self regulation. This was particularly the case in the Republic where for the first time, the Nursing Board comprised of a majority of nurse representation. It was expected that during the 1980s these new bodies would speak authoritatively on behalf of nurses and provide clarity and guidance on professional matters. As the education debate gathered momentum, the UKCC in 1984 set up Project 2000 with terms of reference "to determine the education and training required for the professional practice of nursing, midwifery and health visiting in relation to projected health care needs in the 1990s and beyond and to make recommendations. In the Republic, An Bord Altranais established a review of nurse education and training in 1989 and this committee has now completed its work.

The Nurses Act, 1985 is the present governing legislation, and this act repealed the Midwives Act 1944 and the Nurses Acts of 1950 and 1961.

The rules in accordance with the Nurses Act, 1985 provided for divisions of the register where the names of nurses who are qualified as competent to practice are en-

tered The seven divisions of the register are

General Nurses (RGN), Psychiatric Nurses (RPN), Sick Children's Nurses (RSCN), Mental Handicap Nurses (RMHN), Midwives (RM), Public Health Nurses (RPHN), Nurse Tutors (RNT), (Nurses Rules, 1988, Part 3 2)

The Nurses and Midwives Act (Northern Ireland) 1959 repealed the 1918, 1919, 1922 and parts of the 1946 Act which through the creation of the roll of assistant nurses (State Enrolled Nurses) established a second grade of nurse The 1959 Act provided a new constitution for the General Nursing Council

The Nurses and Midwives Act (Northern Ireland) 1970 made provision for a re-organisation which led to a grouping of schools into seven colleges of nursing, with one college of midwifery The 1970 Act effected the separation of education and service so that unlike schools of nursing in the Republic, the Northern Ireland National Board had direct responsibility for the colleges and their staff

The Nurses Midwives and Health Visitors Act 1979 established the United Kingdom Central Council for Nursing, Midwifery and Health Visiting, with boards for England, Scotland, Wales and Northern Ireland This Act also introduced fundamental changes in the education, training and registration of nurses, midwives and health visitors throughout the United Kingdom

The Northern Ireland National Board in accordance with the 1979 Act delegated its powers in relation to colleges, to the training committee of each college an arrangement subsequently carried forward by a new board established under nursing legislation enacted in 1992 The training committee was responsible for the proper conduct of the college and all aspects related to the functional elements of the college

The current legislation, the Nurses, Midwives and Health Visitors Act 1992 has led to major reform regarding membership of the UKCC and National Boards and aspects related to their operational strategies

It is noted that the nursing profession in the Republic of Ireland has not been studied as extensively as in the United Kingdom, nor is there such a range of reports on nursing. Reports on nursing in the United Kingdom, including the Lancet Commission 1932, Athlone 1938, Horder Committee 1943, Wood Report 1947, Nuffield 1953, Platt 1964 and Briggs 1972, point out a variety of problems and solutions concerned with nursing and nurse education.

It is significant to note that the apprenticeship aspect of nurse education was central to many of these nursing reports. As early as 1932 the Lancet Commission rejected any possible reduction in the length of training, arguing that it would be detrimental to the hospitals who required the probationers (student nurses) to give service. It went on to suggest that nursing was essentially a craft. The report effectively did little to enhance nurse education. However it did state that Ward Sisters should be relieved of some of their duties to enable them to spend more time teaching nurses.

The Horder Committee (1943) strongly recommended a separation between training and the obligations to provide service for hospital patients and that the educational needs of nurses should take priority.

However, little change occurred and in 1953 the Nuffield Report highlighted unsatisfactory aspects of apprenticeship nurse education and reported that teaching, as such, was found to take up no more than a negligible amount of time. "During a ward sister's nine hour day tuition to student nurses was observed to occupy an average of five minutes only" (p. 121).

The Platt Report (1964) recommended that student nurses should be students and not apprentices and that they should be supernumerary for the first two years of training and receive an educational grant. The report further suggested that the School of Nursing should be independent of the hospital.

It was only in 1970 that the first report on nursing appeared in the Republic of Ireland. The Irish Matrons Association commissioned a report on student nurse training (Hanrahan 1970). In this report, it was highlighted that 60% of respondents expressed a favourable attitude to linking nurse training schools to university departments.

A Working Party report on Psychiatric Nursing Services of Health Boards reported in 1972 and outlined a strategy for a new direction and approach in relation to the role of the nurse and student nurse training. The report recommended a common basic training course to be followed by further training and specialisation in the different fields of nursing. It suggested that links should be formed with Regional Technical Colleges.

In the UK, the Briggs Report (1972) made wide ranging recommendations for change in pre and post registration nurse education. It emphasised nurse education as a process of continuing learning and recommended a common core training for all entrants. In recommending University or College education for some nurses it urged caution and stated "basic skills can be learnt thoroughly only in clinical practice". This Report laid the foundations for many of the changes which were to follow in the next decade, particularly in relation to Project 2000. It also identified fundamental problems inherent to apprenticeship nurse education, and stated that the critical problems in nurse education and training were,

"The ambivalent position of the nurse in training both as learner and worker, determining the balance of theoretical and practical work in the learning process itself, the dual role of the hospital as provider of nursing care for patients and the provider of education for nurses" (P 64)

The Working Party Report (1980) commissioned by the Department of Health was one of the most significant reports in the history of nursing in the Republic of Ireland. In its wide ranging recommendation for pre registration and continuing educa-

tion the report called for a common basic training course for a period of two years to be followed by further training and specialisation in the different fields of nursing. It recommended that priority be given to the development of a degree course for registered nurses.

In 1991 An Bord Altranais published a Consultative Document on Nurse Education and Training. This helped create a debate on the future of nurse education in the Republic of Ireland. The report highlighted the need for a Common Core Programme with academic recognition for nursing qualifications. In discussing the process of nurse education it stated

"reviewing the extending base of nursing knowledge leads to fundamental questions being raised about nursing values and where the educational focus should lie within the nursing curriculum. There is an urgent need to examine teaching and learning strategies in nurse education" (P 17)

In 1986 the United Kingdom Central Council for Nursing, Midwifery and Health Visiting published Project 2000 which served as the blueprint for the current programme of nurse education and training in Northern Ireland. The gradual implementation of Project 2000 across the U.K. generally, and particularly the full implementation in 1991 in Northern Ireland, served to break the long established tradition of apprenticeship nurse education in the United Kingdom. Project 2000 has the following characteristic features,

- 1 a common foundation programme of eighteen months for all entrants to nursing followed by an eighteen month preparation for a particular division of the register in adult, mental health, mental handicap and children's nursing
- 2 the discontinuation of the employee status of student nurses
- 3 conjoint professional and academic validation between the Nursing Board

and third level educational institutions with students receiving a higher diploma in education (nursing) at the point of registration as a nurse

- 4 the preparation of registered nurse practitioners competent to function in institutional and non institutional settings
- 5 an emphasis on health promotion as well as care of the sick and disabled

Project 2000 programmes comprise 4,600 curricular hours of which half are designated to learning within practice settings. Normally one third, that is six months, or no more than 20% of the course, is designated as rostered contribution to nursing services. This service contribution is educationally directed and normally takes place in the third year of the programme. Student nurses receive 68 weeks theoretical instruction.

In contrast, the Republic of Ireland currently has apprenticeship type nurse training with student nurses as employees of a hospital or Health Board. Student nurses are an integral part of the health services and as such provide a very substantial service contribution. Hospitals have developed training programmes which incorporate their specialities with the emphasis strongly placed on hospital based nurse training programmes.

In contrast to the Project 2000 model where specialisation begins following a common foundation programme, specialisation in the apprenticeship model begins at the point of entry to the training programmes.

The registration programme in the Republic, like Northern Ireland, is of three years duration. In the Republic, forty weeks theoretical instruction is provided to student nurses. In Northern Ireland student nurses receive sixty eight weeks theoretical instruction. An overview of the characteristic features of both programmes is provided in Figure 2.

Figure 2

Characteristic Features of Nurse Education in Northern Ireland and the Republic of Ireland

	Northern Ireland	Republic of Ireland
Specialisation	Students undertake a common foundation programme for 18 months and then a branch programme for Adult, Mental Health, Mental handicap or Children's Nursing for a further 18 months	Students embark on a specialist three year programme for general, psychiatric, sick children's or mental handicap nursing
Name of Qualification	Registered Nurse (RN) with (adult)(mental health) or (mental handicap) or (child)	Registered General Nurse (RGN) or Registered Psychiatric Nurse (RPN) or Registered Mental Handicap (RMHN) or Registered Sick Children's (RSCN)
Status on Course	Student nurse with bursary Supernumerary status on placements for all but 20% of the time	Employee of a hospital or health board A member of the workforce except for some specialist areas
Contact with Higher Education	All colleges of nursing have links with a University for academic accreditation	No formalised contact
Level of Qualification	Eligibility to register with UKCC as a nurse and a diploma in higher education	Eligibility to register as a nurse with An Bord Altranais
General philosophy and approach	An emphasis on health and holistic care in both institutional and community settings	An emphasis on ill-health focused mainly on institutional settings
Educational emphasis and assessment	Sixty eight weeks theoretical instruction Emphasis on student centred methods and adult education Continuous assessment	Forty weeks theoretical instruction Proficiency assessment for clinical skills and final registration examination conducted by An Bord Altranais

1.3 European Council Directives

In highlighting the distinctiveness of the programmes in Northern Ireland and the Republic of Ireland it must be noted that both programmes fulfil the E U directives. European directives exist for General Nursing and Midwifery only, and were established in 1979 for nurses training in General Care and in 1980 for Midwifery. The directives for general nursing are concerned with

"the mutual recognition of diplomas, certificates and other evidence of the formal qualifications of nurses responsible for general care, including measures to facilitate the effective exercise of the right of establishment and freedom to provide services" (Council Directive 77/452/EEC)

"The co-ordination of provisions laid down by law, regulation or administrative action in respect of the activities of nurses responsible for general care" (Council Directive 77/453/EEC)

In 1989, Council Directive 89/595/EEC amended directives 77/452/EEC and 77/453/EEC and set out the length of theoretical instruction to be at least one third and that of clinical instruction at least one half of the minimum length of training which is 4,600 hours

The Commission of the European Communities (1990) through the Advisory Committee on nursing has had its anxieties about nurse training programmes and in 1990 it produced guidelines aimed at reducing the gap between theory and practice in programmes leading to the qualification as a nurse responsible for general care. The guidelines focused on a range of very specific relevant issues including

- a shortage of nurses with the appropriate preparation in teaching,
- differences in the design of programmes of preparation,
- the status of students as employees
- the lack of continuing education,

CHAPTER 2

THE LEARNING MILIEU

2.1 The Learning Environment

To examine aspects related to learning styles and learning approaches in nurse education, it is fundamentally important to provide a contextual background

Nurse education does not operate in a vacuum and in a reductionist way is inherently viewed as a mechanism for preparing the major group of health care workers for service delivery. Therefore student nurse education must be strategically viewed in the context of the delivery of nursing and health services, including new paradigms in health care.

Health service statistics reveal a continuous change in demographic and epidemiological patterns which have fundamental implications for nursing and health care delivery in the future. To date, certain of those changing patterns have triggered the commissioning of a number of new reports and the formulation of health policy in elements of the health service (Planning for the Future 1984, Health, the Wider Dimensions 1986).

An Bord Altranais (1991) through the consultative document on nurse education and training raised fundamental issues,

‘Rapid, social, technological and medical changes have in the later part of this century, presented the nursing profession with many challenges requiring nurses to be flexible and adaptable. The orientation towards community care will mean the re-orientation of many traditions in nursing including educational preparation and the role and function of hospital, community and public health nurses (p45)

In the United Kingdom the changes in nurse education brought about by Project

2000, were rationalised in a scenario of changing social and health service trends. As part of the National Health Service reforms, it was considered necessary to re-orientate the initial preparation of nurses for registration. Project 2000, in recommending change, raised fundamental questions about 'care in the community, care in the home, self care, and independence' (p 19)

Project 2000 and the Consultative Document on Nurse Education and Training places a greater emphasis on student centred education than was the case traditionally. In highlighting adult education principles as a desired focus in nurse education, problem-solving, independent self-directed learning and interpersonal development are very much part of the associated nomenclature.

In terms of educational philosophy underpinning Project 2000 the emphasis in documentation from Colleges of Nursing are consistently on student centred methods and on integrating the range of subjects into a nursing focused course. Some typical statements of educational intent from the various curricula from the Colleges in Northern Ireland include,

'Negotiated self learning aims to foster an appropriate degree of self-directedness while investing the student with equivalent responsibility for the process of their own learning'

'The student will become an informed consumer actively questioning and discussing what he/she learns on this curriculum'

'The philosophy throughout the course will place emphasis on students as adult learners preparing for professional work'

In the Republic, national syllabi or training programmes are provided by An Bord Altranais. The various syllabi espouse a medical model of training and detail lists of subjects to be taught to student nurses during their training. The psychiatric programme since 1986 unlike the others stipulates the requirement for the use of a

nursing model This programme also distinguishes itself by requiring learning activities related to structured formal teaching and self directed learning and supervised clinical experience

Crotty (1993), in a Delphi study of teaching and learning activities in Project 2000 (England) noted many developments She reported that nurse teachers experienced many changes in classroom teaching in regard to level, content, style and amount

Some nursing commentators, Hurst, (1985), Silcock, (1991) in noting the trends in nurse education have reinforced the need for higher order cognitive behaviour in current and future nursing practice Reilly and Oerman (1985) stated that

"nursing's charge to act within an ambiguous ever changing society demands that its practitioners be skillful in learning to learn and continually relate nursing practice to developing events at any point in time"

A review of the literature on aspects of learning environment highlights the fact that it is very much influenced by the dual role of the student nurse as an employee and learner (Fretwell 1985, Orton 1981, Treacy 1987)

For student nurses, learning potentially exists in two quite separate and distinct environments - the school of nursing and the clinical areas of a hospital With regard to control and power, Martin (1973) quoted a student's comment "It is the hospital not the school which is the dominant influence in the student nurse's existence" Quinn (1980) suggested that in nursing the hidden curriculum is far more potent than the official curriculum of the school of nursing

Whilst theorists and researchers have identified that learning from practice is central to the development of a nurse's competence, studies of the suitability of clinical areas as learning environments is far from encouraging

While no single theory of learning succinctly describes powerful learning

environments, there are characteristics that are likely to instigate higher order thinking and stimulate reasoning of greater intellectual complexity (Chickering 1969)

Krikorian and Paulanka (1984) in a study of students' perceptions of learning and change in the psychiatric clinical setting, summed up the emerging scenario in relation to learning environment

'Learning occurs primarily through experience and self awareness within the context of a structured environment. The implication would seem to be that in the clinical setting the instructor needs to go beyond the didactic role of the traditional teacher to a more facilitative managerial role in the promotion of student learning'

2.2 Theory and Practice

Balme (1937) stated

"it is only by a happy accident that a lecture given in the school of nursing will have a direct bearing upon some particular case which a nurse is attending to at the moment"(p 17)

Balme's statement represents one of the earliest concerns about the theory-practice divide in nurse education which in later years became a preoccupation with nurse researchers. There is now voluminous research indicating that the integration of theory and practice is a cause for concern.

The discrepancy between what was taught educationally and that which was practised on the ward is well documented in many areas of nursing practice, (Dalton 1969 Hunt 1971 Jones 1975) Wong (1979) suggested that the inability of student nurses to transfer classroom knowledge to clinical nursing practice is a common learning problem and she identified the shift from the technical aspects of a nurse's education to the teaching of principles without integration. Wong concluded that nursing

students may become superb passers of examinations but might be unable to help a troubled patient take heart

The vernacular term 'theory' may be judged to be at a distance from the implementation of practice nursing skills. Many nursing theorists such as Henderson (1966), King (1970), Roy (1976), Orem (1971), Rogers (1970) have conceptualised nursing by the describing of nursing models which may be applied to nursing practice. However, the disparate and unscientific nature of the nursing models and the lack of a universally accepted definition of nursing has contributed to the theory-practice dichotomy. Nursing is still largely about the application of expertise to the performance of practical skills. Ashworth and Longmath (1993) point out that the many nursing theories are lived with rather than known. For instance, nurses may not always be aware of the germ theory of disease, when they observe as matters of habit the rules of asepsis.

It may be argued that nursing is by definition an eclectic rather than a pure discipline. Knowledge is derived from many sources including the social, biological and behavioural sciences. The evolution of nursing practice and the associated knowledge to its current position reflects a pathway of constant redefinition. The period of the pre-1970s was a period of prescribed role with the major emphasis on nurses performing tasks for patients in an unsystematic pattern. Educational preparation of nurses during this period was strongly based in a training paradigm with a strong emphasis on behavioural and biological sciences. From the 1970s to the mid 1980s, nurses were moving toward a more interactive role and systematic nursing care patterns. Educational preparation of nurses incorporated a more humanistic element. From the 1980s to the present, the emphasis has been strongly placed on the practice of nursing and the individuality of the patient and client in care. The educational preparation of nurses is aimed at preparing nurses to be knowledgeable, critical thinking and reflective. The knowledge base, besides including the biological, behavioural and social sciences includes a major component of nursing and professional studies.

Learning from practice has been described as a central way in which people create their world and give it meaning. However, in recent decades society generally has given legitimacy to knowledge that is formal, abstract and general while devaluing knowledge that is local, specific and based in practice (Benner 1989). Schon (1983, 1987) portrays reflection as occurring in practice linked to experience as being central to the concept of professional artistry. Reflection is presented in two forms: reflection in action and reflection on action. Basically, Schon's (1983) contention is that practitioners reflect upon their practice and that their practice is actually reflection in action. 'Reflection in action' refers to the process where practitioners encounter a situation which is in some way out of the ordinary and they devise and test hypotheses to deal with the situation. The implications of Schon's work is that a proportion of knowledge is generated from the practical situation and therefore, the nurse teacher's role may include that of assisting nurses to crystallise the ideas that they have generated in practice. It may therefore be argued that aspects of nursing knowledge may be best learned through practice or reflection on practice.

Systems of theoretical knowledge, however, are distinctly different from systems of practical knowledge. This issue was highlighted by Friedson (1986) when he stated

"to assume that textbooks and other publications of academics and researchers reflect consistent and predictable ways that knowledge is actually exercised in concrete human settings is either wistful or naive" (p 229)

Ryle (1949) was one of the earliest writers to distinguish between the two types of knowledge when he described declarative knowledge (that something is the case) and procedural knowledge (how to do something). It is now accepted that both forms of knowledge are necessary for skilled performance. It is suggested that declarative knowledge varies in scope and is relatively static. Procedural knowledge, in contrast, is dynamic. Declarative knowledge firstly, provides the knowledge to perform procedures. However, having been performed a number of times, they then can be applied directly without accessing the declarative knowledge. Procedural knowledge is acquired when executing a skill. It is claimed by Gagne (1985) that a major

difference between experts and non experts is that experts have more procedural knowledge. Ryle's construction of declarative and procedural knowledge raises fundamental questions for nurse educators in their quest for a greater integration of theory and practice. It may be argued that traditionally nursing may have expected students to develop procedural knowledge in the absence of a declarative knowledge base. The absence of modular programmes in some schemes of nurse education serves to highlight this situation.

Research into the integration of theory and practice in nursing is in its infancy. With the issue of learning from practice continuing to be a contentious issue, recent trends in the education and training of nurses have seen a retreat from the locations of practice to locations of research (example, universities). In some way, it may be regarded as a process of de-legitimation of practical knowledge in favour of abstract knowledge. Cervero (1992) highlighted the relatively new research area of cultural cognition to understand fully why the knowledge gained from practice is viewed by most professionals as the gold standard. Cervero pointed out that researchers have sought to understand the nature and process of what is variously termed practical intelligence (Sternberg 1986), practical thinking (Scribner 1986), everyday cognition (Lave 1988).

In summarising the main differences between learning in school and in practice, Resnik (1987) illustrated the central characteristics of the knowledge used in practice. This knowledge is created and made meaningful by the context in which it is acquired. It is also stated that the use of this knowledge is not simply a matter of pattern recognition, but rather is orientated towards action. Resnik concluded that the packages of knowledge and skill provided by formal instruction in school seem unlikely to map on to the clusters of knowledge people use, even for highly technical professional training. Some of the earliest research into the integration of theory and practice in nursing was undertaken by Bendall (1973). Bendall demonstrated that for many nurses what they write in examinations did not predict what they would subsequently do in practice on the wards. Bendall concluded that in nurse education there is an ideal type of care being taught in the classroom and a quite separate

reality being practised on the ward. From the student nurse's perspective, Cowman (1985) and Burnard (1991, 1992) demonstrated that students learned more and better in the clinical setting than they did in the school of nursing. Harvey and Vaughan (1990) identified that nurses appeared to learn most from practical clinical activities by observing role models and interacting with people.

The theory-practice gap in nurse education has remained a constant theme in the literature for over twenty years. Theoretical perspectives and research themes have been established in many areas, Clarke (1986), Wickendon (1988), McCaugherty (1991), World Health Organisation (1991). It is noticeable that in later years there has been an increased focus on the student's perspective and the individual nature of the problem and solution. Alexander (1983) suggested that,

"the actual achievement of integration is a matter for the individual student. It is part of the active dynamic process of individual learning"(P 35)

The depth and breadth of research and inquiry on the theory practice divide in nursing has contributed to a level of maturity of thinking on nursing and what constitutes substantive knowledge. Barrett (1991) distinguished between 'theory in nursing' and 'theory for nursing'. This fundamental distinction progresses the debate on unique versus borrowed knowledge in nursing. Barrett's contention is whether or not nursing is viewed primarily as a basic science, meaning to know what is clearly unique in nursing, or an applied science, meaning to know what is required in the practice of nursing. It may be argued that traditionally nursing implied the latter, as generations of nurses almost exclusively concentrated on the act of 'doing'. Nurse education therefore adopted a medical model of training and nursing practice developed within a medical subspecialisation model.

However, as nursing research developed, the knowledge base of nursing extended and a level of introspection occurred in the nursing profession. Nurse theorists critically examined nursing from a perspective, which Barrett describes as 'that which

is uniquely nursing as a basic science' The development of models of nursing with a distinction, albeit unclear between the 'totality' paradigm theorists and the simultaneity paradigm theorists, reflects such developments However, even such progress by nurse theorists met with critical acclaim from nursing commentators who suggested that the primary focus in such theories is on application of knowledge rather than the development of new knowledge

Regardless of differences in epistemology and indeed ontology, what is common to both "theory of" and "theory for" schools of nursing thought is that nursing theorists firmly embrace nursing as a science that differs in varying degrees from other sciences In recognition of differences in epistemology, Barrett concludes that uniformity of perspective is neither possible nor desirable An alternative perspective was related by Northrup (1992), who argued that uniformity of perspective which entails agreement at the macro level on some of the most fundamental and meaningful components is essential The theory-practice debate in nursing does symbolise the contextual nature of learning in nursing and the lack of clarity on fundamental issues including a definition of nursing Project 2000 has recognised the shortfalls of the traditional system of nurse education and by its explicit aim of the development of a 'knowledgeable doer' may redress, fundamental issues in the theory practice divide

The dichotomous relationship between theory and practice in nursing presents the greatest challenge to the evolution of nursing as a profession This challenge is best related by Northrup (1992) when she stated

"the relevant quest before nursing, then, is the development and articulation of a coherent philosophy that reflects our (nursing) values and our (nursing) moral ideals and in the larger context a unified prospective"

Historically, the curriculum revolution reflects an emergence from a cultural tradition deeply rooted in the past to a transition stage involving a search for a unique and scientific base for nursing. Unlike American nursing, British and Irish nursing has been relatively slow in strengthening its educational base through links with higher education. In this regard, Armstrong Esther (1979) in highlighting the curriculum development problems for nurses in Britain stated,

"It is clear that curricula are built from the conventional wisdom of generations of nurses, which for the most part is untested. Conventional wisdom can be a euphemism for ritual, superstitions, speculation and unstructured experience."

Whereas the essentials of modern nursing practice were very much coined during the Nightingale period in Victorian England, the curriculum revolution is best reflected in developments in American nurse education. Bevis and Watson (1989) illuminated the many issues reflecting the American nursing curriculum revolution and identified four curriculum development stages.

The earliest stage in curriculum reform occurred in the seventeenth century and involved a basic level of structured training for untrained carers (Stewart, 1947). This earliest curriculum design was in three parts: the practical (skills and procedures), the theoretical, made up of rules, and the code of conduct containing the ideals, general philosophy, loyalties and obligations.

The second stage of the curriculum revolution incorporated the nursing practice ideals of Florence Nightingale in the 1860s. During this period the programme had the aim of training the nurse to undertake specific functions. These functions were provided as a list of practical skills to be acquired. The curriculum also sought to develop twelve characteristics in nurses which could be identified as behavioural in nature. Such characteristics included being sober, honest, truthful, trustworthy,

punctual, quiet, orderly, clean, neat, patient, cheerful and kindly This particular period also represented the first attempt to describe the elements of nursing and this received international acceptance

The third stage of the American nursing curriculum revolution was characterised by the publication of the Standard Curriculum produced by the League of Nursing Education in 1917 The Standard Curriculum provided objectives in the form of general and specific goals, content and methods for each course It also listed materials, equipment and bibliographies A third edition called "A Curriculum Guide for Schools of Nursing" was published in 1937

Following the second World War, curriculum planning and theory in nursing gained considerable ground This fourth stage which introduced the concept of behaviourism and the use of behavioural objectives (Tyler 1949) reflected the influences of educational theorists on the nursing curriculum The incorporation of principles from general education was perceived as providing a level of credibility to nurse educational planning and made it inevitable that nursing regulating bodies would adopt Tyler's (1949) model During this period the Tylerian model of training became the only model acceptable to approval and accrediting bodies for use in developing the nursing curriculum at all levels of nurse education The behaviourist model, as proposed by Tyler was first used in American nurse education in 1954 (Sand, 1955) Besides Tyler's (1949) objectives model, curriculum developments in nursing reflected theoretical contributions from the Neo-behaviourists including Thorndyke's (1949), connectionism, Skinner's (1953), stimulus-response, Bloom's (1956), taxonomy of educational objectives, Gagne's (1970), conditions of learning, Taba's (1962), learning activity model This fourth stage which incorporated the behavioural objectives approach made the greatest impact on nurse education in the UK and American nursing curriculum designs and to a lesser extent in the Republic of Ireland Prior to the behavioural objectives era, curriculum developments in British and Irish nursing tended to be prescribed in the form of a content laden syllabus and a course programme Nurse education in the United Kingdom and Ireland gradually accepted the Tylerian paradigm as the predominant curriculum

design The General Nursing Council for England and Wales, Scotland and Northern Ireland in its policy document 77/19 stated that one of the characteristics of a satisfactory learning/training setting was that learning objectives and opportunities are identified and written worksheets are available for the student nurse. Given such a directive, many nurse tutors began working on learning objectives for their educational programmes, (Hume 1981). In the Republic of Ireland, An Bord Altranais (1987) in a statement on conditions of suitability for schools of nursing/midwifery stated

"areas being used for clinical instruction/experience must have attainable learning objectives"

Nurse educators, in adopting the behavioural objectives Model perceived its strengths as being its neat and logical approach through its potential to identify desired behaviours and to provide a mechanism for evaluating those behaviours. The potential to identify positive behavioural changes in students as a result of training was more than acceptable to a practised based profession such as nursing. Such a doctrinaire approach to nurse education through behavioural measurements also fulfilled the requirements of regulating bodies who through nursing legislation were charged with ensuring safe nursing practices in the interest of public protection. Therefore the granting of registration to nurses on the basis of successfully completing a course of training based on an objective model of curriculum provided regulating bodies with a base line for ensuring desired behavioural changes related to safe practice. It may be argued that the strong behavioural associations of Tyler's (1949) model served to focus the curriculum and provided regulating bodies with an educational means for supporting other statutory functions related to investigating malpractice, unprofessional behaviour, unethical behaviour and fitness to practise.

Colucciello (1988), in relation to powerful learning environments in nursing, stated that objectives can focus learning for students but used improperly can also inhibit discovery. Gould and Bevis (1992) outlined the extent to which the behavioural model of curriculum historically has had a pervasive influence on nurse education. In

discussing the limitations of the behaviourist paradigm, they argued that major assumptions have been made in nurse education, and they concluded

'No paradigm, no one curriculum model can be allowed to dominate State Board attempts to regulate nursing education and ensure quality'

Maclea (1992) argued that because of the drive to legitimise nursing as a profession, nurse education has accepted a technical Tylerian approach to demonstrate acceptable levels of nursing practice. In examining the appropriateness of the behavioural measurement of nursing outcomes, Maclea contended that nurse educational practices had not kept pace with changes in the ethos of nursing practice in the 1990's.

It is accepted that the behavioural approach can provide technically efficient nurses, however, its limitations in nurse education have been explored (Gibson, 1980). The requirement of behavioural objectives for all planned learning is educationally limiting and narrow. It can be perceived as representing minimal achievement levels and as such is useful for skills training and instruction. The curriculum legacy therefore is presented as a dominant positivistic paradigm, a chauvinist orientation and a narrow biomedical model of care. Bevis and Watson (1989) suggested that the model can stifle creativity, provide rigid and restrictive guidelines for evaluation and as such can become an inhibitor of achievement of the very purposes of professional education. They are, therefore, perceived as being out of step with transformative education and nursing as a human science.

Educational perspectives based on the transformative and humanistic paradigm reject the more technical and positive scientism (Kirby and Slevin 1992), of the behaviourist paradigm. Chinn (1985) argued that such a cause effects, numeric scientific method (behaviourist) can only be viewed as reductionist and thus of limited relevance in the complex human field of nursing.

Transformative education and the humanistic nursing curriculum perspectives provide for an emphasis on the importance of the individual engaged in the educational process. The educational process helps the student work towards acknowledging and understanding the dynamics of their inner and outer worlds.

Based on the humanistic and transformative perspectives the evolution of the caring curriculum represents a response to providing a new age curriculum. The caring curriculum goes beyond the transfer or mere acquisition of knowledge and skill, and toward the development of the person. This in itself represents an acceptable framework on which to educate nurses since it espouses the essential characteristics desirable in nurses for their caring responsibilities. This approach also encourages the individual to reflect on their practice and how what is learned influences practice, thereby encouraging the integration of theory and practice. As Bevis (1988) stated

"Living theory is encountered in praxis, a dance wherein ideas, concepts, and theories may arise in the intellect from reading, discussions, lectures, classroom learning activities or in practice. Practice both tests and enhances theory, and theory both tests and enhances practice. Each enlightens the other, provoking insights, altering and changing the form, shape and meaning in the truly professional curriculum, each informs the other in the magical world of praxis (p48)

In accepting the bipolarised argument of behaviourist versus humanistic/transformative curriculum models, there is an innate danger that neither model in isolation from the other will provide a satisfactory basis for curriculum development in nurse education. Therefore in the interest of fulfilling the requirements and demands of the wide range of interested parties in nurse education, a view should be taken with regard to the inclusion of behaviourist, humanistic and transformative curriculum development models.

The American curriculum revolution in nursing has been paralleled by other events, including the movement from hospital based training programmes to more academic settings in higher education. This development provided a process of legitimisation and validation in nursing. Such a change has endorsed a more dynamic and creative approach involving a recognition for professional practitioners to be research minded, critical thinking, reflective, self-directed and creative. At this period in history, it would appear that both British and American nursing and to a lesser extent Irish nursing systems espouse similar philosophies through their educational systems. This in essence appears to be signalling a move away from the behavioural approach and more towards a humanistic basis for curriculum. However, what must be recognised is that the long association of American nursing with higher education has impacted on the American nursing curriculum and influenced advanced thinking and theoretical perspectives on nursing practice. From the early 1960s onwards, American nursing theory and curriculum theory became increasingly integrated into a developmental framework. American nursing theorists developed many nursing models which defined and conceptualised nursing (Henderson 1966, King 1970, Roy 1976, Orem 1971, Rogers 1970). In contrast, British and Irish nursing is in its infancy as regards the development of nursing theory, however, there is a gradual growth of validated hypotheses as nursing becomes more focused. McCloskey (1981), in a comparative sense, suggested that 'a look at the English scene today is a look at the American system of yesterday'.

2.4 A Teacher Focused or Student Centred Education

Philosophically the current literature on nursing curriculum generally reveals two broad viewpoints, incorporating contrasting ideologies such as traditional versus progressive nurse education (Hurst 1985), curriculum process versus product (Sheehan 1986, Lauder 1992). Fundamentally the two schools of thought are symbolic of a wider educational debate outside nursing in which contrasting curriculum models with opposing perspectives have been described, for example, Lawton's (1973) romantic versus classical model. The classical model which is teacher centred views the teacher as being more important than the student in that

he plans and executes, the programme. The aims/objectives/teaching methods are predetermined by the teacher. Measurement of learning is by tests and examinations set by the teacher or boards of examiners. The teacher is the one who knows and the student is the 'one who comes to learn'. The romantic model is student centred, the teacher acts as a facilitator of learning. The aims and objectives are negotiated with the students. Evaluation of learning is through self and peer evaluation and students are considered as equals in the educational process. Similar distinctions have been made by Freire (1972), when he described the 'banking concept' versus the 'problem posing' concept. The banking concept involves the teacher providing the knowledge which is later "cashed out" relatively unchanged in examinations. In contrast, the problem posing approach involves the student and teacher meeting and exchanging ideas and experiences in a critical way. Certain aspects of this debate having been contextualised in nurse education have focused specifically on student centred versus teacher centred education (Slevin & Lavery 1991, Sweeney 1990, Richardson 1988).

The nursing literature from the 1970's onwards has critiqued many aspects of nurse education. Eisemann (1970) argued that nurse education not only fails to stimulate critical thinking but actually stifles originality and creativity of thinking in nursing students. The process of nurse education embodies a passive role for the student nurse. Programmes are devised and recruits are required to unquestioningly follow the path laid out for them (Davis 1983). Consequently it has been said that nurse education discourages thoughtful reflection on the nature of nursing practice (Meleis and Price 1988). In relation to commitment to (i) autonomous learning and (ii) continuing education Alexander (1984), suggested that it was undermined by earlier nursing experience of learning as a passive process resulting from 'spoon feeding' and teachers insistence on covering the curriculum.

The notion as to whether nurses receive a training or an education is also a focus in the literature and many debates have concluded that nurses receive a very good training but a poor education. The words 'education and training' are often used synonymously and this is reflected at the most basic level. For example, the titles 'School of Nursing' has been used interchangeably with 'Nurse Education Centre'

with an underlying lack of educational interpretation. In relation to process, the terms 'education and training' imply different sets of assumptions. Training is usually considered to be a convergent process aimed at the development of pre-determined skills. Education is usually referred to as a divergent process aimed at the development of knowledge, skills and attitudes. This distinction has previously been made by the philosopher, R S Peters (1966). Peters relates training to the learning of skills and education to the implementation of change. It may be argued that historically nursing has utilised the training approach to prepare registered nurses. French (1992) proposed that pre-registration preparation of nurses was not an educational experience but subsumed a training paradigm. Having undertaken a meta-analysis of selected major studies on nurse education, French concluded that 'the roles of teacher and student operate around a mechanistic view of man, the teacher being the font of all knowledge and the student a passive recipient of that which was given'.

In the context of apprenticeship nurse education, much discussion has taken place on the role of the school and the nature of tutor student relationships.

The question as to whether the curriculum aims to develop the intellectual processes of student nurses or to prepare them for service commitments is another major theme in the literature. This lack of clarity has created concerns for student nurses. Alderton (1983) a student nurse wrote,

'Any student who aims to bring school standards and practices to a ward where these differ will not be popular, and will often be viewed with suspicion being seen as implicitly critical and potentially a trouble maker.'

Holloway and Pearson (1987) have argued that nurse education is a form of social control involving a process of role learning. On one hand, there is much casual learning, on the other, there is an inculcation of rituals. Alexander (1983) noted that in terms of their preference for teaching and learning, student nurses showed that

their favourite and most rewarding method of teaching was the ward tutorial. A previous study undertaken by this researcher (Cowman 1985), clearly demonstrated that students learned most whilst in the clinical area. Nurse tutors had a minimal role to play in relation to student learning in the clinical areas. In apprenticeship nurse training the nurse tutor's role is fundamentally concerned with the provision of information for examination purposes. It has even been argued that the principal role of the nurse tutor is to help students pass examinations (Gott 1979).

The role of the nurse teacher has never been clearly defined. Their specific teaching role which has been generic, not specialist, has been a source of study and comment over many decades. Project 2000 has resulted in nurse teachers operating predominantly as subject specialists. Crotty (1993) in a Delphi study of teaching and learning activities in project 2000 noted many developments. She reported that nurse teachers experienced many changes in approaches to classroom teaching in relation to levels of contact, content, and style. The recent literature evaluating Project 2000 (NFER 1994), indicated that students perceived the Institutes of Higher Education (HE) and the Colleges of Nursing to be quite different in terms of ethos and teaching style. Lecturers from HE 'stood up, lectured and left'. Students expressed anxiety about this 'cut and dried' approach. Teaching in Colleges of Nursing was reported as being so informal that it left students frustrated and feeling they were time wasting. Reference was made to difficulties in adjusting from the 'cosy' School of Nursing to the HE setting.

The extensive range of literature on the role of the nurse teacher has been reviewed (Crotty and Butterworth 1992). The activities of nurse teachers have been described as multi-faceted and complex (Crawshaw 1978, Gallego et al 1980, Nolan 1987). The Judge Report (1985) described the life of a nurse teacher as being marked by the restless movement of students through the classroom and repetition of courses which generates an educational atmosphere reminiscent of a 19th century teacher's training college rather than further or higher education.

Payne et al (1991) reviewed the nurse teachers experiences of planning and

implementing Project 2000 in England Nurse teachers were generally unhappy about the effects of the hasty introduction of Project 2000 on their work and were concerned that students should not loose out Many nurse teachers reported that student intakes for Project 2000 were so large as to militate against what were seen as the best teaching methods and teachers had to resort to 'chalk and talk' Despite the earliest difficulties experienced, the teachers nevertheless gave widespread endorsement of the philosophy and principles of Project 2000

Akinsanya (1993) on reviewing the emerging role of nurse teachers in a context of Project 2000 argued the need for nurse teachers to become graduates Akinsanya questioned the logic of teacher preparation specifically for nurses, particularly as nursing departments in universities are now relying more on academic qualifications of nurses rather than the possession of specific nurse teaching qualifications as prerequisites to teaching appointments

It is stated that future teachers must be able to demonstrate an advanced level of knowledge as regards both the theory and practice of nursing or midwifery They must be qualified or clinically credible in the area of practice they teach and hold a teaching qualification (Department of Health (UK) 1989)

External factors, notably the growth of the market philosophy and the implementation of Working Paper 10 (Department of Health (UK) 1989), have created a level of debate about the future role of the nurse teacher Working Paper 10, in raising the funding arrangements for nurse teachers prompts a complete rethink of the current teacher preparation courses, and their relationship to the needs of the services Nurse educators can no longer be the generic teachers they once were, if nursing knowledge is to continue to develop and acquire academic credibility and recognition Recent literature reflects this trend with debates on the requirement for nurse teachers to empower nurses through research based teaching (Bassett 1993, Clifford 1993) Such changes are also reflected in the various strategies for nursing In the case of Northern Ireland the strategy for Nursing, Midwifery, and Health Visiting (statement 2) identified the need for teachers to

maintain professional knowledge and competencies and to undertake appropriate research. Statement 3, states the commitment towards an all graduate teaching workforce. In the Republic the report on the future of nurse education and training (An Bord Altranais 1994) recommended that the role and preparation of nurse teachers should be developed in a context of future educational change.

The literature generally reflects the fact that authoritarian and hierarchical styles have resulted in the teacher's role being viewed as superior and the student's role as subordinate. Nurse tutors have felt the need to assume responsibility for every aspect of a student's learning. Commentators, in noting this established and historical trend in student teacher relationships, have argued vehemently for more student centred educational approaches. Parfitt (1989) demonstrated that creative teaching produced better results in terms of problem identification and planning than did didactic teaching.

The need for a more student centred curriculum has created alternative themes in nurse education, learner centredness (Sweeney 1990), experiential learning and androgogy (Burnard 1989,1992), empowerment (Lutz et al 1991), self directed learning (Slevin and Lavery 1991). These trends are now fashionable and have been applied and adopted by National Boards as requirements for the development of new curricula. Project 2000 aims to enable students to have more responsibility for their learning, encourage self-awareness and self direction and to motivate and develop nurses to continue learning after registration. An Bord Altranais (1991) in its Consultative Document recognised the need to provide nurses with greater opportunities for independent learning, interpersonal development and generally a greater balance of student centred approaches.

Today, nursing continues to be a diverse occupation with a lack of agreement on a specific definition of nursing. This provides a challenge to nursing curriculum designers and nurse educators to capture what knowledge and skills are required for effective nursing practice and patient care in a complex health care environment. Such complexity is succinctly stated by Alexander (1983) when she described learning

in nursing,

'Learning to nurse is learning to care Learning to care for people Whole people not parts of people such as a fractured skull, an amputated limb, a gastric ulcer, but individuals of different appearance with different ways of behaving with often vastly different experiences of life as a result of which they have different problems and accomplishments, sadness and joys, fears and faiths (p 31)'

CHAPTER 3

UNDERSTANDING LEARNING

Setting a Scenario

The W H O (1991) has stated that nursing is both a science and an art. It is therefore likely that no single theory of learning can account for all aspects of learning in nurse education. Consequently, there are likely to be reflections of many learning theories in nurse education. The assumption of nursing as a science and art has created much debate. Holden (1991) stated,

"the caring role, intrinsic to the meaning of the word 'nurse' demonstrates nursing under the rubric of the arts, while nursing embraces high technology which constrains the discipline under the rubric of science"

Within the academic sector there has traditionally been a division between the arts and the sciences. Nursing however, does not fit neatly into either category.

Nursing knowledge as a distinct entity is ill defined and some commentators (Burnard and Chapman 1990) have considered three domains of knowledge, "propositional", which is contained in theories or models and may be described as text book knowledge, "Practical", which is developed through the acquisition of skills, "Experiential", which is gained through direct encounter with a subject, person or thing. The importance of incorporating all three forms of knowledge into the nursing curriculum is highlighted.

In recent years there has been an increased interest in educational theory among educators in the professions, including nurse education. Educators have examined and questioned the fundamental principles upon which their systems of education are constructed. The various learning theories, each with its own rational, theoretical

construct, have served as a basis for understanding student/teacher interaction and the learning process. Aspects of the literature (Condell and Elliott 1989, Coulter 1990) have examined the application of various learning theories in British and Irish nurse education. Coulter (1990) having examined two contrasting theories of learning (i.e.), Gagne's (1985) cognitive theory and Rogers' (1983) humanistic theory concluded that there is a strong case for employing a combination of approaches to learning in a nurse education programme.

The multiplicity of factors contributing to an educational exchange is noted by Beckwith (1991) and it is suggested that numerous elements interact in the teaching/learning process, including approaches adopted by the teachers and learners, the nature of the material to be learned, pre-existing knowledge of relevant material and the nature of assessment.

The distinctive features of each of the main learning theories provide the theoretical basis for much of the research on approaches to learning and styles of learning. In this regard, this particular comparative study of learning in nurse education is rooted in a paradigmatic assumption of two opposing ideologies of learning, which Entwistle (1991) described as the two dominant educational philosophies. The first philosophical orientation assumes the purpose of education as being vocational. It is based on the premise that mental discipline enhances learning by developing faculties of the mind with teacher control of knowledge and learning. Teachers see their role as imparting a body of knowledge and managing student learning. Teaching methods emphasise structure and draw on principles derived from behavioural theory. In contrast, the second philosophical belief is one of natural unfoldment and learning through a stimulating environment which fosters curiosity, self-initiated exploration and a self-directed learning approach. There is shared control of knowledge and learning methods with student-centred education. This student-centred approach very much espouses humanistic models of education with the person being central to the educational process. Problem based learning (Boud 1985, Sims & McMillan, 1991), adult education, Knowles (1978) with teachers as facilitators encouraging reflection, critical thinking and questioning are dominant themes in this philosophical

tradition. The theory of andragogy was first described by Knowles (1970) as the art and science of helping adults to learn. Knowles contended that any theory of education must ultimately revolve around the nature of the person as well as the nature of the subject being discussed. The author goes on to claim that the type of learner in the educational process, whether child or adult must effect the teaching and learning transaction and therefore the nature of the educational process.

This comparative study of nurse education recognises the fact that human learning is a complex process and is determined by such factors as preferred mode of perception and the cognitive processing of information. It is noted that the literature generally highlights the fact that learning theorists do not speak with one voice and that many of them have attempted to describe and explain complex learning processes by reducing them to some prototype or prototypes of learning.

3.1 **Theoretical Perspectives on Learning**

Early in this century, uneasiness with the failure to address the thinking and reasoning potential of human beings became evident. Prior to 1940, research efforts on learning were concerned mainly with the relationship between memory, oral and visual teaching methods (Keefe 1979).

Thorndyke, (1932) in a mechanistic way, explained learning and reduced higher level processes to connectionistic conceptions. Allport (1937) described attitude, interest, aim, concept and ideal as forms of mental organisation that result in, and effect learning.

Systematic research into cognitive styles commenced in the late 1940's with the 'new look movement' in perception (Witkin and Goodenough 1981). The new look movement primarily aimed to re-establish a focus on the individual in perceptual studies. The approaches to understanding how individuals typically receive and process information which grew from this movement have formed the basis of much subsequent research (Joughm 1992). Some of the earliest commentators (e.g.)

Thurnstone (1948) and Guildford (1959) recognised individual perceptual abilities and flexibility as significant aspects in the teaching/learning process

Parallel to the focus on the individual's perception of learning, the notion of academic environments which encouraged student learning developed Ramsdon (1979) suggested that there was no clear agreement in the literature as to what constituted an academic environment It was noted that the early work involved the investigation of teacher opinions (Gaff & Wilson 1971) or the measurement of student behaviour such as informal interaction with staff or the amount and frequency of student contributions in classes (Astin 1968)

Biggs (1978) provided one of the earliest models of student learning which had, as its focus, what he termed process factors that made up the 'learning process complex' which comprised three approaches (deep, surface, achieving) Biggs suggested that studies on student learning processes may be classified into two main types, firstly, relatively large scale studies in which students are grouped according to general characteristics frequently assessed by self report inventories (e.g Entwistle & Wilson 1977) and secondly, more intensive experimental or observational studies of students' learning in situ (e.g Marton and Saljo 1976b)

Van Rossum & Schenk (1984), categorised the research on learning in terms of first order and second order perspectives They suggested that traditional research has been of a first order perspective involving a description of different aspects of reality The first order perspective is best defined by Marton and Svensson (1979),

"We (the researcher) thus observe the learner and describe him as we see him and we observe the learner's world and describe it as we see it We frequently relate our descriptions of the student to our descriptions of his world and generally do this within an explanatory framework" (p 472)

The second order perspective is not directed so much to reality as it is, but more to how people view it. In this case one has as a starting point, the perspective of the learner and not, as it is traditionally, the perspective of the researcher. Marton (1981) coined the term phenomenography to refer to research which systematically focuses on the second order perspective. It is the second order perspective which accommodates much of the research on approaches to learning.

3.2 Learning Styles and Preferences

As the breadth and depth of literature on aspects related to learning increased, the need to define the associated nomenclature was evident. Educationalists and researchers offered numerous definitions of learning style, learning preference, learning strategy, cognitive style.

The concepts, "learning style" and "learning preference" having often been used interchangeably were based on the hypothesis that students will learn more, and more thoroughly if taught the way they prefer to learn and they will be more motivated to learn if taught the way they prefer (Merritt 1989).

Gregorc (1979) took a phenomenological approach in defining learning style and stated that learning style consists of distinctive behaviours which serve as indicators of how a person learns from, and adapts to, his environment. It also gives clues as to how a person's environment operates.

In contrast to Gregorc, Hunt (1979) perceived learning style as being more precise and quantifiable, by suggesting that learning style categorises students in terms of educational conditions under which they are most likely to learn and the amount of structure they require for learning to occur.

Della-Dora & Blanchard (1979) viewed learning style as a personality preferred way of dealing with information and experience for learning that crosses content areas.

The individuality and the holistic nature of learning style is reflected in Keefe's (1982) definition,

"Cognitive, effective and psychological behaviours that serves as relatively stable indicators of how learners perceive, interact with, and respond to learning environment" (p 44)

Keefe's perception of learning style, as stable, may be contrasted with the ideas of Dunn et al (1981) who suggested that learning style is not permanently fixed and preferences may be affected by motivation, interest and teaching style

Rezler & Rezmovic (1981) noted that the terms "learning style" and "learning preference" have been used synonymously. They suggested that learning preference is the choice the individual makes for one learning situation, or condition, over another, whereas learning style is the manner in which an individual perceives and processes information in the learning situation

One of the earliest contributors to the literature, Pask (1976a), differentiated between "learning style" and "strategy" and coined the terms Serialist and Holist. A serialist learning strategy involved the building up of understanding out of the component details, logical steps and operations in a linear sequence. The student had a narrow focus of interest. Contrastingly, in the holistic learning strategy, the learner attempted to build right from the start a broad view of the learning task, how the subject matter fitted in with other related topics, with real life and with personal experience. Learning involved a search for relationships between ideas. As an adjunct, Pask identified a redundant holist as a learner who personalises learning and depends on individualistic ways of discrimination

Pask (1976a) suggested that holism and serialism are more extreme manifestations of more fundamental processes which are induced by systematic enforcement of the requirement for understanding. Pask indicated that behind the specific learning strategies lie distinct learning styles which he defined as comprehension, operation,

and versatile. Comprehension learning places emphasis on broad description building and is associated with a holistic strategy. Operation learning involves the building up of meaning from the details and is associated with a serialist strategy. Pask argued that in order to reach a full understanding of academic topics both learning styles may be followed. He attributed a versatile learning style to learners who are consistently able to adopt a strategy (Holist or Serialist) appropriate to the task, and to integrate what they learn into their own personal interpretations. Pask (1976b) found that students matched with learning materials of their own style learned faster and more fully than did students who were mismatched.

Whereas learning style and cognitive style are often used interchangeably there is a recognition of the distinctiveness of "cognitive style" and "learning style". Witkin, (1976), regarded cognitive style as a potential variable, in students' academic choices and vocational preferences, in student academic development throughout their school career in how students learn and teachers teach and in how students and teachers interact in the classroom.

Messick (1976) argued that, cognitive styles are stable attitudes, preferences or habitual strategies. Similarly Macneil (1980), Kirby (1979), described cognitive style as characteristic information processing habits that typify an individual's mode of perceiving, thinking, problem solving and remembering.

In reviewing the range of contributions on learning style and cognitive style Merritt (1989) concluded that, in contrast with cognitive style, learning style is concerned with the practical applications that can be made of how people learn in educational or training institutions. Cognitive style is seen as a more generic term in that it includes thinking and memory behaviour that occurs internally and is often used to describe human behaviour in a variety of situations beside the teaching learning process.

Arising from work in the 1940's Witkin's contribution of field dependence versus field independence has been extensively used in research on cognitive style. The authors distinction between field dependence and field independence is based on perception

and the differences between global and analytical ways of perceiving the environment (Witkin, et al 1977) A field dependent individual is one who relies on his environment for his orientation (i.e. demonstrates less ability to deal with parts of the field separately and is more attentive to the whole situation) Such individuals are depicted as having difficulties with tasks requiring analytical abilities (Cross 1976, McCleod and Adam 1979-80) Field independent individuals consistently utilise internal cues to orient themselves and deal with situations in an analytical way and tend to process information with greater isolation from the environment They are portrayed as individuals who have well developed interpersonal skills (Cross 1976, Jacobs 1972) Based on these characteristics, field dependence is associated with a global mode of perception and field independence is associated with an analytical mode of perception (Goodenough, 1976)

It is difficult to determine whether teachers adapt to students' learning needs or if students respond to teacher applied strategies for learning through the use of specific instructional techniques Brookfield (1986) noted that much of the research on adult learning is based on the teacher's perception of learning rather than reports of the students' experiences Brookfield expresses skepticism about the over simplification which can occur when one attempts to recognise appropriate learning styles It is suggested that teachers should concentrate on providing students with a bench mark against which learning can be measured

In reviewing the range of contributions to the literature it is noted that theory and research on learning style, learning strategy and cognitive style is complex and encompasses sensory perceptual preferences and the environmental factors most conducive to learning The range of research which encompasses a variety of learning models and learning styles/preferences, inventories prompted Partridge (1983) to state,

"Under the rubric of learning styles one finds a baffling array of research and rhetoric which unquestioningly has profound implications for educational planning"

Tamir (1985) reviewed the research dealing with cognitive preferences and included fifty-four of the studies in a meta-analysis. Curry (1983) reviewed twenty-one models of learning style. Marshall (1987) noted that learning style research has been reported in almost all areas of professional work and education.

In trying to provide a classification there has been a semblance of agreement that learning style models may be organised into mutually exclusive strata. Curry (1983), identified three distinctive classifications of learning style models based on

- (1) instructional preference,
- (2) information processing,
- (3) cognitive personality style

Curry's framework provides a basis for organising the research and information currently available about learning styles into a coherent body of knowledge. It suggests that the educator might best choose a model for assessing learning style based, on the use to which the information will be put, that is whether one is concerned with modifying the learning environment to account for instructional preferences or using teaching learning strategies that influence the ways people assimilate information.

Curry (1983), in reviewing and classifying learning styles into three strata, noted the existence of a range of learning style inventories which have been developed,

(1) **Instructional preference models** portray the individual as interacting directly with his/her environment and represents an individual's preferential learning modes within specific situations. Because of the situational dependence it can be expected that individual learning styles are somewhat variable (Marshall 1987). The instructional preference classification incorporates learning models developed by Dunn, et al (1978), Rezler & Rezmovic (1981), Canfield (1980)

(2) **Information processing models** are concerned with how individuals assimilate information and are independent of the actual learning environment, therefore they are more stable than the *instructional preference models*. Through this particular approach the concept of "cognitive mapping" has developed (Fizzel 1984). One of the most utilised information processing models in nursing is that developed by Kolb (1976,1984) which described a four stage model of learning based on conceptualisations of experiential learning.

Kolb (1984) described a cyclical learning process which requires the use of four types of learning competencies. Concrete experience competencies (CE) enable individuals to become immersed in actual situations. Reflective observation competencies (RO) allow individuals to reflect upon their experiences from different perspectives. Abstract conceptualisation competencies (AC) are used to develop symbolic representations or explanations of what has been experienced. Active experimentation competencies (AE) are utilised to test hypotheses derived from the previously developed theoretical explanations in attempts to solve practical problems.

Four learning style categories are related to the learning competencies described by Kolb. Divergers have strong CE and RO skills and prefer concrete people - oriented learning experiences. They are good at seeing situations from a variety of situations and generating ideas. Assimilators have AC and RO skills and prefer symbolic thoughtful learning experiences. Convergors have strong AC and AE skills and are good at testing out theories or ideas in practical situations. They are capable problem solvers and prefer learning situations which involve the search for a single answer. Accommodators have CE and AE skills and are good at carrying out plans and seeking out new experiences. They are less analytical than others and trust their instincts in problem solving situations.

Kolb (1984) suggested that members of a professional discipline develop learning styles that reflect the predominant learning demands of their discipline and that disciplinary structures of knowledge determine the required learning competencies necessary for successful functioning in these disciplines. It is further suggested that

learners are attracted to disciplines with learning environments comparable with their learning styles and that these styles are further accentuated with experience in the discipline. Kolb maintained that professional education programmes tended to focus on the development of core learning competencies essential for initial professional role functions at the expense of other types of learning competencies.

Success in a discipline is more likely if personal learning style and environmental pressure of a discipline are matched (Kolb 1984). In an earlier series of studies Kolb et al (1981) had demonstrated many of the relationships between professions and environmental pressure. Kolb (1984) contended that members of people-oriented professions have learning orientations, with a feeling-based theoretical approach towards dealing with the world.

(3) **Cognitive personality models** represent the individuals' approach to adapting information as it has been assimilated through his/her information processing style. It is reported as being relatively stable because of its inclusion of the underlying personality dimension of the individual learner. Witkin's et al (1977) classification of field dependence and field independence and the Myers-Briggs type indicator based on the works of C. G. Jung (Myers 1962) appear in the literature as the most utilised of the cognitive personality models.

3.3 **Approaches to Learning**

Research into relationships between learning approaches, experiences, preferences and other personal characteristics is in its embryonic stages. As multiple models are available for determining ways people prefer to learn and their particular learning style, Grasha (1984) has questioned which learning style characteristics are most likely to prove useful to educators in designing the instructional process. It therefore may be argued that an understanding of learning styles in isolation of other factors such as approaches to learning, is an incomplete equation.

Alongside the developmental research on learning styles, a considerable range of

exploratory studies on approaches to learning have been conducted, e.g. research on approaches to learning and students' study processes, although distinctly different to learning style research, is inextricably related and therefore complementary in contributing towards a greater understanding of student learning

The research on approaches to study and learning is rooted in the works of Heath (1964) and Perry (1970). Heath (1964), in terms of personality and intellectual development, described three types: The Non-Committer who is over cautious, the Plunger who allows his thoughts to fly from one idea to another without apparent connection, and the Reasonable Adventurer who manages to integrate the aforementioned contradictory attributes

Entwistle & Ramsden (1983) in highlighting the significance of Perry's work stated,

"Students move from simplistic acceptance of facts presented by authority through a period of confusion about the nature of knowledge and belief to a recognition that they need to establish a personal philosophy of life which is built out of their own interpretation of relevant evidence, but, which recognises and is tolerant of other peoples alternative, even conflicting interpretations of reality" (P 11)

Ference Marton's work at Gothenburg represents one of the most significant pieces of research on approaches to learning (Marton 1978). Marton and Saljo (1976a) initially described the distinction which they found among students reading an academic article as deep and surface levels of processing. Some students indicated that they conceived the task as being mainly reproductive and described how they had directed themselves to parts of the text most likely to feature in questions afterwards. The student focus of attention was thus limited to the specific facts or pieces of disconnected information which was rote learned. They described this approach as a 'surface approach' to learning. Other students reported that they took a more constructive view of the task and had tried to penetrate to the intention of the author of the text and to understand the meaning of the article. They questioned the

author's arguments and related them to previous knowledge, personal experience and tried to determine the extent to which the author's conclusions seemed to be justified by the evidence presented. Marton & Saljo (1976a) described this approach as a 'deep approach' to learning.

Saljo (1979) categorised conceptions of learning into five qualitatively different categories. Three of these were essentially reproductive and described learning as being related to an increase in knowledge, memorising, and the acquisition of facts and procedures which may be retained or utilised in practice. In the other two learning conceptions, learning is viewed as a constructive activity and is perceived to be the abstraction of meaning, and an interpretative process aimed at an understanding of reality. Saljo (1979) suggested that learning conception would probably show a relationship with the level of processing applied in certain situations and thus with the eventual learning outcomes.

Deep and surface learning approaches feature strongly in educational research and remain as a distinctly valid and reliable categorisation for differences in learning approaches. The many significant findings which emerged during the period of the Gothenburg studies, highlighted a relationship between the organisation of teaching, the specific type of course, the assessment technique and approaches to learning.

Svensson (1977) demonstrated that students who adopted a deep approach to learning tended to spend a longer time studying. Fransson (1977) concluded that anxiety provoking situations induced a surface approach to learning and that students who felt the situation to be threatening (whether this was intended or not) would be more likely to adopt a surface approach. Lack of interest or perceived relevance evoked a mechanical rote learning approach.

As regards how students approached learning in their everyday studies, Laurillard (1979) reported that it was associated with their perceptions of the purpose of the task, therefore learning was context dependent, a point which was also supported by Gaff et al (1976).

Learning environment is a predominant feature in many studies. Aspects related to rigid assessment techniques, impersonal student/teacher relationships, lack of choice over content and method are reported as being vital factors in reducing the quality of learning. Brennan & Percy (1977) reported that learning in higher education is facilitated and enhanced when students are permitted greater freedom over methods and content of study and negative attitudes may develop where choice is perceived to be absent. Student approaches to study were affected by the type of questions they were given in tests (Marton & Saljo 1976b). The authors concluded that it is much easier to induce a surface rather than a deep learning approach.

In summary, the Gothenburg investigations have demonstrated clear functional relationships between the quality of teaching, the characteristics of academic departments and the approach to learning which students use (Entwistle & Ramsden 1983).

In the context of this study, a very significant research development occurred through the major five-year research programme at Lancaster University. The Lancaster Studies as reported by Entwistle and Ramsden (1983), built on the phenomenological foundations and research work surrounding the Gothenburg Studies. Just as the period following the Gothenburg Studies gave rise to a concentration of research on learning, similarly, the post-Lancasterian research period resulted in an intensification and extension of significant aspects associated with learning. Entwistle and Ramsden (1983), operated on the assumption that the sole purpose of the teacher is to facilitate learning and that once the teacher understood more about how different students learned, then the better they would be at helping students to learn.

The Lancaster Studies, in design, utilised both qualitative and quantitative research methods and incorporated theoretical constructs from earlier research studies. The researchers attempted to unite and extend conceptually and empirically many earlier research findings on learning styles and approaches to learning and to present an eclectic synthesis of research findings emanating from a variety of research perspectives.

Entwistle and Ramsden (1983), determined the extent to which approaches to learning reflected the effects of teaching and assessment demands, and highlighted the important association between perceptions of learning context and approaches to studying,

"it might be possible to make improvements to the quality of student learning in higher education by alterations to the context in which it occurs" (p 192)

Later on, Entwistle (1987) highlighted the notion that it is the student's perception of the academic environment rather than the environment per se, which most directly influences learning. He formulated a heuristic model which demonstrated how aspects of the academic environment might be expected to interact with the individual characteristics of learners, affecting both their approaches to learning and the quality of learning outcomes. In providing further clarification, Meyer and Muller (1990) argued that altering the context of learning does not necessarily alter the perceptions of it. This fundamental point gives rise to a more general hypothesis that perceptions of learning context represent potentially powerful intervention variables that can be used to influence the quality of students' approaches to studying (Meyer, 1988)

Some of the earliest research, which was conducted by Laurillard (1978), supports the general trend of argument that student strategies and approaches to learning are context-dependent. Entwistle and Ramsden (1983) stated,

"positive attitudes to studying, deep approach, intrinsic motivation and academic progress are all related to good teaching, freedom in learning and avoidance of overloading" (p 202)

Conversely, the authors suggest that perceptions of inappropriate or excessive assessment, together with a too-rigidly structured curriculum, encourages extrinsic motivation, engenders poor attitudes and thereby encourages surface approaches to

learning Trigwell and Prosser (1991) highlighted the fact that perception of heavy workload and assessment aimed at recall is associated with students adopting a surface approach

3.4 Assessment and Examinations

The Lancaster Studies highlighted the influential role of assessment and examination methods and the importance of setting examinations and assessments which test understanding and demand independent thought, and which do not seem to reward simple reproduction. Much attention has been given by researchers to the influential role of examination and assessment on approaches to learning and the extent to which attitudes are shaped by examinations. While individual differences between students and approaches to learning and studying may remain stable over time and course (Entwistle, 1991), the balance between deep and surface approaches for the whole course can be altered by the assessment procedure (Thomas 1986 Beckwith 1991). Thomas (1986) demonstrated that students are strongly influenced by the form of assessment they expect. He argued that multiple choice formats, an emphasis on detailed factual answers, push students towards the surface approach, while open essay-type questions encourage a deep approach.

Entwistle and Entwistle (1991), in a study which contrasted forms of understanding for examinations, revealed the worrying feature of the way in which the examination distorted the abilities of students to achieve personal understanding, and the limited extent to which some types of examination questions actually tapped conceptual understanding.

3.5 Teaching style and teaching methods

Teaching methods and aspects related to teacher-student relationships have featured predominantly in recent research. Entwistle (1984) concluded that lecturers are mainly concerned with instilling the skills of critical thinking about the discipline and the fostering of conceptual understanding. However Entwistle and Tait (1990),

identified that many of the practices currently found in education are inadvertently pushing students towards reproducing knowledge, contrary to lecturers' intentions. The authors concluded that students who are relying on a surface approach actively prefer and rate more highly lecturers who provide predigested information ready for learning, while students with a deep approach prefer lecturers who challenge and stimulate. Prosser and Miller (1989) showed that only students who had used the deep approach to their learning developed the more sophisticated technical conceptions required by lecturers. Students relying on surface approaches were left with inadequate conceptions which created increasing problems for them as they moved through the course.

Teaching style has a profound influence on learning, and it is suggested that preferences for different teaching styles are related to approaches to learning (Entwistle and Tait, 1990). Teaching methods have been focused on consistently over the years by writers and researchers (Bowden, 1988, Sheppard and Gilbert, 1991). Evaluation of teaching performance has presented a formidable task to researchers. Many diverse models have been explored, including the linking of staff performance appraisal to student evaluation of teaching skills. Marsh (1987) and Biggs (1993) summarised the range of research studies which highlighted the critical importance to effective learning of teaching methods, which emphasise student enterprise, student autonomy and co-operation endeavour. Fox (1983), in highlighting the complimentary nature of teaching and learning describes four basic theories of teaching, each with its own distinct characteristics. The effectiveness of feedback on learning and on subsequent test performance is acknowledged (Kulhavy 1977, Crooks 1988), and that the provision of student feedback by teachers support students' engagement in productive study activities (Duckworth et al, 1986).

Accountability in education has had a prevailing influence on the process of education and is reflected in all elements of education. It provides a focus on ability and the products of education and its manifestations in approaches to learning are varied. Cole (1990) argued that in relation to various types of schools, teachers need to change their conceptions of educational achievement. Cole further suggested that

too great an emphasis exists on the acquisition of skills and facts rather than on relationships and meaning Sheppard and Gilbert (1991), researched the notion of quality in higher education, and concluded that course content which explicitly considers alternative conceptions of knowledge and teaching and which addresses the existing conceptions of students, would be more likely to facilitate learning based on personal meaning and orientation, this, it was argued would enhance the quality of the learning outcome

Many of the earlier research findings have generated new themes and an associated nomenclature in the recent literature (Meta-Learning, Meta-Cognition, Biggs 1985, Study Orchestration, Meyer, 1991) Within a framework of accountability and economic models of education, Ramsden (1991) discussed the concept of performance indicators in higher education and designed a Course Experience Questionnaire (CEQ) to measure differences between teaching performance in educational units The CEQ, which is seminal to this study of nurse education and training has a theoretical basis derived from the work of Ramsden and Entwistle (1983), who described a Course Perception Questionnaire as part of the Lancaster Studies

CHAPTER 4

LEARNING STYLES AND APPROACHES IN THE HEALTH CARE PROFESSIONS

Overview

In the case of British nurse education there is a wide range of research literature highlighting concerns about learning, conditions, clinical learning environment and the integration of theory and practice (Bendall 1973, Fretwell 1978, Orton 1980, Reid 1986) Treacys'(1987) work sheds some light on the situation in the Republic The very limited information which is available on the overall learning styles and learning approaches in nurse education comes mainly from the United States of America The USA's nursing literature generally reflects the trend of the general education literature where during the 1970's and early 1980's intensive research was conducted into learning styles and approaches to learning

DeTornyay (1984) in an annual review of nursing research identified thirty seven major investigations of the teaching learning process from 1971 to 1982 and noted that none of these studies incorporated a specific conceptual model to investigate student nurses' learning styles As De Coux (1990) suggested there has been a veritable deluge of research on learning styles amongst health professionals and a puzzling array of research where the terms learning style and cognitive style are used indiscriminately

It is noted that, generally, models of learning for health care professionals reflect and pursue the notion of learning from practice and the location of theory in practice (Schon 1983, Benner 1984) The notion of learning from practice is not new in the health service occupations and has been portrayed as a central way that people create their world and give it meaning (Cervero 1992) The more recent nursing research on learning has followed the trend of general education and research themes have been developed in areas such as metacognition (Worrell 1990) computer assisted learning

(Van Dover and Boblin 1991), field dependence and field independence (Blagg 1985, Norris 1986, Ostrow 1986, Ismeurt et al 1992), problem based learning (Simms and McMillan 1991) and cognitive style mapping (Cranston and McCort 1985)

The various health care professions, including nursing, medicine, occupational therapy and physiotherapy have been studied fairly extensively using a range of instruments adopted from general education Merritt (1989) reported on the wide array of learning style research carried out among health care practitioners and students Merritt's review included, learning style preferences of students in a variety of health care fields (Rezler and French 1975), differences between students at graduate and undergraduate level (Barris et al 1985, Llorens and Adams 1978), differences between practitioners and students in a particular field (Merritt 1983, Wunderlick and Gerde 1978), whether or not preferences are stable over time and/or effected by a specific programme of study, (Barris et al 1985, Cahill and Madigan 1984), the relationship of behaviour and work habits in clinical settings to preferences (Christenson et al 1979), the relationship between academic success and style preferences (Blagg 1985, Cranston and McCort 1985, Ostrow 1986) Kolb's (1976,1985) learning style inventory has been extensively utilised in health care research and the results reveal a preponderance of the 'concrete experience' mode

The approaches to learning instrument arising from the Lancaster studies has also been utilised in the health care research on learning, Newble and Gordon (1985) with medical students, Colgan (1992) with student nurses The results demonstrate a predominant reproducing orientation towards learning The findings of research on learning style preferences and learning approaches amongst health care professionals generally demonstrate a majority preference for concrete learning styles, reproducing orientations, and teacher structured learning environments

For review purposes the literature on learning styles, and approaches to learning amongst health care professionals will be divided into two main categories

- 1 Studies involving professions allied to nursing
- 2 Studies specific to nursing

Comparative studies involving a range of health care professions have been undertaken. Rezler and French (1975), using the Learning Preference Inventory investigated the learning preferences of six allied health professions and concluded that all six groups preferred teacher structured learning experiences dealing with concrete materials and practice orientated learning. Vittetoe and Hooker (1983) reported on a three year study involving ten health related occupations in a university teacher education programme. The results showed that all groups had higher scores on concrete rather than on abstracts scales. The highest scores on concrete learning were found amongst the radiological technologists group and the lowest means amongst nurses. The authors concluded that most allied health students preferred learning where there is structure and where facts can be applied, skills attained with task orientated learning and concrete assignments. Similarly, Vittetoe (1983) identified a predominant concrete orientation amongst medical technology and physiotherapy students. The learning styles of students and practitioners in five health professions in Israel (occupational therapy, social work, nursing, physiotherapy and clinical psychology) were investigated by Katz and Heinmann (1991). Using Kolb's (1985) learning style inventory the findings indicated a greater variance in learning styles amongst students compared to practitioners. In relation to nursing, it was reported that nursing students were diverger type while registered nurses were convergers.

A diverse array of information exists on learning amongst medical students and practitioners. In one of the earliest studies, Joyce and Hudson (1968) demonstrated that medical students obtained best examination results when teachers and students had similar learning styles. In a study of medical family practice residents Sadler et al (1978) identified that the learning style preference of the group tended towards the active experimentation and concrete experimental mode. Newble and Gordon (1985) using the Lancaster Inventory investigated the learning approaches of medical students. The results revealed high scores on reproducing orientation with low scores on meaning orientation in the first year and a sequential rise for students in later

years with final year students producing the highest value. The authors concluded that in medical education a greater focus must be on approaches to studying and the way approaches to learning might be influenced by the activities imposed on students.

The relationship between learning style and medical career choice has been reported on. Using a Learning Style Inventory the results indicated that different types of medical careers are associated with certain predictable learning styles. Plovnick (1975) identified that general practice and general medicine were chosen most often by concrete types (accommodators and divergers), medical specialisation was chosen more often by convergers, academic medicine and pathology were selected by assimilators. Overall, the study highlighted concrete experience and active experimentation as the most common style of learning. Plovnick's (1975) study was later replicated by Wunderlich and Gerde (1978) but Plovnick's findings relating career choice to learning style having been critiqued were not supported. Wunderlich and Gerde (1978) identified that the converger was the most common learning style in all medical career groups except psychiatry. The authors concluded that the high incidence of converger learning style in medicine is consistent with Kolb's (1976) description of a converger as an individual whose greatest strength lies in the practical application of ideas and who excels in the use of deductive reasoning to solve specific problems.

Garvey et al (1984) investigated the learning style of pharmacy students, and a predominant converger learning style was identified. Significant correlations were found between learning scores and preference for learning situations and between report grade point average and learning style scores. The authors concluded that students with a converger learning style are likely to be more successfully academically than are students who process other learning orientations.

The Rezler and French Learning Preference Inventory (1975) and Kolb's Learning Style Inventory (1975) were utilized by Cahill and Madigan (1984) to investigate the influence of curriculum format on learning styles and preferences amongst occupational therapy students. Using a pre and post-test format, no significant

differences between scores were reported. The authors concluded that faculty efforts to develop and introduce diverse methods of instruction are unwarranted. However, the provision of a variety of instructional modes will enable more students to learn according to their learning preference.

Katz and Heinmann (1991) in demonstrating a preference for the active experimentation mode amongst occupational therapy students highlighted the suitability of a learning environment which was well organised with clear goals and objectives.

In a study of graduate and undergraduate occupational therapy students, Barris et al (1985) showed that both groups conformed to a profile of preferring teacher structured, concrete, inter-personal learning. The graduate group had a greater preference for abstract learning while the undergraduates experienced a greater satisfaction with their education. In relation to learning style and course work Cunningham and Tricky (1983) demonstrated no significant relationship.

Generally, studies of learning styles and preferences amongst occupational therapy students indicate a learning preference for direct experience and practical skills (active, experimentation), (Rezler and French 1975, Llorens and Adams 1978, Rogers and Hill 1980, Stafford 1986).

4.2 Learning Styles and Approaches in Nursing

Nursing students are amongst the most frequently studied group of professionals with regard to learning style construct. Generally the research demonstrates a predominance of concrete learning and a preference for teacher structured environments (Christenson et al 1979, Hodges 1988a, Hutch 1981, Johnson 1987, Laschinger 1986, Laschinger and Boss 1984, and 1989, Merritt 1983, Remington and Kroll 1990, Marcinek 1983, Seideman 1983, Ostmoe et al 1984, Siplon 1990). Kolb's work (1976, 1984) has had a seminal influence on learning style research in nursing. De Coux (1990) reviewed the extensive application of Kolb's learning style inventory.

in the examination of learning styles of student nurses

A number of American studies on learning examined the differences in learning styles between generic and RN students (Generic students generally enter college shortly after completing high school and have little or no nursing related experience, in contrast RN students are generally older, may be part-time and may have had nursing experience) Hutch (1981) identified no significant difference between generic and RN students in preferred learning styles with a greater proportion of RN students being accommodator learning style and generic students being converger learning style Hutch (1981) reported that students with accommodator learning styles were more satisfied with their nurse training programme

No significant differences were reported in learning styles between first and fourth semester Baccalaureate degree nursing students (Wells and Higgs 1990) In looking at learning style preferences Wells and Higgs (1990) used a Likert type scale on a choice of twelve teachings/learning methods Demonstration and practice was the overall preferred choice and group work received the highest positive response from first semester students Significant differences were reported with regard to lecture method, it being favoured by first semester students It was concluded that nursing students demonstrated predominant learning styles and that a group of nursing students may have major learning style differences

Duff et al (1992) examined the learning styles of Chinese nursing faculty and career choice preferences using Kolb's (1985) learning inventory Chinese nurses do not have the option of leaving the profession owing to political and cultural factors and are subjected to teaching methods emphasising the authority of teachers with passive student roles involving assimilation of facts and the rapid retrieval of large clusters of information by memory The results of the study demonstrated concrete learning styles similar to nurses in other countries

LaPeyre (1992) used the Lancaster approaches to studying inventory in a comparative study of learning between degree and non degree students It was

concluded that there were significant differences between the two groups in approaches to learning. On the basis of the results LaPeyre suggested that in the learning of nursing it is important to tailor one's approach to the context of the learning situation, because the education and training of nurses occurs in a variety of situations and through interaction with a large number of individuals. Specifically, LaPayre (1992) noted that the degree students obtained higher scores on all scales of the Lancaster inventory except those of achieving and operation learning.

Colgan (1992) investigated the learning strategies of student nurses in Northern Ireland using a modified version of the Lancaster approaches to learning instrument. Two groups of student nurses at different stages of training were investigated and it was identified that more junior students adopted a deep approach whilst the more senior students adopted a surface and reproducing orientation towards learning. A link between the subject matter and the choice of learning was also reported. The author concluded that in nurse education there is a need to identify the context dependent strategies of students and that provision should be made for such strategies when planning courses.

Laschinger (1992), using Kolb's (1984) experiential learning theory, examined nurses' perceptions of the contributions of different types of nurse learning environments to the development of adaptive competencies. It was concluded that nursing environments were thought to contribute most to divergent and convergent competencies, reflecting the importance of both people oriented and scientific skills in nursing. Skills required for building conceptual models, testing theory and ideas, leading and influencing others were given a low rating. The author suggested that the traditional view of the nurse as a doer and follower of orders may still influence student nurses' perceptions of the importance of such competencies in nursing despite efforts by faculty to foster changes.

Nurses as adult learners with particular orientations in learning style preference have been a focus for nursing research. Merritt, (1983) on finding significant differences between two groups of students, suggested that consideration needs to be given to

developing different teaching/learning situations for younger versus older experienced adult nurse learners. It was identified that older experienced nurses are less positively orientated than younger learners towards the conditions and modes of learning commonly associated with formal four years collegiate situations and may need orienting to the learning behaviours which they are expected to demonstrate. When learning style preferences of adult learners in nursing were investigated (Ferrell 1978) findings indicated a preference for traditional teaching learning strategies such as the lecture.

King (1984) examined adult educational development patterns amongst RN and generic student nurses and reported no significant relationship. Predominant diverger learning styles were found by Linares (1989) in a comparative study of generic students and RN students used a range of instruments to investigate learning characteristics. No significant differences were identified with regard to locus of control, self directed readiness and learning style preference although data showed ethnic and age effect involving all subjects. The results demonstrated a strong choice for educational environments with teacher structured learning and where performance expectation, assignment and goals are clearly identified, there was a tendency for RN students to indicate a more adult learning orientation than generic students. It may generally be concluded that on the basis of previous research, age may be a factor influencing student nurse learning patterns.

Facilitating a match between teaching and learning styles which has been a focus in the general educational literature has also been explored in the context of nursing. McMillan and Dwyer (1990) presented problem based learning as a means of reconciling teaching and learning. The authors suggest that nurse educators must be flexible and be prepared to continually review their own practice. Partridge (1983) advocated the matching of teaching and learning styles on the premise that a more comfortable interaction will probably facilitate learning. Hodges (1988,a) concluded that in nursing, a match between teaching and learning styles arises in two ways, socialisation to an environment moulds personalised characteristics to fit that situation and individuals actively select environments which are consistent with their

personal characteristics Matching teaching and learning strategies is reported to have positive effects on learning and leads to enhanced academic performance and more efficient learning (Lange 1972, Ogden 1980) Laschinger (1987) found that nursing students whose perceived personal competencies exceeded perceived environmental demands were less satisfied with their choice of nursing as a career Burnard and Morrison (1992) investigated student nurses' and lecturers' preferred teaching strategies, and found that student nurses tended to prefer a teacher centred approach to teaching whilst the lecturers preferred a student centred approach Teachers felt that the students should take more responsibility for their learning whilst the students felt that the lecturers should organise and manage the learning experience Such a dissonant attitude may be evident in the current practices of nurse education, with on the one hand teachers espousing to student centred ideologies and on the other hand students expressing preferences for teacher structured approaches

The relationship between learning style and achievement has been investigated and no significant relationship was reported (Blagg 1985, Wilkerson 1986, Zemaitis 1987) However, when instructional methods were compatible with learning style, learning and achievement were enhanced (Smith 1974, Frazier 1982) Siplon (1990) examined the learning styles of student nurses and their teachers and reported a preference for concrete learning styles The author concluded that nurse education did not accommodate student preferences for particular learning styles Dux (1989) in a study of nurse teachers demonstrated that the lecture method was still the preferred teaching method in general nurse education On the basis of the research findings Dux argued that there was a need for nurse education to cater for a wide variety of educational approaches Sweeney (1986) has argued that the almost total reliance on the lecture method has contributed to the failure to develop critical thinking, research mindedness and a positive attitude to change

The planning of teaching strategies or a curriculum around only one learning style may result in failure of students with other learning strengths (Highfield 1988) In this context various studies report on similarities and differences between groups of

student nurses with regard to aspects of learning O’Kell (1988), found that both general and psychiatric students preferred the lecture method to experiential learning methods although the general students rated experiential learning approaches far lower in terms of popularity than did psychiatric student nurses Overall, discussion and debate was the preferred teaching method of student nurses from general, psychiatric and mental handicap nursing O’Kell (1988) identified differences between individual groups of students with regard to choice of teaching method so it generally appeared that the student’s choice for a teaching method was influenced by the predominant teaching method of nurse teachers in particular areas of nursing such as general, psychiatric and mental handicap

Crotty (1993) reported that within the project 2000 programme nurse teachers were concerned about preserving a range of teaching approaches Crotty’s research highlighted the fact that nurse teachers did not express a liking for the lecture method and were keen to be innovative in their use of small group teaching including methods such as the use of video, student led seminars, self directed work and discussions Computer assisted learning (CAL) as a method was not generally regarded with any real enthusiasm Crotty concluded that teaching approaches reported by nurse teacher respondents could generally be regarded as being compatible with a process approach to curriculum development and the theory of adult learning

The National Foundation for Educational Research (1994) in an evaluation of Project 2000 reported on the concerns of students about group work and self directed learning The arrangement was said to be too ‘laid back’ and students felt saturated with this approach The students emphasised the need for mixed approaches to teaching Lectures needed to be sharply focused and groups well organised so that staff just do not let people ‘ramble’ Students referred to the need for study time to be planned and used constructively More mature students expressed a major commitment to achieving the course and this was reflected in high grades

The dimensions of field-dependence and field-independence have been investigated

in a nursing context Garity (1985) provided a summary of the characteristics of field-dependent and field-independent individuals. In noting the diverse nature and the distinctive features of each, the author argued for the assessment of learning style as an essential aspect of ensuring expedient methods to implement learning strategies. The influence of field-dependence and field-independence on choice of learning has been reviewed (Ismeurt et al 1992). Field-dependent people have tendencies towards studying in groups, prefer discussion and demonstration teaching methods. The presentation of theoretical information in an organised form will facilitate learning for the field-dependent learners (Gillies 1984). In contrast, field-independent individuals prefer to study alone. Teaching strategies should focus on providing situations to stimulate learners. They may need guidance in developing therapeutic interpersonal skills due to a tendency to be more impersonal. Mutual goal setting is important to ensure challenges and to provide an outlet for creativity and self direction preferred by field-independent learners (Garity 1985).

Quinlan and Blatt (1972) found that high achieving students in psychiatric nursing tended to be significantly more field dependent than high achieving students in surgical nursing. No significant differences in the environmental press perceptions of psychiatric and general nursing students were reported by Laschinger (1986). The competencies which were perceived to be most important by psychiatric and general student nurses were primarily people orientated competencies while those considered least important were assimilative competencies such as building conceptual models, testing theories and designing experiments.

In proposing that learning style is one reflection of personality type nurse researchers have investigated the relationship between learning style and personality. Most often, the Myers Briggs Type Indicator has been used (Brown 1981, Rezler and French 1975, Hodges 1988b). Till (1988), showed that female student nurses exiting from a programme endorsed more masculine characteristics than entering students. Hodges (1988a) investigated a range of student nurse attributes and findings indicated a predominant profile of concrete cognitive styles and a personality type characterised by sensing, feeling, judging and caring characteristics. The findings of

Hodges (1988a) suggest that the typical beginning student nurse favours a learning environment characterised by the following structure a caring relationship with teachers, permission to be assertive and utilise nurturing behaviours, use of practical materials, experiences in small and large group discussions, simulations and role play

The desirability of innovative teaching and learning techniques has been identified in the nursing research literature. It is argued (Roberts et al 1992) that, if within the nursing profession, reflective practice is to be encouraged and competence accurately measured, innovative teaching and evaluation strategies can no longer be eschewed. Glendon and Ulrich (1992) suggested that nurse educators are challenged to find innovative teaching strategies that help students think critically and interact skilfully with others. The authors discuss the merits of co-operative learning and describe ways that nurse educators can teach essential content using a co-operative learning strategy. The benefits of self learning packages in nursing staff development are outlined by Cochenour (1992). Roberts et al (1992) argued that simulation as a teaching learning strategy has much potential which has as yet to be fully explored in nurse education. Ramprogus (1988) reported that student nurses who undertook a 'learning how to learn' course performed better on nursing related tests.

It has been argued that student centred and negotiated styles of learning strategies are most appropriate for use with student nurses (Marshfield 1985, Raichura 1987, O'Kell 1988, Burnard 1991). It is noted however that whilst nurse teachers often favoured student centred experiential methods of learning, students tended towards more structure and teacher led learning methods.

More recently, the literature, whilst maintaining the debate on student centred versus teacher centred learning has focused on the newer technologies. The use of television as a mode of access to continuing education has been explored Fry (1976) Millonig (1988). The efficiency of teaching various courses by television is supported (Keck 1992, Boyd and Baker 1987).

Computer experiences and preferences for learning were investigated by Van Dover

and Boblin (1991) and it was concluded that there was a lack of curricular attention to the use of the computer in the light of the future application of computer technology in health care. The results showed that 94% of the sample liked to use a computer for some aspect of the student learning role. A level of understanding about computers had a positive impact on its choice as a preferred learning mode. In relation to students' preferences for the use of computer learning Koch et al (1990) reported that students, in their acceptance of this form of learning resource, had a majority preference for using the computer with other students. Respondents identified the positive aspects of computer assisted learning, (CAL) as being its self paced nature and the allowance of a one to one relationship with the teacher in the form of a computer. Koch and Rankin (1984) suggested that computers will not replace teachers in the classroom but the increasing use of computers in relation to (CAL) will challenge nurse teachers to re-examine their roles and the current teaching strategies which they adopt. Generally, the nursing literature identifies the potential attractiveness of computer assisted teaching in nurse education. There is increasing evidence to support the notion that students learn at least as well in terms of knowledge retention when taught by (CAL) versus the lecture method (Conklin 1983, Warner and Tenney 1985)

The value of interactive video in terms of individual and active learning has been analysed by Ward (1992). The fear is expressed that nursing will be "left behind" unless it is able to harness the potential of such technology.

Conclusions

The review of literature identifies apprenticeship nurse education with the student as an employee and learner as being the earliest expression of nurse education. This system operated on the belief that nurses automatically learn as they work and that to place them as a member of rostered staff in a ward full of patients made a valuable contribution to their training. However, subsequent reports and research confirms that the model did not fulfil the ideals of apprenticeship training, that is the certainty of a learner working with a "master craftsman". Whereas legislation served to tighten policy and rules and matters of curriculum, there remained problems in relation to the creation of a satisfactory clinical learning environment. In the early part of the twentieth century, the desire for the professionalisation of nursing conflicted with the notion of vocationalism and female servility, and it was suggested that the limited form of training offered to nurses reflected contemporary beliefs about women.

The control of medicine over nursing was apparent from the earliest days. This appears to have impacted on the development of the "medical model" of nursing. This later on appears to have been reflected in the lack of definition of nursing and what constitutes nursing knowledge. Nursing syllabi generally reflected lists of subjects to be taught to nurses. The evolution of the nursing curriculum is rooted in the American system of nursing where it appears to have been influenced by links with the higher education system. Educational perspectives which originated in higher education were gradually reflected in nurse education with the most notable curriculum development being the use of behavioural objectives in the nursing curriculum. As the curriculum debate in nursing gathered momentum during the 1960s and the 1970s, the nomenclature reflected a wider educational debate on student centred versus teacher centred learning. The requirement for the integration of theory and practice and a greater breadth and depth of knowledge prompted a review of fundamentals in nurse education. The 1970s and 1980s revealed voluminous research on learning environments and the dichotomy between theory and practice in nurse education. The notions of learning 'from practice' and 'in-practice' were identified as central to the nurses learning.

In higher education during the 1980s within a climate of accountability, there was a particular focus on understanding student nurse learning. Previous work in Gothenburg provided a basis for more recent UK research at Lancaster on student approaches to learning. The methodologies and outcomes of both studies are central to this study of student nurse learning. It is now accepted that many factors related to teaching, assessment and curriculum design can capture a student's interest and motivation and lead to a better quality of learning. In recent years, there has been a trend of research albeit rather limited on student nurse learning styles emanating from America. In the light of changes to nurse education through Project 2000 and potential change through the report of the Review Committee on Nurse Education and Training (An Bord Altranais 1994) in the Republic, it is unfortunate that there is a complete absence of research and understanding of student nurse learning. On the basis of the literature review in this section, it may be argued that an understanding of student nurse learning is central to all aspects in the development of nurse education and training.

SECTION 2

RESEARCH DESIGN AND METHODOLOGY

CHAPTER 5

THE RESEARCH FOCUS.

Introduction

This section of the thesis provides an outline of the research perspectives used in the study. An overview is provided on the background to the development of nursing research. The epistemological basis of quantitative and qualitative research and their complimentary roles in modern research is discussed. The importance of triangulation as the choice of research method in a study of learning is identified. The propositions and research objectives as the basis for the development of all aspects of the study are highlighted. The four data gathering procedures which include the three questionnaires and the focused interview are reviewed. The background to the development of the questionnaires, their scales, subscales and meaning including aspects related to reliability and validity are discussed. An outline of the research design and data gathering time frame is presented in Figure 4.

The Frame of Reference

The general focus of this study is student nurse learning and the extent to which it is influenced by formal and informal aspects of the learning environment. Specifically the research focuses on the uniqueness of the student nurse's experience in nurse education and the variety of qualities they display as learners. As a second order research perspective (Van Rossum and Schenk, 1984), (discussed chap 3), the study is not directed so much to reality as it is, but more to how people view that reality. The researcher, therefore, concentrates on the perspective of the learner and not as has been the case traditionally, the perspective of the researcher. The research perspective in this study is one which involves the use of triangulation and mixed methods and is essentially descriptive research as it sets out to describe and interpret

"what is" from the perspective of the student. The advantages of descriptive research in education have been identified. Best (1970) suggested that descriptive research is concerned with conditions or relationships that exist, practices that prevail, beliefs, points of view or attitudes that are held, processes that are going on, effects that are being felt or trends that are developing. In essence, Best's view of descriptive research serves to state the frame of reference for this research study aimed at understanding student nurse learning. Having adopted a descriptive research perspective, a longitudinal research approach was utilised. This method gathered data over an extended period of time because it involved successful measures with the same respondents at different points in time, it may be most appropriately termed "follow-up" or "cohort" study (Cohen and Manion 1984). Douglas (1976), who pioneered the first follow-up study, outlined the main advantage as being its ability to uniquely identify typical patterns of development and to reveal factors operating on the samples which elude other research designs. However, longitudinal studies also have several disadvantages, including being time consuming and expensive, sample mortality (students being lost to the study), and measurement affect (the influence of the ongoing research on the behaviour of subjects).

The use of student evaluations of educational settings provide a direct measure of consumer satisfaction in nurse education and is entirely consistent with trends in higher education where an emphasis has been placed on accountability and teacher performance related factors (Ramsden 1991, Marsh 1987). The research perspective, in its broadest sense, permitted the study of a number of variables considered to be important in gaining an understanding of student nurse learning. This was important since the study included nurses from two countries with programmes of nurse education which espoused different philosophies and approaches. However, reciprocal recognition of qualification exists between the two countries. Registered nurses from general nursing (through E U Directives) and psychiatric mental handicap and sick children's nurses (through custom to practice) have been eligible to register and practice nursing in either country irrespective of the particular type of educational programme undertaken. Clarification of student learning orientations in both programmes therefore would be helpful in characterising the type of registered nurse

qualifying. A major review of nurse education in the Republic has been undertaken, Project 2000 has been implemented. However, there remains a lack of clarity with regard to student nurse's approaches to learning and course experiences and the teaching/learning preferences of student nurses. The issue of adult learning has received much discussion in the literature on Project 2000 which explicitly aims to provide adult education approaches. Yet, there remains no substantial research on age as a factor in student nurse learning. This study therefore has adopted age as a variable to be investigated in student nurses' approaches to learning, course experiences and teaching/learning preferences.

The Propositions

This study aims to provide insights, with substantial information on the various relationships which exist between learning, strategies, approaches and various programmes of nurse education and training. The propositions are necessarily broad and highlight certain relationships which may exist between the variables in the study. The range of data collected and analysed will establish the veracity of the propositions.

Proposition One

The two fundamentally different programmes of nurse education and training as provided in the Republic and Northern Ireland provide two characteristically different student approaches to learning profiles. The more academic nature of the Northern Ireland programme against the more traditional and vocational oriented programme in the Republic is a significant feature.

Proposition Two

The status of the student nurse as supernumerary in Northern Ireland and employee in the Republic will be reflected in the course experiences of students. In the Republic, the service requirement aspect combined with the learning needs of students focuses

learning on breadth of knowledge The Northern Ireland programme, because of the programme orientation, extra class time, and theoretical emphasis provides depth of knowledge

Proposition Three

Clinical experience is perceived as central to learning in nursing However, both programmes are deficient in providing favourable teaching/learning environments and consequently maintain the dichotomy between theory and practice of nursing

Proposition Four

Student nurses have preferences for more teacher centred teaching/learning strategies However, the curriculum orientation and a dominant teaching/learning strategy implied in a particular programme can influence teaching/learning preferences

Proposition Five

Older student nurses, in contrast to younger students, have a different learning profile and draw on a greater reserve of previous experience and are more assertive and questioning in ensuring more favourable learning environments

Proposition Six

In relation to the Republic of Ireland cohort, psychiatric nurse students will exhibit a significantly different learning profile compared to other groups of student nurses

The Research Objectives

- 1 To investigate the approaches to learning of student nurses from Northern Ireland and the Republic and to describe significant differences

- 2 To investigate the course experiences of student nurses from Northern Ireland and the Republic and to describe significant differences
- 3 To investigate the teaching/learning preferences of student nurses from Northern Ireland and the Republic and to describe significant differences
- 4 With regard to the Republic of Ireland cohort to identify differences between student nurses from general, psychiatric, mental handicap and sick children's nursing in relation to
 - a) approaches to learning
 - b) course experiences
 - c) teaching/learning preferences
- 5 To identify if age is a significant factor in relation to student nurse learning approaches, course experiences and teaching/learning preferences
- 6 To provide information on the implications of nurse education policies as implemented in Northern Ireland and the Republic
- 7 To provide feedback on nurse education which might inform policy formulation and implementation

The Population

The population (N= 1122) included all entrants to student nurse education programmes in Northern Ireland (n= 408) and the Republic (n= 714) during the Autumn 1991 period (Figure 3)

Figure 3 **Population of student nurses included in the study**
 (Republic subdivided by division of the nurses register)

Northern Ireland	408
Republic of Ireland	714
RGN	467
RPN	82
RSCN	41
RMHN	124

The total student nurse population in the Republic is accommodated in 32 Schools of Nursing, 17 General, 6 Psychiatric, 7 Mental Handicap, and 2 Sick Children's. The total student nurse population in Northern Ireland is accommodated in 5 Colleges of Nursing.

The questionnaires were distributed to the students by Nurse Tutors in each School/College who served as a mailing point for the return of completed questionnaires. A series of instructions and a covering letter (Appendix A and Appendix B) were provided to ensure standardised administration and completion of the questionnaires. As the questionnaires were anonymous the method of distribution did not influence the completion of the instrument.

Project 2000 is a new programme and students were in their first year when some of the data were obtained. Therefore some of the results pertaining to Northern Ireland may have been the result of the major change involved rather than the specific characteristics of the new curriculum.

Access and ethical considerations

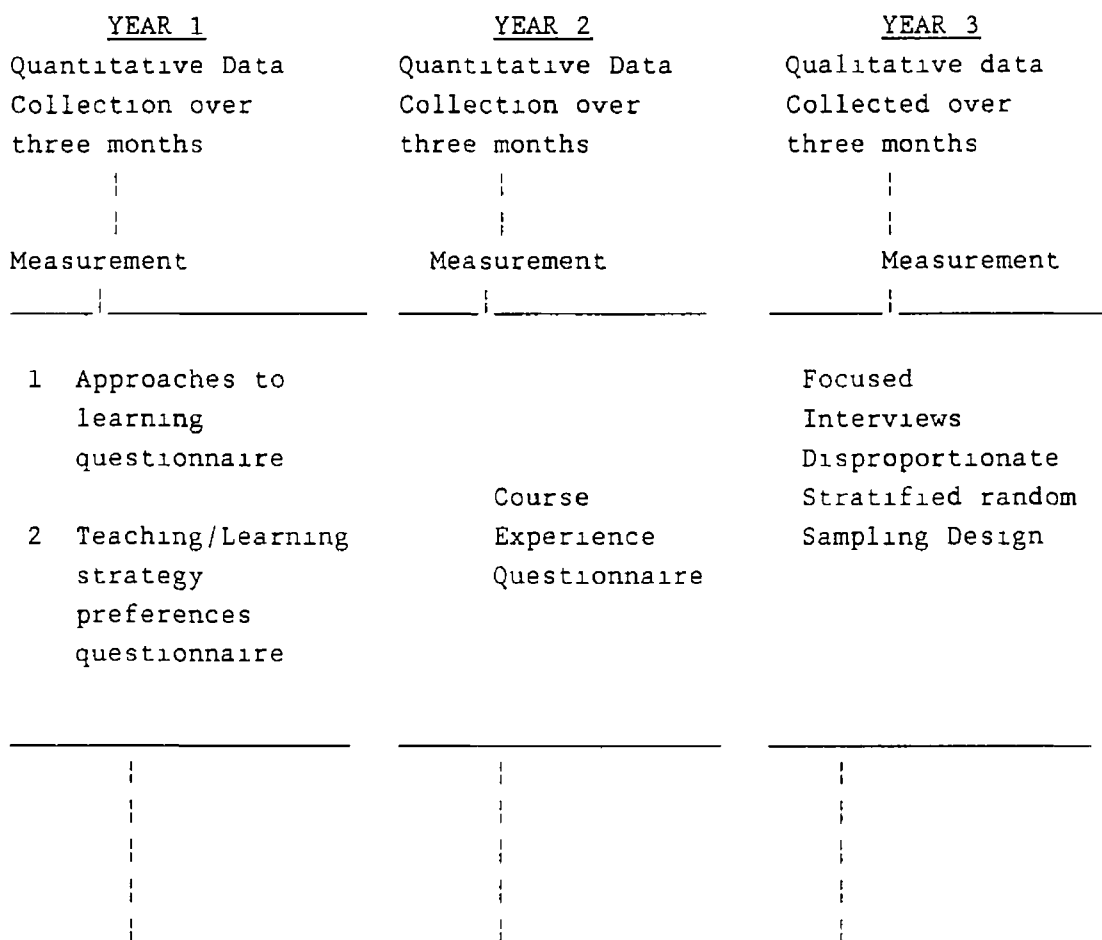
As the study did not involve patients/clients and related nursing practice the ethical considerations were minimal. However the issue of informed consent was considered.

to be important in respect of the prospective subjects being given sufficient information about the research to enable them to take an informed decision on whether or not they wished to participate⁷. In this study this was done by providing an information sheet with the questionnaires (Appendix A and Appendix B)

The protocol to gain access to student nurses in Northern Ireland involved a formal request to the Northern Ireland National Board for Nursing Midwifery and Health Visiting. The National Board, having agreed to the study, then informed the Colleges of the researchers impending approach to access student nurses for research purposes. In the Republic access was gained by contacting Matrons and Principal Tutors. The issue of confidentiality in respect of individual students and the various schools/colleges of nursing remained a priority issue throughout the research.

FIGURE 4

Outline of Research Design & Data Gathering Time Frame



CHAPTER 6

THE RESEARCH PARADIGM

Background.

Unlike British and Irish nursing, American nursing has a long tradition of research. The generation of research in American nursing is principally due to its long established tradition in academia. Despite many aspirational notions of the need for nursing to become a research based profession, research into British nursing is a relatively new activity (Lelean and Clarke 1990) and to date there is no research strategy for nursing in the Republic of Ireland (Cowman 1990). Just as the theoretical foundations of nursing are, to a major extent, drawn from disciplines such as psychology, anthropology, physiology and sociology, nursing has also adopted and utilised a range of research methodologies from academic disciplines. Some nursing commentators, in perceiving a rather conservative approach towards nursing research, have called for a more imaginative and dynamic research paradigm in nursing. The perceived conservative approach adopted by nurse researchers is historically not without foundation. Nursing, in not being a traditional academic or research based profession, has had to gain respectability in both professional and academic terms. The earliest nurse researchers in the 1950s predominantly adopted a quantitative approach which Leininger (1985), in relating the American experience, believes to be related to four factors:

- 1 Nurse researchers adopted the prevailing quantitative approach as the primary base for their research because they wanted it to be accepted and respected by other academic scientists
- 2 The researchers who established the first doctorate programmes in nursing implanted the quantitative paradigms as the primary research model within these programmes

- 3 The foremost nursing research publications would accept only quantitative research reports for publication
- 4 National funding for research projects was awarded only to quantitative research projects, thus, the quantitative approach became the nursing research model of choice

The Qualitative/Quantitative Debate

Generally, there is a perceived conservative approach by nurse researchers often with wholesale acceptance of one epistemological approach to the exclusion of others (Cowman 1993). As the scientific approach in nursing continues to develop, much debate has occurred over the merits, approaches and usage of quantitative and qualitative methods in nursing research. Whereas the quantitative approach was the dominant paradigm in nursing research in the 1950s and 1960s, the 1970s and 1980s have increasingly located the research approach in the qualitative paradigm. Each research perspective has several inherent differences which can give rise to a specific type of research endeavour.

The quantitative approach has been exclusively associated with the dominant, empirical analytical paradigm, and seeks the causes of human behaviour through objective, observable and quantifiable data. Most commonly, research methods are associated with experimental research designs where causal relationships between variables are examined, controlled or removed from the natural setting and observations are quantified and analysed to determine statistical probabilities and the certainty of a particular outcome (Duffy 1985). It is argued that quantitative research methods make an epistemological assumption that the social world lends itself to objective forms of measurement. Leininger (1985) suggests that people are not reducible to measurable objects and do not exist independently of their historical, cultural and social context. There is a growing awareness that the traditional paradigm, as characterised through quantitative methods is inappropriate when dealing with the complexities of individuals relating to each other and functioning

within their social and educational settings (Hamilton 1977)

Finch (1986) in support of qualitative methods, criticised the positivistic 'fact' finding approach to explaining social life on the grounds that it assumes an unproblematic conception of facts and an impartiality in their collection that is unrealistic. Finch's exposition of the strengths of the qualitative dimension demonstrates its importance in a study of an educational situation. The qualitative paradigm is concerned with the value of meaning and the social world from which meaning is derived (Benoliel 1984). Through a variety of theoretical perspectives, including phenomenology and ethnography, naturalistic and familiar data which serve to gain an understanding of people, are sought and valued. Differences between quantitative and qualitative approaches can be seen at even the most basic level. Qualitative methods develop nursing theory inductively from the data, while quantitative research is deductive and its methods are primarily aimed at testing theory.

The Emerging Paradigm Triangulation

Within the research literature there is general support for the separateness of the qualitative and quantitative paradigms (Duffy 1987, Haase and Myers 1988). However, in accepting the inherent differences between the two methods, nurse researchers have been concerned that neither method, in isolation from the other will truly provide an understanding of human beings and of their physical, psychological and social needs. The polarisation which has arisen is based on the disparate nature of the principles constituting the two paradigms and has created a separatist versus combinationist debate. Leininger (1985) describes the separatist as a nurse researcher who remains purist, totally committed to either the quantitative or qualitative research perspective. Such nurse researchers want each perspective to remain separate from the other so that neither will be contaminated. In contrast, combinationists believe that they must combine the two methods for a variety of reasons. Capra (1986), in stating the need for elements of more than one paradigm, argued that in research integration rather than a shift of paradigms is possible. In defining qualitative research, as theory developing hypothesis generating, and

quantitative research as theory modifying hypothesis testing, Field and Morse (1985) have identified the complimentary nature of both. In acknowledging the disparate nature of quantitative and qualitative methods of research and in identifying the need for the integration of research approaches in nursing, triangulation as a research strategy is proposed.

In accepting the inherent differences between the two methods of research, this researcher was concerned that neither the qualitative nor the quantitative method in isolation from each other would truly provide an understanding of learning in the context of this study. This study, therefore, through the chosen research methodology of triangulation with the integration of research approaches, recognises the complexity of the phenomena requiring elucidation. With reference to undertaking research to gain an understanding of student learning, Entwistle and Ramsden (1983) have stated

"We would argue that in our experience, neither qualitative nor quantitative methods of research taken separately can provide a full and convincing explanation of student learning. It seems essential that an understanding of student learning should be built up from both qualitative and quantitative approaches to research" (p 219)

The use of triangulation as a research approach is relatively new in nursing and is perceived as a way of integrating and reconciling many of the paradigmatic assumptions inherent to quantitative and qualitative methods (Cowman 1993). Campbell and Fisk (1959) are acknowledged in the literature as being the first researchers to apply triangulation as a research method. Denzin (1970) has defined triangulation as the combination of multiple methods in a study of the same object or event to depict more accurately the phenomena being investigated. Denzin went on to describe four types of triangulation: data triangulation, investigator triangulation, theory triangulation and methodological triangulation.

Data triangulation and methodological triangulation are the specific research methods employed in this study

Data triangulation involves the collection of data from multiple sources incorporating quantitative and qualitative methods. The qualitative dimension affords the opportunity to explore more fully the dominant, significant and relevant issues which emerge from the quantitative findings.

This approach to the integration of data permits the researcher to discover which dimensions of the phenomenon are similar and which are dissimilar across settings, which change over time and which differ by group membership (Mitchell 1986)

Methodological triangulation is ideally used when studying complex concepts that contain many dimensions (Jick 1979) and may involve the use of two or more methods. Learning is a complex issue and therefore more than one research approach must be used. Mitchell (1986) has distinguished between two different types of triangulation, 'within method' and 'across method'. In this study 'across method' was used and involved the use of dissimilar but complementary methods including quantitative and qualitative methods. The combination of dissimilar methods provided opportunities for counter-balancing the weaknesses of one method with the strengths of another. Cohen and Mannion (1984) have pointed out that by using or drawing from each of these usually mutually exclusive categories, contrasting perspectives can be disclosed.

In recent years, triangulation has been used more frequently in educational research, simply because of the single method approach yielding only limited and sometimes misleading data. This comparative study of teaching and learning involved two countries with contrasting educational philosophies, objectives and practices arising from two different models of nurse education. Consequently, a single method approach would have provided data of very limited value in that it would in no way have reflected the more subtle, less tangible, features distinguishing the two systems.

Advantages and Disadvantages of Triangulation

Triangulation, by reconciling the paradigmatic assumptions inherent to qualitative and quantitative methods, provides rich and productive data (Cowman 1993) Duffy (1987) notes that in terms of data collection, three benefits may accrue

- 1 By using quantitative methods prior to qualitative work, the replies to surveys can provide leads for subsequent interviews and observations and the need to ask background information during an interview could be eliminated should these questions have been answered by respondents in a previously administered questionnaire
- 2 Quantitative data can provide information about informants or subjects initially overlooked
- 3 The use of a survey instrument that collects data from all respondents may serve to correct the qualitative research problem of collecting data only from an elite group within the system

Triangulation also has inherent problems. In the first instance, a researcher, in accepting the advantages of triangulation, may lose sight of the differences underlying the chosen methods. There is a danger of collecting large volumes of data which are subsequently not possible to analyse or which could be treated superficially. Fielding and Fielding (1986) stressed the danger of multiple methods without simultaneously utilising the bias checking procedures.

This study, by utilising the triangulation approach, is prepared to move outside the rather narrow and conservative methods which to date have served the profession well. Triangulation does offer an alternative to the bipolar, qualitative and quantitative approach and fundamentally introduces another perspective on nursing research. Triangulation also encourages creativity, flexibility and insightfulness in data collection and analysis. As Cohen and Mannon (1984) stated,

"methodologists often push particular methods whether because these are the only ones they have familiarity with or because they believe their method to be superior to all others" (p209)

Historically, nursing research methods were, in the first instance, strongly based on the quantitative domain and more recently in the qualitative domain. It is now time to reconcile the methodological encampments.

In a context of this research, triangulation was not applied as a 'time series' approach which involved triangulation using the same instruments at each stage of data collection. The researcher utilised different data collecting methods at different stages of the research (Figure 4). This permitted the researcher to discover which dimensions of the phenomenon were similar and which were dissimilar across settings and which differed by group membership. This approach to triangulation accommodated the collection of a greater range and level of data. It also permitted the use of quantitative methods prior to qualitative work and therefore, provided leads for the focused interviews (Duffy 1987). This in itself eliminated the need to ask background information during the interviews. This was important owing to the researchers limitations of time and resources.

DATA GATHERING TECHNIQUES

Four different data gathering procedures incorporating qualitative and quantitative measures were undertaken, and these included

- 1 Approaches to studying questionnaire
- 2 Course experience questionnaire
- 3 Teaching/learning strategies questionnaire
- 4 Focused interviews

An outline of the research design and data gathering time frame is presented in Figure 4 (p91)

Approaches to Studying Questionnaire (ASI)

Researchers at Lancaster developed the Approaches to Study Inventory (ASI) to examine student's approaches to learning (Entwistle and Ramsden 1983). The ASI was developed through three pilot versions before acceptance of the final sixty-four item version. The final version of the questionnaire was first used in 1981 by Entwistle and Ramsden. The earliest developmental work and background information on the ASI is described by Entwistle et al (1979). The ASI (Appendix C) is a self-report inventory and contains sixty-four items which are grouped into subscales and these in turn are grouped under four general orientations to learning. Each of the sixty-four items is scored on a five-point Likert type scale ranging from definitely agree to definitely disagree.

The items included in the ASI were drawn primarily from the works of Entwistle and Wilson (1977), Marton and Saljo (1976a, 1976b) (Deep and surface approaches), Pask (1976, 1976b) (Comprehension learning, operation learning and related pathologies) and Biggs (1978, 1979) (Motivational states) Entwistle and Ramsden (1983) indicated that the questionnaire can be used empirically to identify four distinctive orientations to study, Meaning, Reproducing, Strategic, and Non-Academic Previous works by Marton (1975) and Laurillard (1978) provided a substantial basis for the development of deep and surface approaches to learning which were later subsumed within a broader dichotomy between meaning and reproducing orientations Essentially, meaning and reproducing orientations purport to relate, students' intentions to try to understand what they are learning, or to try to memorise facts and ideas for later reproduction

Students using a meaning orientation utilise a deep approach to learning and attempt to understand and determine the meaning of the subject Meaning orientation involves deep learning and the use of holistic styles (Entwistle and Tait 1990)

The reproducing orientation, in contrast involves a predominantly surface approach to learning, with concentration on the memorizing of the material In not having time to think about the implication of what they have learned, students tend to be unreflective and passive learners with a narrow, cautious stance relying on evidence, logical analysis, and a fear of failure Students are anxiously over-concerned with assessment demands and are unable or unwilling to see the wider implications of what they are learning (Entwistle and Ramsden 1983)

A strategic orientation describes well organised and conscientious study methods with achievement motivation Students are trying to do well in their course so that they can get a qualification There is a tendency for students to relate studying to the assessment requirements in a manipulative or even cynical manner

The non-academic orientation is a loose grouping of study pathologies and

distinguishes students who say they have disorganised study methods and who tend to jump to conclusions on the basis of inadequate evidence and who have low levels of motivation and ease of distraction with negative attitudes towards the courses they are taking and towards studying in general

A breakdown of the four orientations into the sixteen subscales and their meaning is provided in Figure 5

Researchers and investigators across a wide range of professions and educational environments who have used the ASI have indicated that it offers a convenient way of characterising different students approaches to learning (Clarke 1986, Newble and Clarke 1987, Newble and Gordon 1985, Watkins 1982, 1983, 1987, Watkins and Hattie 1985, Prosser and Trigwell 1990, Lapeyre 1992, Richardson 1991, Harper & Kember 1986, 1989, Kember and Harper 1987, Morgan, et al 1980, Meyer and Parsons 1989, Chessil 1986)

1 Reliability and Validity of the ASI

Entwistle and Ramsden (1983) detailed substantial work concerned with the development and psychometric properties of the ASI. The authors, in support of reliability and internal consistency, report on coefficient alphas for the various scales and subscales. The published values for the four study orientations vary between 0.59 and 0.79 when calculated on the basis of values obtained on the individual items (Entwistle and Ramsden 1983, p43). Clarke (1986) investigated the test, retest reliability of the ASQ and reported median correlation coefficients of 0.75 at one month follow up and 0.73 at three months follow up across the sixteen different subscales, the corresponding values were 0.68 and 0.70. Watkins (1987) revealed reliability coefficients of 0.80 from the general orientation scales of meaning, reproducing and strategic orientation.

Investigators have generally confirmed the reliability and validity of the broad distinction between the meaning and reproducing orientation, but the other

constructs of strategic and non-academic have been less readily identifiable to some researchers (Watkins and Hattie 1985, Clarke 1986, Richardson 1991, Meyer and Parsons 1989) Entwistle (1989) and Ramsden (1989) responded to such criticisms and reaffirmed the psychometric properties of the ASI

FIGURE 5

ASI Subscale and Scales and brief explanation of terms.

SUBSCALES

Deep approach High scores indicate that students are looking for meaning in their studying, interacting actively with what is being learned, and linking what they are studying with real life

Use of evidence High scores indicate that students are examining evidence critically and using it cautiously

Relating ideas High scores show that students are actively relating new information to previous knowledge

Intrinsic motivation High scores mean that students are interested in what they are learning for its own sake

Meaning orientation A composite scale including all four subscales listed above Also referred to as "deep approach to studying" High scores indicate that students intend to understand what is being studied

Surface approach High scores show that students are relying on rote learning

Syllabus-boundness High scores indicate an intention to restrict learning to the defined syllabus and specific tasks

Fear of failure High scores indicate that students lack self-confidence and are anxiously aware of assessment requirements

Improvvidence High scores mean that students are not prepared to look for relationships between ideas and are fact-bound

Reproducing orientation A composite scale made up of the four subscales listed above High scores indicate that students intend to reproduce what they are studying Also referred to as "surface approach" to studying

Extrinsic motivation High scores mean that students see qualifications as the main source of motivation for learning

Strategic approach High scores show that students are actively seeking information about assessment requirements and trying to impress staff

Achievement motivation High scores indicate competitive and self confident students, driven by hope for success

Strategic orientation A composite scale made up of the three subscales listed above High scores indicate that students are studying to gain qualifications for employment and see this task as a game which they must win

Disorganised study methods Low scores show that students report they are organising their time effectively and planning ahead

Negative attitudes High scores mean that students have little involvement with their work and are cynical and disenchanted about higher education

Globe trotting High scores indicate that students are over-ready to generalise and jump to conclusions without evidence

Non-academic orientation A composite scale made up of the three subscales above High scores indicate that students have little concern for academic requirements and are experiencing study difficulties linked to poor academic performance

Comprehension learning High scores show that students use illustrations, analogies and intuition to build up a general picture of what they are learning

Operation learning High scores indicate that students concentrate on details and logical analysis

Source Ramsdon, P (1983) The Lancaster approaches to studying course perception questionnaire Educational Methods Unit Oxford Polytechnic

3 Pretesting the ASI

A pilot study that involved a dress rehearsal of all the elements of the study was considered not to be necessary. However it was important to pretest the instrument with a sample of student nurses, as the instrument had not previously been used with such a student group. This procedure of pretesting or pilot testing has been distinguished from the more extensive pilot study procedure (Verohnick and Seaman 1978). The purpose of the pilot test was to check for clarity and understanding on individual items of the ASI with a sample of student nurses (n=35). Pilot testing also allowed opportunity to find out the time required to complete the instrument and any other general or incidental problems which could arise. Overall the pilot testing resulted in a satisfactory level of acceptability and understanding. In relation to certain items a more appropriate addition was made. The following are the range of modifications,

- the title tutor was included with the term lecturer as tutor/lecturer in items 16, 18, 20, 60, 62,
- the term nursing was included in items 7, 15, 64,

The following additions were made

- Registered Nurse to item 7, study block to item 14 and patient's care to item 38

Course Experience Questionnaire (CEQ)

The specific, theoretical and empirical basis for the CEQ is the work of Ramsden and Entwistle (1981), and subsequent studies by Entwistle and Tait (1990), and Ramsden (1989). As part of the Lancaster studies Entwistle and Ramsden devised a Course Perception Questionnaire (CPQ) which was administered in association with the ASI. The CPQ was specifically designed to examine student experiences in higher

education and to identify influences on approaches to learning deriving from the educational environment Entwistle and Ramsden (1983) identified a high level of correlation between items in the ASQ and the CPQ as used in the Lancaster studies However, Meyer and Parsons (1989) in a later study expressed concern about the low correlations between the items of ASQ and CPQ, at the level of the individual student With an emphasis on teacher performance and accountability, Ramsden (1989) revised the conceptual basis of the CPQ and devised the CEQ The CEQ (Figure 6) fundamentally provides an indication of students' perceptions of their learning environments Ramsden (1991) reported on the preliminary developmental stages of the CEQ, which concluded with an Australian national survey in 1990 The final version of the CEQ (Appendix D) which included thirty items grouped into four scales was scored on a five point Likert type scale ranging from "definitely agree" to "definitely disagree" A further subscale on memory was presented as part of the instrument

Ramsden (1991) highlighted the properties of the CEQ as a student evaluation instrument designed to measure the teaching performance of educational units The instrument was developed as a response to an evolving requirement for economic models of education and the application of performance indicators in education Student evaluations of educational programmes including the quality of teaching have become important in a climate of accountability and the need for a direct measure of consumer satisfaction

1 Reliability and Validity of the CEQ

Ramsden (1991) claims that the CEQ scales possess good statistical qualities, have a sound conceptual basis, and are reliable and valid The analysis which was undertaken included item factors analysis scale internal consistencies, and scale validity Ramsden (1991) reported on the CEQ scales Good teaching ($\alpha = 0.87$), Clear goals ($\alpha = 0.80$), Appropriate workload ($\alpha = 0.77$), Appropriate assessment ($\alpha = 0.71$), Emphasis on independence ($\alpha = 0.72$) Factor analysis of the ASQ and CEQ scales indicated the presence of one dimension relating perceived heavy

workload, assessment and rote learning to surface learning approaches and a reproducing orientation. Another dimension linked good teaching, clear goals, independence in learning to deep learning approaches and a meaning orientation (Ramsden 1991). Such relationships were confirmed by Trigwell and Prosser (1991) in a study of student nurse learning. Trigwell and Prosser concluded that the results of their study with student nurses validated the use of the CEQ in the evaluation of educational programmes.

FIGURE 6

Course Experience Questionnaire Scales and their meanings

Scale	Defining Item
Good Teaching	Teaching staff here normally give helpful feed back on how you are doing
Clear Goals	You usually have a clear idea of where you're going and what s expected of you in this course
Appropriate Workload	The sheer volume of work to be got through in this course means you cant comprehend it all thoroughly (negative)
Appropriate Assessment	Staff here seem more interested in testing what we have memorised than what we have understood (negative)
Emphasis on Independence	Students here are given a lot of choice in the work the have to do
Source	Ramsden, P (1991) A performance indicator of teaching quality in higher education The course experience questionnaire <u>Studies in Higher Education</u> , 16 (2), 129-150 (Instrument and other data supplied in personal correspondence with Ramsden in 1991)

Teaching/Learning strategies inventory.

On the basis of research evidence, referred to in the literature reviewed, the relationship between approaches to learning and teaching/learning strategies is accepted. Perceived good teaching and freedom in learning was related to deep approaches. The relationship between anxiety provoking assessment methods, lack of interest, and surface approaches to learning is also identified, therefore approaches to learning were relational to the nature of the course and the teaching within the course (Ramsden 1987, Thomas and Rohwer 1986). Commensurate with the research design of triangulation, it was considered important that data should be collected on teaching/learning strategies. On the basis of a review of college/school of nursing curricula and the researcher's own personal experience as a nurse tutor in the U K and Ireland twelve different teaching/learning strategies were selected, these included, Films, Library work with self directed learning, Lectures, Computer Assisted Learning, Role play, Use of models/objects, Videos, Seminars, Demonstration and practice, Slides, Group work, Care studies. The twelve strategies as selected were those most utilised in nurse education and included teacher centred and student centred strategies. Respondents were asked to rate the twelve teaching/learning strategies, (1 being most preferred and 12 being least preferred) (Appendix E)

A pilot study was conducted with a sample of student nurses (n=35). Following an evaluation of student verbal comment and an analysis of results no changes were made to the structure or design of the instrument. In the main study, the instrument was administered in association with the ASI.

The Interviews

During the qualitative phase of the research, data were collected through a focused interview technique. The distinctive features of the focused interview is the prior analysis by the researcher of the situation in which subjects have been involved. The advantages of the focused interview have been discussed by Merton and Kendall

(1946) who suggested,

"By means of the technique of content analysis, elements in the situation which the researcher deems significant have previously been analysed by him. Using his analysis as a basis, the investigator constructs an interview guide. This identifies the major areas of inquiry and the hypothesis which determine the relevant data to be obtained in the interview"

Treece and Treece (1987) in exploring the merits of the interview technique highlighted its advantage as being its potential to explore a greater depth of meaning on a topic. Its disadvantages principally centred around the possibility of interview bias (Polit and Hungler 1991), hence the possibility of the 'Hawthorne effect', (Borg and Gall 1979) as an influencing factor.

In the context of this research the schedule of questions (Appendix F) were composed with the explicit aim of eliciting greater clarification and attaching greater meaning to the substantive issues arising from the quantitative element of the study. Items in the interview schedule included fixed alternative items and open ended items. The advantages of using both sets of items has been highlighted (Kerlinger 1970). Specific questions relating to particular areas were clustered into five main areas (Appendix F). The clustering of questions enhanced the interviewing technique by focusing both the interviewer and the interviewee on a general area in the context of a number of specific questions. The interview questions were designed to elicit specific and unexpected issues. The schedule of questions (Appendix F) were used creatively and students were encouraged and allowed to expand on their answers in relation to specific questions.

1 The Interview procedure

Through the quantitative phase of the study, five homogeneous student groups were identified as general, psychiatric, sick childrens, mental handicap (Republic) and

Northern Ireland The process of selecting students for interviewing involved a stratified random sampling approach The main areas of concern were location, type of education and training programme and age of the student nurse Accordingly these factors were used as strata The first stage was to divide the schools/colleges of nursing into five strata The Northern Ireland colleges were in one strata and four strata were created in the Republic for general, psychiatric, sick children's and mental handicap nursing The probability of a school/college being selected was proportionate to the number of students in that school/college of nursing Schools/colleges with greater numbers of students had a greater probability of being selected The first stage of the procedure was to list schools/colleges in descending order of numbers of students A random number greater than the total number of schools was then used to select schools The second stage of the procedure was to select students from within schools/colleges of nursing Two further strata were created one for students 24 years and under and one for students 25 years and over The students were then selected randomly from the school/college using a random number generator The sampling design may be classified as a disproportionate stratified design This design essentially implies that the number of students selected in each strata was not in proportion to the total number of students in each strata The disproportionate stratified design was considered to be suitable as the researcher was more interested in comparing differences across the various strata (Good and Hatt 1952) Gardner (1978) discussed the relevance of the disproportionate stratification design in ensuring a more adequate representation of small sub-groups Garner also identified the financial implications of data collection in having to examine larger sample ratios A proportionate sample would have been chosen if the researcher had been attempting to gather information about the total sample A total of 14 students were interviewed, 8 from the Republic and 6 from Northern Ireland At the time of interviewing, the students were in the third and final year of their programme

Selected students were contacted and interviews took place at a time convenient to the student The duration of the interview was 15 minutes and a tape recorder was used during the interview

2. The Interview transcripts.

A number of methods of analysing unstructured textual data have been identified in the literature as for example, the grounded theory approach (Glaser and Strauss 1967)

The first step undertaken in this study was the preparation of full transcripts of all interviews, which proved to be a very time consuming process. Each transcript was examined and any 'dross' removed. Field and Morse (1985) described 'dross' as material that occurs in the transcripts which does not relate directly to the topic, or that is repetitious or peripheral. Once this had been performed the text was examined for themes and recurring regularities. Polit and Hungler (1987) stated the need to attend not only to what themes arise but also to how they are patterned. The transcripts were read, line by line, looking for significant incidents or phenomena. Each individual transcript was divided into 'meaning units'. The term 'meaning unit' is used by Mostyn (1985) to refer to a discrete phrase or series of sentences which conveys one idea or one related set of perceptions. Each 'meaning unit' was identified as a stand alone item, however it was related to other meaning 'units'. When all the 'meaning units' in the transcripts had been separated out, the transcripts were further examined with a view to grouping 'meaning units' into distinct descriptive categories which captured the flavour of what the respondents were saying. Stern (1980) described a category as coded data which seem to cluster together.

The five selected categories included,

- Perceptions of the course
- Student and teacher relationships
- Levels of understanding
- Teaching/learning strategies
- Curriculum influences

The selected categories served as a basis for writing up and summarising the results of the interviews and are presented in section 3 of the report.

SECTION 3

THE QUANTITATIVE DATA ANALYSIS

THE QUANTITATIVE DATA ANALYSIS

Introduction

This particular section of the thesis outlines the significant patterns emerging from the analysis of the three questionnaires related to,

- a) Approaches to learning (ASI)
- b) Teaching/learning strategies (TLS)
- c) Course experiences (CEQ)

The ASI and TLS were administered to the student nurses during the later stages of the first year in the programme. Both of these inventories were administered together. The CEQ was administered during the later stages of the second year in the programme.

Frequency distributions and comparative statistical analysis for the three questionnaires were undertaken on the basis of the following categories,

- a) Republic of Ireland/Northern Ireland
- b) Age groups 24 and under/25 and over
- c) Republic of Ireland by divisions of the nurses register for general, psychiatric, sick childrens and mental handicap nursing

The results obtained following the analysis indicated significant differences between the various categories. Significant relational factors across the three instruments and the three categories were also revealed. Such findings provided a substantial contribution towards defining important factors which influence learning in nurse education. Significant factors arising from this section provide a basis for the development of the focused interview schedules in the qualitative section of the study.

Statistical Analysis

The data from the three questionnaires were individually tabulated and analysed on SPSS-X. Inferential statistics were utilized to infer characteristics of the population. Tests of statistical significance undertaken included parametric and non-parametric tests. The parametric test (t test) was used on data collected from the approaches to learning and course experience questionnaires. A non parametric test (chi square) was used on data collected from the teaching/learning strategies inventory. The choice of non parametric test for the teaching/learning strategies inventory was influenced by the style of questionnaire which included ratings and therefore parametric testing was inappropriate.

A level of $P = 0.05$ was accepted for significance which is in line with convention in the social sciences and a two tailed probability sampling approach was adopted. As the research approach included three quantitative measurements and data triangulation, the researcher viewed the statistical results as trend indicators rather than absolutes. Therefore, the level of significance was set at what was believed to be an appropriate level given the nature of the study. In rejecting the Null hypothesis at $p = 0.05$ the researcher was conscious of the risk of committing a type I error. Owing to the large numbers included in the research, there was less chance of making a type II error.

APPROACHES TO LEARNING (ASI) ANALYSIS

Overview

The Approaches to learning inventory (ASI) (Appendix C) was administered during the second half of the students' first year in the nurse education and training programme. The response rate was 95.1% (n=678) for the Republic and 90.9% (n=327) for Northern Ireland.

The response rate for the Republic, by type of nurse training for division of the nurses register was, RGN 98% (n=458), RPN 86.5% (n=71), RSCN 100% (n=41), RMHN 87% (n=108).

The results for the overall sample of nurses (N=1005) (Table 3) demonstrated the highest mean scores on the subscale surface approach and operation learning, and the lowest mean scores on the subscale negative attitudes and extrinsic motivation. The scale meaning orientation, was rated highest and the scale, strategic orientation, was rated lowest.

It has been argued, (Entwistle and Ramsden, 1983) that both operation and comprehension are essential in reaching understanding. Student nurses in this study, in demonstrating a high score on operation learning and a low score on comprehension learning, reflect an over-concentration on the use of rules, procedures and isolated details. Learning is perceived in a stepwise manner and as being hierarchically structured. This may reflect a curriculum design with an over-reliance on the use of behavioural objectives. In such a context, it is noted that curricular activities in the Republic are primarily based on the use of behavioural objectives. Correspondingly the Republic cohort reported significantly higher mean scores than the Northern cohort on operation learning.

It may be argued that the vocational and non-academic nature of nursing is reflected in the low mean scores on negative attitudes, extrinsic motivation and high mean scores on surface approach. Such results indicate student nurse involvement with their work and qualifications are not perceived as the main motivation for learning. Students are mainly relying on rote learning.

The high rating for the scale meaning orientation, indicates that student nurses have an active involvement with what is being learned and are linking what they are learning with real life. The low mean score on strategic approach highlights a certain naivety about student nurses through a lack of competitiveness in relation to gaining qualifications and a failure to look further than the course of study.

Significant differences in learning approaches were identified between student nurses from the Republic and Northern Ireland, between the 24 years and under and the 25 years and over, and between the four groups of students from RGN, RPN, RSCN and RMHN in the Republic. These differences will now be discussed in the remaining part of this chapter.

The Demographic profile

A breakdown of respondents by age for the two countries is provided in [Table 1](#). The Republic's population included 94.2% women and 5.8% men and the Northern Ireland population included 91.1% women and 8.9% men.

From the Republic cohort, student nurse groups from psychiatric and mental handicap nursing had an older age profile than had students from general and sick children's nursing, with 29.6% of psychiatric students and 16.7% of mental handicap students over the age of 25 years ([Table 2](#)). Men constituted 33.8% of the psychiatric cohort and 2.4% of the general, 3.7% of the mental handicap and 0% of the sick children's cohort's.

Frequency distributions and comparative statistical analysis for the sixteen subscales

and four scales of the ASQ were categorised by

- 1 Republic of Ireland/Northern Ireland
- 2 Age groups 24 and under/25 and over
- 3 Republic of Ireland by divisions of the nurses register for general, psychiatric, sick children's and mental handicap nursing

1. Republic of Ireland/Northern Ireland

On the basis of results displayed (Table 4), differences existed between the two student cohorts from the Republic and Northern Ireland in 'approaches to learning'. In accepting statistical significance at $P \leq 0.05$, differences occurred between the two countries on all subscales with the exceptions of "globe trotting", "achievement motivation", "syllabus boundness" and "improvidence".

Of these subscales where significant differences existed, the Republic reported higher mean scores than Northern Ireland on the following subscales,

Disorganised study methods

Relating ideas

Deep approach

Operation learning

Use of evidence

Intrinsic motivation,

and on Scales

Meaning orientation

Non-academic orientation

The Northern Ireland cohort reported higher mean scores than the Republic on the following subscales,

Extrinsic motivation

Negative attitudes
Fear of failure
Surface approach
Strategic approach,
and on the Scale
Strategic orientation

A level of $P=057$ on comprehensive learning and $P=054$ on reproducing orientation, were obtained

The significant differences which exist between the two populations reflect two ideologically opposed profiles in approaches to learning between the Republic and Northern Ireland cohorts

In displaying significantly higher scores on subscales, deep approach ($P=000$), relating ideas ($P=002$), intrinsic motivation ($P=000$) and on the overall scale meaning orientation ($P=000$), the Republic cohort reflect an overall deep approach to studying with an intention to understand what is being learned. It is also reflective of students active, critical interaction with what is being learned and linking what they are studying with real life. Students are also actively relating new information to previous knowledge.

Student nurses from the Republic also reflected significantly higher scores on subscales disorganised study methods ($P=000$), and on the overall scale non-academic orientation ($P=036$). The non-academic orientation, reflects an attitude of jumping to conclusions on the basis of inadequate evidence with unquestioning acceptance of information. Failure to organise study time effectively and plan ahead is characteristic of the results obtained. As regards learning style, the Republic's students' reported significantly higher mean scores on operation learning ($P=000$). This reflects a facet of the learning process concerned with mastering procedural details where students pick up rules, methods and details, assimilate procedures and build concepts from isolated topics.

The Northern Ireland cohort scored significantly higher on the subscales 'fear of failure' ($p=0.003$), with $p=0.052$ on 'surface approach' and ($p=0.054$) on the overall scale 'reproducing orientation'. Such results indicate an intention to memorise facts and ideas for later reproduction in essays and examinations. It may suggest that students are anxiously over-concerned with assessment demands. The significantly higher mean scores obtained on 'negative attitudes' ($p=0.016$) infer that students have a somewhat cynical attitude and are disenchanted with their education. The significantly higher scores on subscales 'extrinsic' motivation ($P=0.000$), 'strategic approach' ($P=0.003$) and on the scale 'strategic orientation' ($P=0.000$) infer that students are very competitive and are trying to do well in their courses so that they can get a qualification. Students see qualifications as the main source of motivation for learning. The strategic approach to learning also reflects cue seeking, where students not only try to make favourable impressions on staff but are also actively seeking information about assessment requirements. Essays and other course work assessment are then fashioned to the likes and dislikes of the particular tutor who sets the assignment. Comprehension learning, as a learning style, was rated higher ($p=0.021$) by the Northern Ireland cohort. Comprehension learning includes an approach of building descriptions of what is known in trying to get an overall picture of the subject matter.

Discussion.

The results obtained on the ASI reflect two contrasting patterns of student approaches to learning. Student nurses from the Republic reflected a more stable learning profile which could be reflective of the well established learning conditions created through apprenticeship nurse training in the Republic. On the other hand student nurses in Northern Ireland appear to reflect the transitional nature of nurse education which is moving from apprenticeship to a Project 2000 model. The high rating given to 'negative attitude' by the Northern cohort requires further investigation through the qualitative dimension of the study. It would appear that examinations and assessments are exerting a dominant influence on student nurse learning approaches in Northern Ireland.

The more academic nature of Project 2000 is reflected in the results obtained for 'strategic learning' and 'extrinsic motivation'. The values inherent in and the demands of apprenticeship nurse education may be reflected in the results obtained by the Republic on disorganised study methods, operation learning and the non-academic orientation

2. The Age Factor

Data obtained through the ASQ was categorised by age groupings, 18 or less, 19-21, 22-24, 25-34, 35 or over. Cross tabulations and t test analysis for the ASQ were performed on such a basis. It was noted that older students, in comparison to the younger students were displaying distinctly different patterns. It was therefore decided to re-categorise the age groups as 24 and under, and, 25 and over (Entry criteria to nurse training in the Republic defines an entrant of mature years as being over the age of 24). Further cross tabulations and a rigorous comparative analysis was undertaken. Such an analysis included the following categories

- 1 Total population age groups 24 and under, 25 and over (Table 2)
- 2 Age groups 24 and under, from the Republic and Northern Ireland
- 3 Age groups 25 and over, from the Republic and Northern Ireland
- 4 Republic, age group 24 and under, 25 and over
- 5 Northern Ireland, age group 24 and under, 25 and over

([Table 5](#), [Table 6](#) and [Table 7](#))

Two ideologically opposed approaches to learning' profiles resulted from comparative analysis between the age groupings 24 and under (n = 904), and 25 and over (n = 93) (Table 5). The 24 and under age group obtained higher mean scores and differed significantly from the 25 and over age group on scales and sub scales

Disorganised study methods	(P= .002)
Globe trotting	(P= .023)
Syllabus-boundness	(P= .001)

Fear of failure	(P= 000)
Surface approach	(P= 006)
Reproducing orientation	(P= 000)
Non-academic orientation	(P= 032)

The 25 and over age group obtained higher mean scores and differed significantly from the 24 and under age group on scales and sub scales

Relating ideas	(P= 023)
Strategic approach	(P= 002)
strategic orientation	(P= 032)

The 24 and under age group

This particular group demonstrated fundamental differences when compared with students in the age group 25 and over. The low mean scores on meaning orientation (particularly for Northern Ireland) and the high mean scores on reproducing and non-academic orientation suggest that they are memorising the material for reproduction later in an essay or examination. Study difficulties, being over ready to jump to conclusions without evidence and failure to plan and organise study time effectively were reflected in the results. An intention to restrict learning to a defined syllabus and specific tasks with students anxiously aware of assessment requirements and a reliance on rote learning is reflected by high mean scores for syllabus-boundness, fear of failure, and surface approach.

The 25 and over age group

The significantly higher mean scores on relating ideas, strategic approach, and strategic orientation project a profile where students are actively relating new information to previous knowledge. Students are competitive and are trying to do well in their nursing course and get a qualification. The high mean score on strategic approach suggests that they are trying to impress staff, are cue seeking, and are particularly seeking information about assessment requirements.

The sub scales, 'syllabus-boundness', 'fear of failure', and 'reproducing orientation' received significantly higher mean scores from the 24 and under age group on each type of comparative analysis with the 25 and over age group. Such differences were reflected between the two age groupings, in the overall population, the Northern Ireland cohort and the Republic cohort. The mean score on sub scale 'strategic approach' was significantly raised amongst the 25 and over age group when compared with the 24 and under age group in the overall population, in the Northern Ireland cohort and in the Republic cohort (Table 5, Table 6 & Table 7)

When the age groups 24 and under from Northern Ireland and the Republic were compared significant differences existed ($p \leq 0.05$), on 14 of the total of 20 scales and sub scales, however when the age groups 25 and over were compared differences existed ($p \leq 0.05$) on only three of the total of 20 scales and sub scales (Table 6 and Table 7)

Discussion

Age appears to be a factor in relation to particular approaches to learning amongst student nurses. The ASI results reflect the younger age group of student nurses as learners who appear to be more anxious and insecure in their learning approaches than are the older age group of students. The 25 and over age group appear to be more confident in their learning approaches and exhibit some of the characteristics of Adult Learners described by Knowles (1980). The older age group have a deeper learning approach and a more relaxed and competitive learning attitude. On the basis of comparative analysis between the two older and the two younger age groupings, in the two countries, it may be argued that student nurses from the older age group are much more homogeneous and stable in their learning approaches than are students from the 24 and under age group.

It is significant that, distinctive differences for the two age groupings are reflected across the two countries, given the two different approaches to nurse training. Particularly marked differences are reflected in the results for the two age groupings.

in Northern Ireland. Some of the highest and lowest mean scores on particular scales and sub scales were obtained, in Northern Ireland, eg the younger age group had the lowest mean score and the older age group had the highest mean score on the scale 'reproducing orientation'

3 The Republic of Ireland.

Pre-registration nurse education and training in the Republic is conducted through direct entry to training programmes for individual parts of the register. Each type of programme, unlike Northern Ireland, where there is a common foundation programme, has its own syllabus/training programme which reflects the knowledge and skills valued in that particular speciality of nursing.

Distinct differences ($p \leq 0.05$) are reflected on comparative analysis of the ASQ scales and subscales data obtained from respondents, undertaking training for the four divisions of the nurses register (Table 8). The psychiatric cohort reflected an approach to learning profile which was notably different to the cohorts from general, mental handicap and sick childrens. The psychiatric students reported the highest mean scores on 'deep approach', and the lowest mean scores on 'syllabus-boundness', 'fear of failure', 'improvidence', 'surface approach', and 'reproducing orientation'. The particularly high mean score on 'deep approach' and low mean score on 'surface approach' highlights a positive learning attitude when compared with other groups. The results also suggest that psychiatric students do not restrict their learning to a defined syllabus, are more self confident, are not as anxiously aware of assessments as other groups, and are not fact bound but are prepared to look for a relationship between ideas.

The highest mean scores on 'syllabus-boundness', 'fear of failure', 'surface approach', 'reproducing orientation', and the lowest mean scores on 'relating ideas' and 'meaning orientation' were obtained by the Sick Childrens cohort. Such results provide a profile of learning where students intend to restrict learning to a defined syllabus, lack self confidence and are anxiously aware of assessment requirements.

The high mean score on the scale 'reproducing orientation' and the low mean score on the scale 'meaning orientation' and subscale 'relating ideas' highlight a rather superficial approach to learning. Students are learning for later reproduction and are failing to interact with the information.

The highest mean scores on, 'relating ideas', 'improvidence', 'intrinsic motivation', 'meaning orientation' and the lowest mean score on 'disorganised study methods', were obtained by the Mental Handicap cohort. This group, in obtaining a particularly high score on the subscale 'intrinsic motivation' differed significantly from the other groups. This finding suggests that students are interested in what they are learning for its own sake. A combination of the subscale 'intrinsic motivation' and the scale 'meaning orientation' reflects a positive learning attitude. Entwistle and Ramsdon (1983) argued that for a deep approach to learning to occur the student must have an intrinsic interest in the content area and must engage with the subject to develop an intellectual passion to understand.

Discussion

The significant differences reported in approaches to learning among respondents from the four programmes of nurse training provides further support to the argument that approaches to learning are context dependent.

A notable pattern is that all of the highest and lowest mean scores occurred amongst psychiatric, mental handicap, and sick childrens cohorts. In a broader context this is particularly interesting given the long standing professional debate on the specialist orientation of these three disciplines.

The general student nurse cohort reflected results which were more compatible with the sick childrens cohort than with other cohorts. Significant differences occurred between the two groups on only one subscale (surface approach). This is an interesting finding as the clinical nursing activity of general and sick childrens nursing are not too dissimilar.

The psychiatric student cohort displayed the greatest level of significant difference when compared to other groups. Such differences may have been influenced by the distinctly different emphasis in their training programme. The differences may also reflect an element of the 'age factor' variable given that 30% of the psychiatric cohort were over the age of 25 years. However it may be argued that the greater influence arises from the training programme given that the Mental Handicap cohort also have an older age profile.

TABLES

TABLE 1.

Age group of respondents by location

Location	AGE				
	18 or Less	19-21	22-24	25-34	35 or more
Republic of Ireland	161(23.7%)	420 (61.9%)	38 (5.6%)	51 (7.5%)	8 (1.2%)
Northern Ireland	46 (14.1%)	217 (66.4%)	30 (9.2%)	30 (9.2%)	4 (1.2%)
Total	207(20.6%)	637 (63.4%)	68 (6.8%)	81 (8.0%)	12 (1.2%)

TABLE 2

Age group of respondents from the Republic by divisions of the nurses register

Divisions of the Register	AGE				
	18 or Less	19-21	22-24	25-34	35 or more
General	114 (24.9%)	313 (68.3%)	12 (2.6%)	17 (3.7%)	2 (0.4%)
Psychiatric	13 (18.3%)	23 (32.4%)	14 (19.7%)	18 (25.4%)	3 (4.2%)
Sick Childrens	12 (29.3%)	25 (61%)	3 (7.3%)	1 (2.4%)	-
Mental Handicap	22 (20.4%)	59 (54.6%)	9 (8.3%)	15 (13.9%)	3(2.8%)
TOTAL	161(23.7%)	420(61.9%)	38(5.6%)	51 (7.5%)	8(1.2%)

Table 3 ASQ Scales and Subscales Means (\bar{x}) Standard Deviation (SD), Standard Error (SE) for population of nurses (N=1005)

SUBSCALE	\bar{X}	SD	SE
Disorganised Study Methods	12.11	3.00	0.95
Relating ideas	10.85	2.80	0.87
Globe trotting	9.06	3.17	0.101
Achievement Motivation	9.38	3.06	0.97
Deep Approach	12.44	2.55	0.81
Comprehension Learning	8.66	3.30	0.105
Intrinsic Motivation	7.35	3.01	0.95
Negative Attitudes	7.13	2.92	0.93
Syllabus Boundness	8.31	2.51	0.80
Operation Learning	13.27	2.21	0.70
Fear of Failure	8.20	2.78	0.88
Improvidence	10.08	3.12	0.99
Surface Approach	16.61	3.72	1.18
Strategic Approach	10.04	2.64	0.84
Use of Evidence	11.23	2.74	0.87
Intrinsic Motivation	10.03	3.19	0.101
SCALES			
Meaning Orientation	44.56	8.55	0.272
Reproducing Orientation	43.21	8.98	0.285
Non-Academic Orientation	28.32	6.48	0.206
Strategic Orientation	26.77	6.00	0.191

Table 4 Republic and Northern Ireland Comparative Statistical Analysis of ASQ Scales and Subscales ($P \leq 05$)

(1) Republic of Ireland (n= 678)
(2) Northern Ireland (n= 327)

SUBSCALE		\bar{X}	SD	SE	t value	P
Disorganised Study Methods	(1)	12.51	2.91	112	6.03	.000
	(2)	11.29	3.02	167		
Relating Ideas	(1)	11.04	2.73	106	3.03	.002
	(2)	10.45	2.90	161		
Globetrotting	(1)	9.13	3.18	123	1.01	.313
	(2)	8.92	3.15	175		
Achievement Motivation	(1)	9.34	3.10	120	0.46	.646
	(2)	9.44	2.97	165		
Deep Approach	(1)	12.86	2.39	092	7.33	.000
	(2)	11.58	2.66	148		
Comprehension Learning	(1)	8.51	3.25	126	1.90	.057
	(2)	8.94	3.28	187		
Extrinsic Motivation	(1)	6.97	2.86	111	5.51	.000
	(2)	8.11	3.16	175		
Negative Attitudes	(1)	6.97	2.76	107	2.41	.016
	(2)	7.47	3.20	178		
Syllabus Boundness	(1)	8.23	2.56	099	1.51	.132
	(2)	8.48	2.41	134		
Operation Learning	(1)	13.50	2.11	082	4.67	.000
	(2)	12.79	2.33	129		
Fear of Failure	(1)	8.03	2.81	109	2.96	.003
	(2)	8.57	2.69	149		
Improvvidence	(1)	10.31	3.11	120	0.67	.501
	(2)	9.99	3.15	175		
Surface Approach	(1)	16.46	3.80	147	1.94	.052
	(2)	16.93	3.53	196		
Strategic Approach	(1)	9.87	2.64	102	2.97	.003
	(2)	10.40	2.63	145		
Use of Evidence	(1)	11.53	2.69	104	5.00	.000
	(2)	10.60	2.74	152		

Table 4 Cont'd

		\bar{X}	SD	SE	t _{value}	P
Intrinsic Motivation	(1)	10.33	3.08	119	4.16	.000
	(2)	9.42	3.33	185		
SCALES						
Meaning Orientation	(1)	45.77	8.05	313	6.30	.000
	(2)	42.07	8.95	498		
Reproducing Orientation	(1)	42.83	9.05	351	1.93	.054
	(2)	43.99	8.79	489		
Non-Academic Orientation	(1)	28.63	6.27	243	2.10	.036
	(2)	27.68	6.87	382		
Strategic Orientation	(1)	26.19	5.82	226	4.28	.000
	(2)	27.95	6.18	344		

Table 5 Age Groups 24 and under, 25 and over Comparative analysis of ASQ Scales and Subscales ($P \leq 05$)

(1) 24 and under (n= 904)

(2) 25 and over (n= 93)

SUBSCALE		\bar{X}	SD	SE	t value	P
Disorganised Study Methods	(1)	12.23	2.90	.097	3.20	.002
	(2)	11.01	3.57	.370		
Relating Ideas	(1)	10.80	2.81	.094	2.30	.023
	(2)	11.40	2.37	.246		
Globetrotting	(1)	9.13	3.16	.106	2.30	.023
	(2)	8.35	3.11	.323		
Achievement Motivation	(1)	9.34	3.04	.102	1.22	.223
	(2)	9.76	3.17	.329		
Deep Approach	(1)	12.41	2.57	.086	1.40	.165
	(2)	12.77	2.32	.241		
Comprehension Learning	(1)	8.74	3.29	.110	2.34	.021
	(2)	7.91	3.25	.337		
Extrinsic Motivation	(1)	7.33	3.00	.100	0.77	.441
	(2)	7.59	3.08	.320		
Negative Attitudes	(1)	7.16	2.92	.097	1.09	.278
	(2)	6.81	2.94	.302		
Syllabus Boundness	(1)	8.40	2.47	.082	3.59	.001
	(2)	7.35	2.72	.282		
Operation Learning	(1)	13.28	2.20	.074	0.22	.825
	(2)	13.22	2.28	.237		
Fear of Failure	(1)	8.34	2.74	.091	4.35	.000
	(2)	6.94	2.96	.307		
Improvidence	(1)	10.14	3.10	.103	1.81	.073
	(2)	9.48	3.34	.348		
Surface Approach	(1)	16.72	3.69	.123	2.79	.006
	(2)	15.50	3.78	.393		
Strategic Approach	(1)	9.97	2.67	.089	3.11	.002
	(2)	10.57	2.24	.233		
Use of Evidence	(1)	11.24	2.72	.091	0.55	.585
	(2)	11.06	2.99	.312		

Table 5 Cont'd

		\bar{X}	SD	SE	t	P
Intrinsic Motivation	(1)	9.97	3.19	107	1.67	.097
	(2)	10.55	3.13	327		
SCALES						
Meaning Orientation	(1)	44.43	8.60	288	1.67	.103
	(2)	45.84	7.77	810		
Reproducing Orientation	(1)	43.61	8.82	295	4.16	.000
	(2)	39.31	9.51	992		
Non-Academic Orientation	(1)	28.54	6.38	214	3.16	.002
	(2)	26.18	6.85	714		
Strategic Orientation	(1)	26.64	5.96	200	2.17	.032
	(2)	28.10	6.20	644		

Table 6 ASQ Scales and Subscales Mean Scores (\bar{x}) Standard Deviations (SD) and Standard Error (SE) for the Republic of Ireland and Northern Ireland for selected age groups

SUBSCALE	Republic of Ireland		Northern Ireland		(a)	(b)
	(1)	(2)	(a)	(b)	24 and under	25 and over
	Age Groups		\bar{X}	SD	SE	
Disorganised Study Methods	(1)	a) (n=611)	12.61	2.83	115	
		b) (n=59)	11.42	3.43	447	
	(2)	a) (n=293)	11.42	2.88	170	
		b) (n=34)	10.29	3.74	642	
Relating Ideas	(1)	a)	10.99	2.77	112	
		b)	11.52	2.30	229	
	(2)	a)	10.39	2.88	169	
		b)	11.20	2.52	432	
Globetrotting	(1)	a)	9.20	3.19	130	
		b)	8.40	3.02	394	
	(2)	a)	8.98	3.11	183	
		b)	8.26	3.30	567	
Achievement Motivation	(1)	a)	9.34	3.09	126	
		b)	9.35	3.20	417	
	(2)	a)	9.32	2.92	172	
		b)	10.47	3.04	523	
Deep Approach	(1)	a)	12.86	2.40	097	
		b)	12.86	8.32	302	
	(2)	a)	11.47	2.66	156	
		b)	12.61	2.36	405	
Comprehension Learning	(1)	a)	8.61	3.26	133	
		b)	7.54	2.94	383	
	(2)	a)	9.01	3.32	196	
		b)	8.55	3.68	632	
Extrinsic Motivation	(1)	a)	6.96	2.86	116	
		b)	7.11	2.92	381	
	(2)	a)	8.10	3.15	185	
		b)	8.41	3.20	552	
Negative Attitudes	(1)	a)	6.99	2.78	113	
		b)	6.74	2.48	324	
	(2)	a)	7.52	3.15	185	
		c)	6.93	3.65	637	

Table 6 Cont'd

SUBSCALE		Age Groups	\bar{X}	SD	SE
Syllabus Boundness	(1)	a)	8.30	2.54	103
		b)	7.44	2.63	343
	(2)	a)	8.62	2.31	136
		b)	7.20	2.90	497
Operation Learning	(1)	a)	13.51	2.10	085
		b)	13.40	2.26	294
	(2)	a)	12.78	2.34	138
		b)	12.91	2.32	399
Fear of Failure	(1)	a)	8.14	2.77	112
		b)	6.89	3.03	395
	(2)	a)	8.77	2.61	154
		b)	7.02	2.88	495
Improvidence	(1)	a)	10.31	3.14	127
		b)	10.11	2.81	367
	(2)	a)	10.17	3.01	177
		b)	8.36	3.91	681
Surface Approach	(1)	a)	16.55	3.81	154
		b)	15.49	3.66	476
	(2)	a)	17.09	3.42	201
		b)	15.73	4.05	695
Strategic Approach	(1)	a)	9.81	2.67	108
		b)	10.50	2.18	284
	(2)	a)	10.32	2.64	155
		b)	11.17	2.32	399
Use of Evidence	(1)	a)	11.56	2.67	108
		b)	11.16	2.97	387
	(2)	a)	10.55	2.70	159
		b)	10.87	3.05	533
Intrinsic Motivation	(1)	a)	10.29	3.11	126
		b)	10.76	2.70	352
	(2)	a)	9.31	3.26	192
		b)	10.18	3.80	662
Meaning Orientation	(1)	a)	45.72	8.10	330
		b)	46.32	7.55	983
	(2)	a)	41.72	9.00	531
		b)	45.00	8.20	142

Table 6 Cont'd

SUBSCALE	Age Groups		X	SD	SE
Reproducing Orientation	(1)	a)	43 11	9 03	367
		b)	39 94	8 75	1 14
	(2)	a)	44 67	8 29	488
		b)	38 18	10 79	1 87

Non-Academic Orientation	(1)	a)	8 83	6 25	254
		b)	26 57	6 13	799
	(2)	a)	27 92	6 63	391
		b)	25 48	8 03	1 39

Strategic Orientation	(1)	a)	26 12	5 82	237
		b)	26 98	5 83	760
	(2)	a)	27 74	6 11	360
		b)	30 05	6 43	1 10

Table 7 ASQ Scales and Subscales Comparative Analysis for selected age groups ($P \leq 0.5$)

SUBSCALE	24 & under (n = 904) 25 & over (n = 93)		Republic 24 & under (n = 611) 25 & over (n = 59)		N Ireland 24 & under (n = 293) 25 & over (n = 34)		Republic/ N Ireland 24 & under		Republic N Ireland 25 & over	
	t value	P	t value	P	t value	P	t value	P	t value	P
Disorganised Study Methods	3.20	.002	2.59	.012	1.70	.097	5.83	.000	1.44	.154
Relating Ideas	2.30	.023	1.65	.103	1.76	.086	2.99	.003	0.61	.545
Globetrotting	2.30	.023	1.93	.057	1.22	.231	0.97	.332	0.21	.838
Achievement Motivation	1.22	.223	0.02	.987	2.08	.044	0.11	.912	1.67	.100
Deep Approach	1.40	.165	0.01	.993	2.63	.012	7.54	.000	0.49	.627
Comprehension Learning	2.34	.021	2.64	.010	0.69	.493	1.71	.089	1.37	.174
Extrinsic Motivation	0.77	.441	0.38	.702	0.53	.599	5.22	.000	1.93	.054
Negative Attitudes	1.09	.278	0.73	.470	0.88	.383	2.44	.015	0.27	.787
Syllabus Boundness	3.59	.001	2.42	.018	2.75	.009	1.87	.062	0.39	.699
Operation Learning	0.22	.825	0.36	.717	0.31	.760	4.55	.000	1.00	.322

Table 7 Cont'd

SUBSCALE	24& under(n = 904) 25 & over (n = 93)		<u>Republic</u> 24 & under(n = 611) 25 & over(n = 59)		<u>N Ireland</u> 24 & under (n = 293) 25& over(n = 34)		Republic/ N Ireland 24 & under		Republic N Ireland 25& over	
	t value	P	t value	P	t value	P	t value	P	t value	P
Fear of Failure	4.35	.000	3.03	.004	3.36	.002	3.32	.001	0.21	.837
Improvvidence	1.81	.073	0.04	.996	2.57	.014	0.17	.864	2.27	.028
Surface Approach	2.79	.006	2.13	.037	1.88	.068	2.12	.034	0.29	.773
Strategic Approach	3.11	.002	2.29	.025	1.99	.053	2.70	.007	1.36	.178
Use of Evidence	0.55	.585	0.99	.325	0.58	.568	5.25	.000	0.44	.660
Intrinsic Motivation	1.67	.097	1.25	.216	1.26	.216	4.28	.000	0.77	.442
Meaning Orientation	1.67	.103	0.58	.565	2.15	.038	6.39	.000	0.76	.449
Reproducing Orientation	4.16	.000	2.64	.010	3.35	.002	2.56	.011	0.80	.425
Non-Academic Orientation	3.16	.002	2.70	.009	1.68	.101	1.95	.051	0.68	.501
Strategic Orientation	2.17	.032	1.08	.282	2.00	.053	3.76	.000	2.30	.025

Table 8 Republic Ireland Scales and Subscales Analysis by Division of the Nurses Register ($P \leq 05$)

SUBSCALES	Division of the Register	\bar{X}	S D		t value	P
Disorganised Study Methods	RGN	12.67	2.82	RGN-RMHN	2.63	0.10
	RPN	12.78	2.51	RPN-RSCN	1.15	0.50
	RSCN	12.14	3.01	RPN-RMHN	2.34	0.20
	RMHN	11.75	3.35			
Relating Ideas	RGN	10.89	2.69	RGN-RPN	1.98	0.51
	RPN	11.56	2.62	RGN-RMHN	2.31	0.22
	RSCN	10.41	3.20	RSCN-RMHN	2.05	0.41
	RMHN	11.57	2.68			
Globetrotting	RGN	9.16	3.23			
	RPN	8.87	3.10	-----		
	RSCN	8.82	3.14			
	RMHN	9.30	3.05			
Achievement Motivation	RGN	9.36	3.06			
	RPN	9.84	2.95	-----		
	RSCN	9.25	3.55			
	RMHN	9.00	3.18			
Deep Approach	RGN	12.78	2.44	RGN-RPN	2.26	0.26
	RPN	13.40	2.12			
	RSCN	12.80	2.06			
	RMHN	12.86	2.46			
Comprehension Learning	RGN	8.36	3.25			
	RPN	9.07	3.25	-----		
	RSCN	9.32	3.12			
	RMHN	8.49	3.27			
Extrinsic Motivation	RGN	6.98	2.82			
	RPN	7.25	2.89	-----		
	RSCN	7.14	3.02			
	RMHN	6.72	2.98			
Negative Attitudes	RGN	7.03	2.68			
	RPN	7.16	3.07	-----		
	RSCN	7.17	2.64			
	RMHN	6.47	2.87			
Syllabus Boundness	RGN	8.27	2.46	RGN-RPN	1.98	0.51
	RPN	7.56	2.89	RPN-RMHN	1.93	0.50
	RSCN	8.46	2.86			
	RMHN	8.38	2.57			

Table 8 Cont'd

SUBSCALES	Division of the Register	\bar{X}	S D		t value	P
Operation Learning	RGN	13 45	2 11			
	RPN	13 63	1 98			
	RSCN	13 57	2 29	-----		
	RMHN	13 65	2 17			
Fear of Failure	RGN	8 08	2 82	RGN-RPN	2 45	016
	RPN	7 16	2 93	RPN-RSCN	2 16	011
	RSCN	8 63	2 81	RPN-RMHN	2 29	020
	RMHN	8 15	2 64			
Improvidence	RGN	10 05	3 12	RGN-RPN	2 53	013
	RPN	9 01	3 23	RGN-RMHN	2 95	004
	RSCN	10 65	2 36	RPN-RSCN	3 09	003
	RMHN	11 00	2 98	RPN-RMHN	4 15	000
Surface Approach	RGN	16 40	3 75	RGN-RSCN	2 28	027
	RPN	15 73	4 08	RPN-RSCN	2 73	008
	RSCN	17 82	3 76			
	RMHN	16 67	3 75			
Strategic Approach	RGN	9 70	2 70			
	RPN	10 26	2 40	-----		
	RSCN	10 25	2 27			
	RMHN	10 21	2 60			
Use of Evidence	RGN	11 54	2 59			
	RPN	11 67	2 79			
	RSCN	10 87	3 21	-----		
	RMHN	11 64	2 85			
Intrinsic Motivation	RGN	10 23	3 03	RGN-RMHN	3 56	000
	RPN	10 04	3 20	RPN-RMHN	2 75	007
	RSCN	9 45	3 64	RSCN-RMHN	2 95	005
	RMHN	11 32	2 77			
Meaning Orientation	RGN	45 43	7 85	RGN-RMHN	2 20	030
	RPN	46 69	7 90	RPN-RSCN	1 86	066
	RSCN	43 62	8 35	RSCN-RMHN	2 41	010
	RMHN	47 46	8 59			
Reproducing Orientation	RGN	42 78	8 87	RGN-RPN	2 64	010
	RPN	39 47	9 95	RPN-RSCN	3 22	002
	RSCN	45 42	8 97	RPN-RMHN	3 37	001
	RMHN	44 37	8 61			

Table 8 Cont'd

SUBSCALES	Division of the Register	\bar{X}	S D	t _{value}	P
Non-Academic Orientation	RGN	28.88	6.20		
	RPN	28.83	6.07	-----	
	RSCN	28.07	6.45		
	RMHN	27.63	6.58		
Strategic Orientation	RGN	26.03	5.89		
	RPN	27.36	5.56	-----	
	RSCN	26.52	4.98		
	RMHN	25.96	5.97		

CHAPTER 9

TEACHING/LEARNING STRATEGIES - ANALYSIS

Overview

'The popular stereotype of the born teacher is someone who seizes every opportunity to 'teach', ie, 'to give a lecture' regardless of circumstances' (Spark 1961)

This section of the study reports on the teaching/learning preferences of the student nurse cohort. As the teaching/learning strategies instrument (TLS), (appendix 5) was administered together with the ASI the response rate and demographic profile is similar to that outlined in Table 1 and Table 2. Data analysis for the 12 teaching/learning strategies was categorised by,

- Republic of Ireland/Northern Ireland
- Age groups 24 and under / 25 and over
- Republic of Ireland by division of the nurses register for general, psychiatric, sick children's mental handicap nursing

The data set as collected was analysed using simple descriptive statistics on SPSS-X. Cross tabulations were performed and mean scores and standard deviations were calculated for each group of nurses for each teaching method. An initial significance test (Chi-Square) was carried out between the various groups of students as categorised above for each of the twelve teaching/learning strategies. Pair-wise comparisons were then performed across the various categories as listed above for each of the teaching/learning strategies. As the questionnaire included ratings, the results cannot be judged as precise measurements, however, in the context of the data obtained on the ASI and the CEQ the TSL results do provide supportive information.

Overall, student nurses reported a greater preference for teacher centred methods

such as demonstration and practice and lectures. Significant differences were identified between students from the Republic and Northern Ireland, between the 24 and under/ 25 and over age groups and between the four groups of students RGN RPN RSCN and RMHN from the Republic.

Republic/Northern Ireland

Demonstration and practice was clearly the main choice of both student nurse cohorts. It was placed as no 1 choice by 45% of the Republic's cohort and 43% of the Northern cohort. The lecture method was the second most popular choice and was chosen as either no 1 or no 2 choice by 42% (Republic) 49% (Northern), cohorts.

The least popular choice was computer assisted learning (CAL) and 51% (Republic) and 38% (Northern) placed it as either no 11 or no 12 choice. However the Northern Ireland cohort had a greater preference for CAL, ($p = 0.00$)

On comparative analysis (Table 9) differences occurred ($p \leq 0.05$) between the preferences of the two cohorts on 7 of the 12 teaching/learning strategies.

The Republic cohort had significantly greater preferences than had the Northern cohort on the following teaching/learning strategies:

Role play	($p = 0.023$)
Use of models/objects	($p = 0.000$)
Group work	($p = 0.000$)

The Northern cohort had significantly greater preferences than the Republic cohort on the following teaching/learning strategies,

Library with self-directed learning	($p = 0.031$)
Computer assisted learning	($p = 0.000$)
Seminars	($p = 0.000$)

A finding of $p = 0.53$ occurred in relation to students' preferences for films

The Age Factor

Owing to the small number of respondent's choices occurring in some of the choice categories 1-12 and so as to strengthen the numerical basis for chi-square analysis, the 12 categories of choice were grouped in four clusters as 123, 456, 789, 10 11 12. Comparative statistical analysis between the 24 and under age group and the 25 and over age group identified significant differences ($P \leq 0.05$) on only two of the twelve strategies. The 24 and under age group had a significantly greater preference for lectures ($P = 0.12$). The 25 and over age group had a significantly greater preference for case studies ($P = 0.020$). Comparative statistical analysis between the two 25 and over age groups from the two countries identified significant differences on only two of the twelve strategies (Table 10). The Northern Ireland 25 and over cohort expressed a greater preference for computer assisted learning ($P = 0.14$) and seminars ($P = 0.004$). However, when the twenty-four and under age groups from the two countries were compared, significant differences occurred on 6 of the 12 teaching/learning strategies (Table 11). The 24 and under cohort from the Republic expressed significantly greater preferences than the Northern Ireland 24 and under cohort for the use of

Models and objects	($P = 0.00$)
Role play	($P = 0.28$)
Group Work	($P = 0.00$)

The Northern Ireland 24 and under cohort compared to the Republic 24 and under cohort expressed significantly greater preferences for

Library with self direct learning	($P = 0.15$)
Computer assisted learning	($P = 0.00$)
Seminars	($P = 0.00$)

The Republic of Ireland

Significant difference occurred between the four groups of students (RGN, RPN, RSCN, RMHN) on preferences for lectures, the use of models and objects, group work and role play (Table 12). All groups identified demonstration and practice as their 1st choice and computer assisted learning as their 12th choice. Lectures received a very high preference rating from all groups with the RSCN cohort expressing the lowest preference. Significant differences on preferences for lectures occurred between the RSCN group and the RGN group ($P = 0.09$) and between the RSCN group and RMHN group ($P = 0.25$). The use of models and objects received the highest preference rating from the RGN and RSCN cohorts, and significant differences occurred between RGN and RPN cohorts ($P = 0.00$), RGN and RMHN cohorts ($P = 0.04$), RPN and RSCN cohorts ($P = 0.12$). Group work received the lowest preference rating from the RGN cohort and significant differences occurred between the RGN and RMHN groups ($P = 0.00$). Role play as a learning strategy was more favourably rated by the RPN and RMHN cohorts. The RPN group provided a particularly high preference rating for role play and statistical significance occurred between RGN and RPN ($P = 0.01$).

Discussion

The overall results obtained demonstrate that nurses as a group exhibit teaching/learning strategy preferences which are far more diverse than the literature presentations of the bi-polar argument of student versus teacher centred approaches would indicate. Strong preferences for particular teaching/learning preferences such as demonstration and practice and lectures do emerge however. The choice of demonstration and practice serves to demonstrate that students' perceive the importance of clinical nursing activities in a context of teaching and learning. This is particularly revealing in the context of Schon's (1983) and Benner's (1989) expositions on learning from practice as discussed in Chapter 2. The low preference rating given by the cohort for student centred, more independent methods (computer-assisted learning, role play, care studies and seminars) and the greater

preference for more teacher-structured approaches (demonstration in practice and lectures) to teaching and learning is supportive of previous research. The preference for more teacher-structured approaches is interesting given the increased emphasis in nurse education particularly in Project 2000, on student centred learning. The results obtained generally support the educational dilemma raised in the literature indicating that whereas teachers believe that students should take more responsibility for their learning, the students felt that the teacher should organise and manage their learning experiences. It may be argued that such dissonant attitudes highlight a certain irrationality about nurse education, with, on the one hand, teachers espousing student centred ideologies and on the other hand, students expressing preferences for teacher structured approaches.

Computer assisted learning was the least preferred teaching learning strategy although the Northern Ireland cohort had a significantly greater preference for this strategy. This particular finding raises further questions at a time when the nursing profession is being directed towards the mastery of information technology and how to harness its potential in nursing. The projected increase in the use of technology in health care and the use of artificial intelligence make it incumbent on the nursing profession to become more accepting of computers and to become computer literate (Miasowski 1990). Koch and Rankin (1984) have argued that computers will not replace teachers in the classroom but that an increasing use of computer assisted learning will challenge nurse teachers to examine their roles and the current teaching strategies they adopt.

The differences which were identified between the groups from Northern Ireland and the Republic suggest that the Northern Ireland cohort have a greater preference for more student centred, individualised, approaches to learning such as films, library work with self-directed learning, seminars and computer assisted learning. Conventional classroom nurse teaching methods such as the use of models and objects and video received a greater preference rating from the Republic of Ireland cohort. Such findings must be noted in the context of curriculum developments. The Northern Ireland curriculum promotes a greater emphasis on student centred

strategies and adult learning principles. It may be argued therefore, that the contextual educational background through a dominant curriculum orientation and teaching/learning approach may provide a strong influence on teaching/learning preferences. The extent of that influence on teaching/ learning preferences is unclear. Nevertheless, it would appear that a link exists between curriculum orientation including a dominant educational philosophy and a student's teaching/ learning preferences.

On the basis of these results it may be argued that age is a factor in teaching/learning preferences. What is particularly revealing is that the two 24 and under age groups, when compared exhibit a greater number of significant difference across the range of strategies than do the two 25 and over age groups when compared. This could indicate that the older students are more stable and consistent in their learning preferences and are not so influenced by contextual differences in the two programmes of nurse education and training.

The finding of significant differences between the four groups of nurses from the Republic again supports the argument that contextual differences, including particular curriculum orientations, may influence teaching and learning preferences, for example the psychiatric curriculum stipulates a requirement for self directed learning. The results obtained for psychiatric students, when compared to other groups, reflect such an orientation with greater preferences being expressed for more student centred, self directed, learning approaches such as role play, films and seminars. Models and objects are used fairly extensively in general and sick childrens nurse education to teach anatomy and demonstrate nursing procedures and techniques. Significantly the general and sick childrens cohort gave the highest preference ratings for the use of models and objects in teaching/learning situations. The results obtained for the psychiatric students' preferred teaching/learning strategies are more similar to the results obtained for the student group from mental handicap nursing. Correspondingly the results obtained for the general students are more similar to the results obtained for the student group from sick children's nursing.

In noting the wide range of student nurse preferences, it is recommended that teachers should not make assumptions about student nurses teaching/learning preferences (Cowman 1994). Clearly, some students have preferences for student centred approaches, with a move away from the teacher as a primary resource. In such a context, nurse teachers must be innovative by empowering learners to take on this responsibility. The diversity in student choice for teaching strategies supports the need for all lecturers and teachers in nursing to have formal training in teaching. There is also clearly a need for defined criteria of effective teaching. Based on the results obtained from this instrument it may be argued that different teaching learning conditions provide a dominant influence on students' perceptions, therefore to some extent the student nurses' teaching/learning preferences may be a reflection of what they believe nurse education is demanding from them. Nurse teachers therefore need to reflect on what they do, particularly that which influences the relationship between the students and what they learn. It is then the responsibility of nurse tutors to act on what they have learned about that relationship and their part in it.

TABLES

Table 9 Teaching/learning preferences of student nurses from the Republic of Ireland (n=670) and Northern Ireland (n=327) ($p \leq 0.05$)

Teaching/Learning Strategy	Republic of Ireland		Northern Ireland		Chi Square Analysis	
	X	SD	X	SD	Pearson	P
Films	6.42	2.89	6.18	2.78	19.46	0.03
Library/self directed learning	7.15	3.27	6.39	3.28	21.21	0.03
Lectures	4.45	3.43	3.66	3.10	18.81	0.06
CAL	9.89	2.49	9.08	2.67	31.85	0.00
Role Play	7.76	3.24	8.61	3.13	22.08	0.02
Models/Objects	5.37	2.87	6.39	2.90	40.55	0.00
Video	5.10	2.63	5.53	2.86	12.63	0.31
Seminars	7.71	2.87	6.75	3.25	43.92	0.00
Demonstration & Practice	2.57	2.14	2.80	2.32	6.46	0.84
Slides	7.83	2.57	8.17	2.57	15.94	0.14
Group Work	5.43	3.31	6.63	3.50	40.48	0.00
Care Studies	8.09	2.72	7.68	2.86	17.21	0.10

* A low mean score indicates a greater preference for a particular teaching/learning strategy

Table 10 Teaching learning preferences of student nurses categorised by age group 2 and over for the Republic of Ireland (n=59) and Northern Ireland (n=34) (p≤ 05)

Teaching/Learning Strategy	Republic of Ireland		Northern Ireland		Chi Square Analysis	
	X	SD	X	SD	Pearson	P
Films	6.90	2.98	6.29	2.32	2.36	.499
Library/self directed learning	7.00	3.28	6.12	3.22	5.15	.160
Lectures	3.33	2.76	2.29	1.88	2.28	.514
CAL	10.20	2.61	8.77	2.78	10.52	.014
Role Play	7.52	3.15	8.96	2.78	3.98	.263
Models/Objects	5.43	2.93	6.64	2.84	5.18	.158
Video	5.41	2.66	6.41	3.13	4.18	.242
Seminars	8.00	2.51	6.32	3.02	12.98	.004
Demonstration & Practice	2.75	2.44	2.48	1.48	2.56	.468
Slides	8.22	2.47	9.00	2.33	2.35	.501
Group Work	5.33	3.21	7.38	3.96	5.42	.142
Care Studies	7.49	2.62	6.90	3.03	1.38	.710

* A low mean score indicates a greater preferences for a particular teaching/ learning strategy

Table 11 Teaching learning preferences of student nurses categorised by age group 20 and under for the Republic of Ireland (n=611) and Northern Ireland (n=293) ($p \leq 0.05$)

Teaching/Learning Strategy	Republic of Ireland		Northern Ireland		Chi Square Analysis	
	X	SD	X	SD	Pearson	P
Films	6.38	2.88	6.19	2.82	938	.816
Library/self directed learning	7.17	3.27	6.42	3.29	10.44	.015
Lectures	4.55	3.47	3.84	3.18	7.42	.059
CAL	9.86	2.48	9.14	2.63	18.14	.000
Role Play	7.89	3.25	8.56	3.18	9.098	.028
Models/Objects	5.37	2.87	6.35	2.91	27.39	.000
Video	5.08	2.63	5.43	2.81	2.30	.511
Seminars	7.68	2.90	6.78	3.38	28.67	.000
Demonstration & Practice	2.55	2.11	2.83	2.40	3.31	.345
Slides	7.79	2.58	8.08	2.59	6.20	.102
Group Work	5.44	3.12	6.53	3.44	22.60	.000
Care Studies	8.15	2.72	7.72	2.82	5.24	.154

* A low mean score indicates a greater preference for a particular teaching/learning strategy

Table 12 Student Nurse Teaching/Learning Preferences by Division of the Nurse Register for the Republic Mean Scores, Standard Deviations and Significant Differences on Chi Square Analysis ($p \leq 05$)

Teaching/Learning Strategy	Student Nurse Groups		Chi Sq Analysis,			
		\bar{X}	SD	Pearson P		
Films	RGN	6.51	2.94	—		
	RSCN	6.34	2.68			
	RPN	6.11	3.14			
	RMHN	6.28	2.54			
Library/Self Directed Learning	RGN	7.09	3.31	—		
	RSCN	7.29	2.87			
	RPN	7.25	3.50			
	RMHN	7.31	3.12			
Lectures	RGN	4.44	3.46	RGN	11.55	.009
	RSCN	5.92	3.75	RSCN		
	RPN	4.50	3.18	RMHN RSCN	9.30	.005
	RMHN	3.83	3.20			
CAL	RGN	9.81	2.55	—		
	RSCN	9.95	2.12			
	RPN	9.98	2.67			
	RMHN	10.15	2.25			
Role Play	RGN	8.03	3.25	RGN RPN	15.77	.001
	RSCN	7.80	2.99			
	RPN	6.24	3.29			
	RMHN	7.69	3.02			
Models/Objects	RGN	5.01	2.78	RGN	21.83	.000
	RSCN	4.80	2.64	RPN		
	RPN	6.74	2.96	RGN	13.20	.004
	RMHN	6.20	2.88	RMHN		
				RSCN RPN	10.91	.012

Table 12 (Cont'd)

Teaching/Learning Strategy	Student Nurse Groups				Chi Sq Analysis,	
		\bar{X}	SD		Pearson	P
Video	RGN	5.17	2.67		—	
	RSCN	4.68	2.20			
	RPN	5.04	2.57			
	RMHN	5.06	2.68			
Seminars	RGN	7.59	2.87		—	
	RSCN	8.02	3.11			
	RPN	7.41	2.79			
	RMHN	8.22	2.81			
Demonstrations & Practice	RGN	2.62	2.25		—	
	RSCN	1.87	1.18			
	RPN	2.92	2.18			
	RMHN	2.41	1.83			
Slides	RGN	7.83	2.52			
	RSCN	7.34	2.41			
	RPN	8.58	2.69			
	RMHN	7.48	2.65			
Group Work	RGN	5.86	3.11	RGN	9.57	.002
	RSCN	4.92	3.35	RSCN		
	RPN	4.92	3.16	RGN		
	RMHN	4.14	2.65	RMHN		
Care Studies	RGN	7.96	2.74		—	
	RSCN	8.51	2.92			
	RPN	8.11	2.57			
	RMHN	8.47	2.60			

CHAPTER 10

COURSE EXPERIENCE (CEQ) ANALYSIS

Overview

The Course Experience Questionnaire (CEQ) instrument was administered to the Autumn 1991 intake of student nurses during the second half of the student's second year in the nurse education and training programme. The response rate was 76.8% (n= 548) for the Republic and 82.2% (n=338) for Northern Ireland. A small number of students had discontinued at this stage of the programme. Accurate figures were not available at the stage of data collection.

The response rate for the Republic by type of nurse training for the divisions of the nurses register was RGN 72% (n= 337), RPN 72% (n= 59), RSCN 88% (n= 36), RMHN 61% (n=76).

The results of the overall population of student nurses (n=886) reflects the highest mean scores on the scale appropriate work load and student independence with the lowest mean scores occurring on the scale good teaching (Table 13). Such results infer perceptions of a learning environment with huge volumes of work to be got through resulting in a failure to comprehend it all thoroughly. The lowest score obtained on good teaching imply that the student nurses are generally unhappy with the level of feedback given by teachers in relation to their progress. Student nurses however, perceive themselves as having a lot of choice in the work they have to do.

The results obtained in this study of student nurses reflect a contrasting pattern to those reported by Ramsden (1991) in a study of final year undergraduate students from a range of academic subject areas. Student nurses, when compared to students in Ramsden's (1991) population, reported greater satisfaction with good teaching, clear goals and standards, and levels of workload. However, there was a greater level of dissatisfaction with appropriate assessment approaches and the emphasis placed

on independence

Significant differences were identified between student nurses from the Republic and Northern Ireland and between the four groups of students from RGN, RPN, RSCN, and RMHN

Demographic Profile

A breakdown of respondents by age for the two countries is provided in Table 14 and Table 15. The Republic cohort included 93.6% women and 6.4% men and the Northern Ireland cohort included 90% women and 10% men. Men constituted 35% of the psychiatric respondents, 3% of general, 5% mental handicap, 0% of sick children's respondents from the Republic of Ireland. It is noted that Northern Ireland had a slightly older age profile than the Republic.

In the Republic of Ireland cohort psychiatric and mental handicap students had an older age profile than general and sick children's students with 33% of the psychiatric cohort and 17% of the mental handicap cohort over the age of 25.

Frequency distribution and comparative statistical analysis for the C E Q were categorised by,

- 1 Republic of Ireland/Northern Ireland
- 2 Age groups 24 and under, 25 and over
- 3 Republic of Ireland by divisions of the nurses register for general, psychiatric, sick children, mental handicap nursing

1 Republic of Ireland/Northern Ireland

On the basis of results obtained (Table 16) differences existed between the two student cohorts from the Republic and Northern Ireland in relation to course exper-

ences In accepting statistical significance at $p \leq 05$, differences occurred between the two countries on three of the five sub-scales with a level of ($p = 063$) reported on the memory sub-scale On the scales good teaching ($p = 001$), clear goals and standards ($p = 000$), the Northern Ireland cohort reported higher mean scores and differed significantly from the Republic cohort which reported higher mean scores on the scale student independence, ($p = 007$)

The scale **Good teaching** (staff normally give helpful feedback on how you are going) The Northern Ireland cohort reported significantly higher scores on this scale ($p = 001$) From the questions comprising the scale, 'good teaching' 34% of the Republic cohort and 19% of the Northern cohort definitely disagreed with the question, 'the teaching staff of this course motivate students to do their best work' The statement, 'staff put a lot of time into commenting on students work' was responded to, with 14% definitely agreeing from the Northern cohort and 9% from the Republic From the Republic cohort 25% and from the Northern cohort 15% disagreed with the statement 'teaching staff normally give helpful feedback on how you are doing'

The scale **Clear goals and standards** (you usually have a clear idea of where you're going and what is expected of you on this course) The Northern Ireland cohort reported significantly higher scores on this scale ($p = 000$) In response to the statement, 'it is always easy here to know the standard of course work expected of you', 41% Northern and 21% of the Republic, cohorts definitely agreed The statement 'you usually have a clear idea of where you are going and what is expected of you on this course' was responded to with 22% of the Republic cohort either agreeing with reservations or definitely agreed, while 46% of the Northern cohort agreed with reservations or definitely agreeing All other statements on this scale received a higher level of positive response from the Northern Ireland cohort

The scale **Appropriate workload** (the sheer volume of work to get through in this course means you cannot comprehend it all thoroughly) There were no significant differences reported between the two countries on this scale However, in the wider

context, some of the responses are *noteworthy*. In response to the statement 'the workload is too heavy' 36% of the Republic cohort and 34% of the Northern cohort either agreed with reservations or definitely agreed. In relation to the syllabus 38% (Republic) and 34% (Northern), either agreed or definitely agreed that it tried to cover too many topics. Both the Republic and Northern cohorts (46%) either disagreed with reservations or definitely disagreed with the statement 'we are generally given enough time to understand the things we have to learn'

The scale **Appropriate assessment** (staff here seem more interested in testing what we have memorised than what we have understood). There were no significant differences reported between the Republic and Northern cohorts on this scale. However, the results generally highlight experiences of inappropriate assessment approaches. In response to the statement 'to do well on this course all you need is a really good memory' 72% (Republic) and 75% (Northern), agreed with reservations or definitely agreed. As regards course expectations 53% (Republic) and 55% (Northern) either agreed with reservations or definitely agreed that it was hard to discover what was expected of them on the course. 45% (Republic) and 50% (Northern) believed that too many teachers ask questions just about facts. Problems with the integration of theory and practice and appropriate assessment procedures are highlighted by the response to the statement 'it would be possible to get through this course just by working hard around exam times', where 64% (Republic) and 67% (Northern), either agreed with reservations or definitely agreed.

The scale **Emphasis on independence** (students here are given a lot of choice in the work they have to do). The Republic cohort reported significantly higher scores, ($p=0.07$). Correspondingly, 26% (Republic) and 35% (Northern) agreed with reservations or definitely agreed with the statement 'there are few opportunities to choose the particular areas you want to study'. Students felt that they 'were given a lot of choice in the course they had to do', with 73% (Republic) and 71% (Northern) responding positively to the statement. In relation to the process of learning, only 29% (Republic) and 18% (Northern) definitely agreed with the statement 'we often discuss with lecturers or tutors how we are going to learn'

The results obtained on the CEQ infer that the Northern Ireland students are more satisfied with the level of feedback given by teaching staff, they also perceive themselves as having a clearer idea of where they are going on the course and what is expected of them. The Republic cohort in reporting a higher mean score on student independence perceive themselves as having a greater choice in the work they have to do.

2 The Age Factor

There were no significant differences reported between the results obtained from the 24 and under and the 25 and over age groups. The 24 and under age group however, reported higher mean scores on all five scales including the memory scale (Table 17). In relation to the CEQs individual statements, interesting differences did occur, these highlight certain patterns which appear to differentiate between student's course experiences on the basis of age. With reference to mean scores obtained on certain questions it may be argued that students in the 25 and over age group are less satisfied with the basic educational approaches. For example the 25 and over age group reported higher mean scores on the following statements,

There are few opportunities to choose the particular areas you want to study
Lecturers here frequently give the impression that they have nothing to learn from students

To do well on this course all you need is a really good memory

Staff here are more interested in testing what we have memorised than what we have understood

It is often hard to discover what is expected of you in this course

The aims and objectives of this course are not made very clear

Too many staff ask us questions just about facts

There is a lot of pressure on you as a student here

Feedback on students work is usually provided only in the form of marks and grades

It would be possible to get through this course just by working hard around exam times

There is very little choice in this course in the ways by which you are assessed

Such responses from the 25 and over age group highlight distinctive experiences characteristic of Adult learning (Knowles 1980) The older cohort of student nurses appear to value more self directed and independent experiences A greater sharing between student and teacher and the provision of broader guidelines through aims and objectives are also highly regarded

It is noted that no significant differences were reported between 24 and under and 25 and over age group from Northern Ireland (Table 18 and Table 19) What is interesting, however, is the higher mean scores reported by the 25 and over age group from Northern Ireland on the scales good teaching, clear goals and standards, student independence and the lower mean scores on appropriate workload assessment approach and the memory subscale Such results indicate that the 25 and over age group have a more favourable and positive response to the nurse education programme in Northern Ireland In contrast, comparative analysis of age groups 24 and under and 25 and over from the Republic (Table 18 and Table 19) reported significant differences between the two age groups on the scales Good teaching ($p= 0.29$), Clear goals and standards ($p= 0.31$), student independence ($p= 0.47$) with the 24 and under age group reporting higher mean scores The 25 and over age group reported higher mean scores on the scales appropriate work load It may be argued that the results indicate that the 24 and under age group reported a more favourable response to the nurse education programme in the Republic of Ireland than did the 25 and over age group

On comparative analysis between the two 24 and under age groups from the two countries, (Table 18 and Table 19) the Northern Ireland cohort reported significantly higher mean scores than the Republic on the scales ,Good teaching ($p= 0.003$), and Clear goals and standards ($p= 0.000$) The Republic reported a higher mean score on the scale, emphasis on Student independence ($p= 0.009$) A contrasting pattern of

results was obtained when the two 25 and over age groups were compared, with the Northern Ireland cohort reporting significantly higher mean scores on Good teaching ($p=001$) and Clear goals and standards ($p=000$) Whereas the scale, Emphasis on student independence, was rated significantly higher by the Republic 24 and under on comparing the two 24 and under age groups The reverse was the case when the two 25 and over age groups were compared It was the Northern Ireland 25 and over cohort that reported a higher mean score on the scale 'emphasis on student independence' This particular finding again supports the earlier point that the older cohort of student nurses appear to respond more favourably to the type of nurse education programme in Northern Ireland

3 Republic of Ireland

Significant differences were reported between general (RGN), psychiatric (RPN), sick children's (RSCN) and mental handicap (RMHN) cohorts on four scales and the memory subscale (Table 20)

The scale **Appropriate workload** which is concerned with heavy workload and a lack of time received consistently high mean scores from the four student groups

The scale **Good teaching** received the highest mean scores from the RGN cohort and the lowest from the RPN cohort Significant differences were reported between the groups RPN and RGN ($p=000$) and between RGN and RMHN ($p=000$)

The scale **Clear goals and standards** received the highest mean score from the RGN cohort and the lowest from the RPN and RMHN cohort Significant differences were reported between RGN and RPN cohorts ($p=015$) and between RGN and RMHN ($p=009$)

The scale **Assessment approach**, which implies an over concentration on testing memorised facts rather than understanding was rated highest by the RGN and RSCN cohorts Significant differences were reported between RGN and RPN ($p=000$),

RGN and RMHN ($p= 003$) and between RPN and RSCN ($p= 046$) Similar findings are also reflected on the memory subscale

The scale **Emphasis on independence** which implies students are given a lot of choice in the work they have to do is rated highest by the RGN cohort and lowest by the RPN cohort Significant differences were reported between RGN and RPN ($p= 000$), RGN and RMNH ($p= 003$), RPN and RSCN ($p= 008$) and between RPN and RMNH ($p= 000$)

All groups of student nurses in the Republic reported the experience of heavy workload with insufficient time for comprehension However, the findings suggest that significant differences exist between the four groups in relation to good teaching, clear goals and standards, assessment approaches and the emphasis placed on independence

The general student nurse cohort reported more favourable experiences in relation to good teaching, clear goals and standards, and student independence than that reported by the sick children's, mental handicap, and psychiatric cohorts However, the psychiatric and mental handicap cohorts, in contrast to the general and sick childrens cohorts reported experiences of an assessment approach with a greater focus on testing understanding rather than the memorising aspects of learning

Discussion

The CEQ as a student evaluation instrument was designed to measure the teaching performance of educational units (Ramsden 1991) In this study the results suggest that student nurses perceive nurse education as being heavily content-laden with insufficient time to get through all of the content Students nurses also perceived that there are insufficient levels of feedback on student progress provided by the teachers

In the context of the two different programmes of nurse education in the Republic

and Northern Ireland students reported significantly different course experiences. Generally the Northern Ireland cohort provided more positive reports on their course experiences than did the Republic cohort. Good teaching and clear goals were significant factors reported by the Northern Ireland cohort. The pattern of results in relation to the age criteria is interesting. The population of student nurses as a whole reported no significant differences on the basis of selected age groups. Responses to individual questions, however, did establish a distinctive pattern which distinguished older students from younger students. In support of such a finding further differences were identified between age groups in each of the two countries. The older age group of students (25 and over) have a greater level of satisfaction and more positive experiences as a response to the Northern Ireland education programme and the older age group of student nurses in the Republic reported negative experiences as a response to the Republic of Ireland educational programme. Further support for this argument is provided on comparative analysis of results for the two younger age groups from the two countries and on similar analysis for the two older age groups.

The pattern of results obtained for the CEQ demonstrate marked similarities to those obtained on the ASI and the teaching learning preferences inventory for the four groups of student nurses in the Republic. Such similarities are reflected on the basis that the general student nurse cohort reflected results which were more compatible with the sick children's cohort. Correspondingly the psychiatric cohort reflected results which were more compatible with the mental handicap cohort than with other cohorts.

2

TABLES

Table 13 CEQ Scales and Subscale - Means (\bar{x}) Standard Deviation (SD), Standard Error (SE) for population of nurses (N=886)

SCALE	\bar{X}	SD	SE
Good teaching	2.56	0.825	0.28
Clear Goals	2.78	0.894	0.30
Appropriate Workload	3.53	0.805	0.27
Appropriate Assessment	2.80	0.721	0.24
Student Independence	3.45	0.676	0.23
SUBSCALE			
Memory	2.61	0.832	0.28

Table 14 Age Group of Respondents

Location	AGE				
	18 or less	19-21	22-24	25-34	34 or more
Republic of Ireland	19 (3.7%)	413 (80%)	41 (8%)	37 (7.2%)	6 (1.1%)
Northern Ireland	--	228 (71%)	57 (17.7%)	32 (9.9%)	5 (1.4%)
TOTAL	19 (2.3%)	641 (76.5%)	98 (11.7%)	69 (8.2%)	11 (1.3%)

Table 15 Age Group of Respondents from the Republic by Divisions of the Nurses Register

Division of the Register	AGE				
	18 or less	19-21	22-24	25-34	34 or more
General	16 (4.5%)	302 (86.3%)	23 (6.6%)	8 (2.3%)	1 (0.3%)
Psychiatric	--	32 (55.2%)	9 (15.5%)	14 (24.1%)	3 (5.2%)
Sick Children's	3 (9.4%)	25 (78.1%)	--	4 (12.5%)	--
Mental Handicap	--	54 (71%)	9 (11.9%)	11 (14.5%)	2 (2.6%)
TOTAL	19 (2.3%)	641 (76.5%)	98 (11.7%)	69 (8.2%)	11 (1.3%)

Table 16 Republic of Ireland and Northern Ireland Comparative Statistical Analysis of CEQ Scales and Subscale ($p \leq 0.05$)

SCALE		1 Republic of Ireland (n=548)		2 Northern Ireland (n=338)		SE	t value	P
		\bar{X}	SD	\bar{X}	SD			
Good Teaching	(1)	2.48	0.820			0.036	3.25	0.001
	(2)	2.67	0.821					
Clear Goals	(1)	2.62	0.866			0.037	6.81	0.000
	(2)	3.03	0.880					
Appropriate Workload	(1)	3.53	0.821			0.035	0.10	0.919
	(2)	3.53	0.778					
Assessment Approach	(1)	2.82	0.742			0.032	0.99	0.314
	(2)	2.77	0.685					
Student Independence	(1)	3.50	0.684			0.029	2.70	0.007
	(2)	3.37	0.657					
SUBSCALE								
Memory	(1)	2.65	0.839			0.036	1.86	0.063
	(2)	2.54	0.817					

Table 17 Age group 24 and less, 25 and over, Comparative Analysis of CEQ Scales and Subscale ($p \leq 05$)

1 24 and under (n= 758)
 2 25 and over (n=80)

SCALE		\bar{X}	SD	SE	t value	P
Good Teaching	(1)	2.56	821	030	0.82	.414
	(2)	2.48	777	089		
Clear Goals	(1)	2.78	895	033	1.10	.272
	(2)	2.67	909	102		
Appropriate Workload	(1)	3.54	794	029	0.40	.689
	(2)	3.50	883	099		
Assessment Approach	(1)	2.80	722	026	1.01	.313
	(2)	2.71	732	082		
Student Independence	(1)	3.45	674	025	0.85	.396
	(2)	3.38	685	077		
SUBSCALE						
Memory	(1)	2.62	829	030	0.98	.327
	(2)	2.52	821	092		

Table 18 CEQ Scales and Subscale - Mean Score (\bar{x}) Standard Deviation (SD), Standard Error (SE) for the Republic and Northern Ireland for selected age groups

	1	Republic of Ireland	(a)	24 and under	
	2	Northern Ireland	(b)	25 and over	
SCALE			\bar{X}	SD	SE
Good Teaching	(1)	(a)(n=473)	2.49	804	038
		(b)(n=43)	2.20	758	120
	(2)	(a)(n=285)	2.67	838	050
		(b)(n=37)	2.78	689	113
Clear Goals	(1)	(a)	2.63	853	039
		(b)	2.33	884	136
	(2)	(a)	3.04	903	054
		(b)	3.05	784	129
Appropriate Workload	(1)	(a)	3.53	809	037
		(b)	3.55	935	143
	(2)	(a)	3.55	771	046
		(b)	3.45	827	138
Assessment Approach	(1)	(a)	2.82	748	035
		(b)	2.68	712	109
	(2)	(a)	2.77	677	041
		(b)	2.75	763	127
Student Independence	(1)	(a)	3.50	676	031
		(b)	3.28	731	113
	(2)	(a)	3.37	664	039
		(b)	3.50	620	102
SUBSCALE					
Memory	(1)	(a)	2.65	845	039
		(b)	2.59	772	118
	(2)	(a)	2.55	801	048
		(b)	2.44	879	144

Table 19 CEQ Scales and Subscales Comparative Statistical Analysis for selected age groups ($p \leq 05$)

SUBSCALE	24 & under (n = 758) 25 & over (n = 80)		<u>Republic</u> 24 & under (n = 473) 25 & over (n = 43)		<u>N Ireland</u> 24 & under (n = 285) 25 & over (n = 37)		Republic/ N Ireland 24 & under		Republic N Ireland 25 & over	
	t value	P	t value	P	t value	P	t value	P	t value	P
Good Teaching	0.82	.414	2.18	.029	0.74	.461	2.95	.003	3.49	.001
Clear Goals	1.10	.272	2.16	.031	.06	.954	6.31	.000	0.38	.000
Appropriate Workload	0.40	.689	0.14	.888	0.80	.425	0.41	.680	0.52	.607
Assessment Approach	1.01	.313	1.16	.248	0.13	.897	0.97	.333	0.41	.681
Student Independence	0.85	.396	1.99	.047	1.11	.266	2.61	.009	1.40	.167
SUBSCALE										
Memory	0.98	.327	0.47	.639	0.81	.421	1.67	.096	0.84	.402

Table 20 Republic of Ireland CEQ Scales and Subscale Analysis by Division of the Nurses Register (N=886) ($p \leq .05$)

SCALE	Division of the Register	\bar{X}	SD		t value	P
Good Teaching	RGN	2.62	812	RGN-RPN	4.33	.000
	RPN	2.12	747	RGN-RMHN	4.32	.000
	RSCN	2.37	800			
	RMHN	2.17	751			
Clear Goals	RGN	2.70	839	RGN-RPN	2.44	.015
	RPN	2.42	831	RGN-RMHN	2.62	.009
	RSCN	2.53	869			
	RMHN	2.42	967			
Appropriate Workload	RGN	3.52	826		-	
	RPN	3.46	875			
	RSCN	3.62	763			
	RMHN	3.58	782			
Assessment Approach	RGN	2.92	703	RGN-RPN	4.77	.000
	RPN	2.44	773	RGN-RMHN	3.01	.003
	RSCN	2.76	706	RPN-RSCN	2.02	.046
	RMHN	2.64	805			
Student Independence	RGN	3.61	660	RGN-RPN	6.69	.000
	RPN	2.98	709	RGN-RMHN	3.06	.003
	RSCN	3.38	694	RPN-RSCN	2.69	.008
	RMHN	3.38	564	RPN-RMHN	3.64	.000
SUBSCALE						
Memory	RGN	2.74	828	RGN-RPN	3.65	.000
	RPN	2.31	807	RGN-RMHN	2.39	.017
	RSCN	2.66	816	RPN-RSCN	2.04	.045
	RMHN	2.49	852			

CONCLUSIONS

The results obtained from across the three sets of data identify significant differences in relation to learning approaches, experiences and preferences between the Republic and Northern Ireland, between younger and older students and between the four groups of student nurses from general, psychiatric, sick childrens, and mental handicap nursing from the Republic of Ireland

The results for the overall population of student nurses (n=1005) provide a profile of learning being fairly hierarchically structured in a stepwise manner with an over-concentration on rules and procedures. An overall vocationally oriented style of programme is projected with students portraying a level of logical analysis and involvement with their work. Qualifications do not provide the main motivation for learning. The programme of learning is highlighted as very much an end in itself, with an over reliance on rote learning and teacher directed learning activities. Student nurses perceived the greatest source of learning as being those aspects associated with clinical nursing situations.

The failure of student nurses to realise the learning potential and importance of information technology and by inference its importance in nursing services is a serious shortfall in the current education system.

The distinctly different patterns in approaches to learning between the Northern and Republic cohorts and between the selected age categories infer connections between students' learning approaches and the context of learning. It would appear to be the case that the distinctly different models for nurse education including curricular activities, and schemes of assessment are particularly influential in student nurses' approaches to learning. Such findings are supported by Marton (1976), who on the basis of his findings argued that the approach to learning should not be seen to be characteristic of the student but as a response to a situation. To this end, forms and type of assessment provide a critical influence on approaches to learning. Students

are pushed towards surface approaches by frequent assessment and by forms of assessment which seem to invite and reward reproductive answers. Student experiences of the process of nurse education are reflected as a failure to comprehend it all thoroughly because of the sheer volume of work. In the case of the Republic the requirement of students having to provide service to hospitals is an overriding factor. Students do perceive themselves as having a choice in the work they have to do. This could be related to the disparate nature of nursing knowledge as a result of which nurse education tends to emphasise breadth rather than depth.

Evaluation and examinations received negative responses from students. There was a perception of the system tending to test knowledge as memorised rather than understood. A lack of feedback in relation to progress was perceived as a serious shortfall.

Age appears as a factor in student nurse learning approaches, experiences, and preferences, the patterns identified add support to aspects of previous research on adult learning, (Knowles 1980) and suggest the need for curriculum planning in nurse education to be sensitive to the needs of learners on the basis of age. Student nurses from the age group 25 and over reported a more confident, experienced, and competitive edge to their learning. The older students were looking for meaning in their studies and they tried to interact actively with what was being learned. In contrast, the younger students were more anxious and insecure in their learning. Overall the older student cohort appeared to be less satisfied with the basic educational approaches adopted in nurse education.

Data analysis highlighted distinct differences between students from the Republic and Northern Ireland including strengths and weaknesses in both systems. Student nurses from the Republic reflected a more stable learning profile including deep learning approaches with an intention to understand what was being learned and to examine evidence critically. The Northern cohort reported a surface approach to learning with an intention to reproduce what they were studying. A review of the curriculum for individual schools/colleges highlighted in Northern Ireland, the

utilisation of schemes of continuous assessment which generally reflected a much greater range and number of assessments than was the case in the Republic. The range of assessments include multiple choice type examinations. In the Republic examinations are primarily through essay type examinations. The different assessment approaches used in the two countries may be contributing to surface learning (Northern) and deep learning (Republic). It has been shown (Thomas and Bain 1984) that multiple choice question formats, with an emphasis on factual answers, push students towards a surface learning approach, while open ended essay type questions encourage deep learning approaches. Entwistle and Ramsden (1983) stated,

'Perceptions of inappropriate or excessive assessment together with a too rigidly structured curriculum encourage extrinsic motivation, engender poor attitudes and thereby make surface approaches more likely' (p 203)

The vocational nature of the apprenticeship programme in the Republic and lack of academic accreditation is evident in some aspects of the Republic's learning profile 'disorganised study methods' 'picking up rules and procedures and isolated details' 'high volumes of workload'. The Republic cohort were also less satisfied than the Northern cohort in relation to levels of feedback, and the level of clarity provided on goals and standards of the course. The more academic inclination of Project 2000 was reflected by students perceiving 'qualifications as a motivation for learning' 'studying to gain qualifications for employment' and 'using intuitive approaches to build a general picture of what is being learned'. However, the number and type of assessments appear as a prevailing influence on student nurse learning approaches in Northern Ireland. Students reported a fear of failure and were anxiously aware of assessment requirements. Students reported a sense of disenchantment and cynicism with elements of the course (this may be related to the common foundation programme and will be discussed further in the qualitative section of the study).

Distinct differences in learning approaches, experiences, and preferences were

identified between general, psychiatric, sick childrens, and mental handicap nurses in the Republic. The finding of differences in learning approaches between the four groups of student nurses from the Republic is significant. The psychiatric cohort reported a more positive learning approaches profile with students more self confident and less concerned about assessments when compared to other groups. The RPN group also had a greater preference for more student centred self directed learning approaches. However the course was not perceived to be giving them a lot of choice in what they had to learn. There was also a perception of a lack of feedback and inadequate information about course expectations. The distinctive findings for the psychiatric students may have been influenced by their programme which stipulates a requirement for self directed learning approaches.

The Sick Childrens cohort results portrayed a rather narrow, superficial and unimaginative type of educational approach, with rote learning and learning restricted to a defined syllabus. This group was also rather anxious about assessments and lacked self confidence. The general student cohort when compared to other groups, perceived themselves as receiving a greater level of feedback, being more aware of what is expected of them and what work they have to do. There is however a greater level of anxiety about assessment and a lack of meaning in their studying. The student cohort from mental handicap reported a strong commitment to understanding what is being studied and less negative attitudes than other groups. Intrinsic motivation was particularly strong amongst the students from mental handicap, this finding, with an accompanying low strategic orientation, indicates a sense of vocation, with students having less interest in self- promotion through educational qualifications.

The four groups reported individually different profiles, however, certain patterns did emerge. General student nurses reported a profile more akin to the sick childrens students, and psychiatric students reported results more akin to the students from mental handicap. Such findings provide support for the establishment of a common nurse education and training course for general and sick childrens nursing, and a common nurse education and training course for psychiatric and mental handicap

nursing This proposal is further strengthened by the emphasis placed on aspects of clinical nursing practice in the four specialities General and sick childrens nurses predominantly provide nursing care to persons with physical ailments of a medical and surgical nature Psychiatric and mental handicap nurses predominantly provide nursing care to persons with disorders of the mind including psychological and social related problems Traditionally, the curriculum for general and sick childrens nursing has adopted a predominant biological and physiological basis, whereas the psychiatric and mental handicap curriculum derives its content predominantly from the behavioural and social sciences

The findings of the ASI, besides highlighting distinctive differences within categories, also reflect a wide array of approaches to learning amongst individual student nurses The challenge therefore to nurse educators is how to harness and maximise the student's potential ability, taking into account, individual characteristics (particularly age) the nursing curriculum and contextual differences provided by models for nurse education and training

THE QUALITATIVE DIMENSION

Introduction

This section of the thesis outlines the important issues emerging from the qualitative dimension of the study. The theoretical basis for the qualitative dimension was created through the triangulation and interweaving of the results obtained from the questionnaires. Twelve factors which were considered to be dominant, significant, and relevant were extracted. The interrelationships which appear to exist between the factors, encouraged the creation of three main clusters, a) approaches to learning, b) the nature and context of the learning environment, c) antecedent and individually related factors.

This process of extracting the twelve factors and three main clusters from the quantitative data prompted the development of a heuristic model of learning in nurse education. A heuristic device by providing a structure helps to focus attention on the interrelationships which exist between the emerging factors.

The factors provided a basis for the development of the focused interview schedule of questions. The interviews were undertaken with a random sample of student nurses from the Republic and Northern Ireland. The analysis of the interview transcripts is presented in this section of the report. The issues arising from the qualitative analysis serve to explain more fully the quantitative findings. The decision to undertake the qualitative analysis in the final year is fully supported by the insightfulness and breadth of reflection in the students' comments. This fact alone brought a quality of richness to the study.

The summary of the interview findings are discussed in the remaining chapters in this section and are presented under the following headings:

- a) Perceptions of the course
- b) Student/teacher relationships

- c) Levels of understanding
- d) Teaching/learning strategies
- e) Curriculum influences

The process of analysing the text and creating such categories is described in Chapter 7

The summary text for the qualitative analysis is illustrated largely with quotations that typified responses and where such individually held reflections are included they are identified as such

CHAPTER 11

CONSTRUCTING A BASIS FOR THE QUALITATIVE DIMENSIONS

Overview

On the basis of the quantitative analysis it is clear that numerous elements interact in the teaching/learning process in nurse education, including approaches adopted by teachers and students, the nature of the material to be learned, levels of understanding and the nature of assessment. Many factors emerged from the quantitative data with varying degrees of inter-relatedness some of which are more important than others. Therefore a level of greater clarity was sought as regards the dominant significant and relevant issues. An analytical process to develop categories was undertaken and twelve factors were identified from the quantitative element of the study. The twelve factors include,

Factor 1	Understanding - breadth, depth
Factor 2	Interest and relevance of content
Factor 3	Workload, - amount, pace and difficulty
Factor 4	Attitudes to course and enthusiasm
Factor 5	Assessment and examinations - quality of feedback
Factor 6	Organisation of study time and revision procedures
Factor 7	Course organisation, goals and expectations
Factor 8	Attitudes towards learning
Factor 9	Teaching strategies
Factor 10	Definition of a good teacher
Factor 11	Levels of independence
Factor 12	Differences between teaching/learning in nurse education and that experienced in previous forms of education

On the basis of this study it can be argued that the twelve factors may be accepted as vital determinants of quality learning in nurse education and, as such, should be

carefully considered by curriculum planners in nurse education. There are various degrees of inter-relatedness between the twelve factors and these may be grouped into three main clusters, identified as,

- a) approaches to learning,
- b) the nature and context of the learning environment,
- a) antecedent and individual factors

Heuristic Model of Learning

The process of abstracting the significant issues from the quantitative data alerted the researcher to the many dimensions involved in the process of student nurse learning. A Heuristic type model of student nurse learning was developed (Figure 6). This Heuristic device helps focus attention on the ways in which aspects of the learning environment might be expected to interact with individual choices of student nurses in effecting both approaches to learning and levels of understanding. In this model it is implied that it is the student nurses' perception of the learning environment, rather than the environment in an objective sense, which, most directly influences learning. Entwistle and Tait (1990) presented a heuristic model of learning in higher education. The process of abstracting significant issues from the findings of the three questionnaires, which involved an interweaving of data, promoted a level of insight and clarity necessary for the construction of the focused interviews.

The heuristic model of learning in nursing as presented in figure 6 draws attention to the interrelatedness of the twelve factors. Essentially the model highlights factor 1 (understanding, breadth and depth) as being central to all aspects of learning. A relationship between approaches to learning and antecedent and individual aspects is created through factor 2 (interest and relevance of content) and factor 8 (attitudes to learning). The nature and context of the learning environment and approaches to learning are related through factor 3 (workload amount, pace and difficulty), factor 5 (assessment and examinations - quality of feedback), factor 7 (the course, organisation goals and expectations) and factor 9 (teaching strategies). The nature

and context of the learning environment and antecedent and individual aspects are related through factor 10 (definition of a good teacher) and factor 11 (levels of independence)

Individual aspects determining learning are difficult to extract from the overall model, nevertheless this study would support the isolation of certain issues. Such issues are related to revision as in factor 6 (organisation of study time, revision procedures), factor 4 (attitudes to the course and enthusiasm) and factor 12 differences between teaching/learning in nurse education and that experienced in other forms of education. It is suggested that these three factors are strongly related to the antecedent aspects of the learner entering nursing.

The Theoretical Basis

The basis for the development of a heuristic type model of student nurse learning is reviewed in this sector.

a) Approaches to learning

The results of the quantitative analysis support the previous research on learning outside of nursing which introduced important distinctions between conceptions of learning (Marton et al 1981), and approaches to learning (Ramsdon and Entwistle 1983). An underlying common feature of both conceptions of learning and approaches to learning is a fundamental categorisation of learning approaches as deep, surface, and strategic. This study of student nurse learning supports previous distinctions made between the three categories. In student nurse learning, levels of understanding appear to be greatly influenced by contextual factors, related to learning environment. Contrasting forms of understanding may vary, what is unclear is the extent to which they may vary in depth, breadth and structure. Levels of interest and relevance appear to influence student attitudes to learning, which in turn, will influence levels of understanding. Strategic learning, as utilised by elements of the nursing population, could be a reaction to particular components of the

curriculum, eg, assessment. It therefore may be argued that levels of learning and understanding may be directly related to the student's perceptions of the purpose of the task, and, as such, may be used to describe students in particular learning situations. It may also be the case that what makes up a deep or surface approach in one discipline is not the same as in another discipline.

b) The nature and context of the learning environment.

In this study, contrasting interpretations of approaches to learning arise from five different programmes of nurse education, which includes Northern Ireland, and programmes of training for general, psychiatric, sick children's and mental handicap nursing within the Republic of Ireland. The broadest interpretation of the quantitative analysis suggests that a prevailing influence on student nurse learning is provided through teaching strategies, assessments and examinations, the organisation of the curriculum, including goals, experiences, student expectations, levels of independence afforded and workload. Previous researchers (discussed in Chapter 3) have identified the influential nature of assessment and examination and levels of workload. It was highlighted that assessment conditions which are threatening, anxiety provoking, perceived to be inappropriate with an accompanying rigidly structured curriculum are related to surface approaches to learning. An important influence on nurse education is the teaching approach adopted by the teacher, which, in turn, is influenced by his/her explicit or implicit educational philosophy.

The distinctiveness of comprehension and operation learning has been identified. It is argued however (Pask 1976b), that both operation and comprehension learning are essential in reaching understanding. It is suggested that comprehension learners are most likely to be in departments where knowledge is most amenable and permits personal interpretation (Social Sciences). Contrastingly, operation learners are found in departments where knowledge is hierarchically structured and related to accepted paradigms (Medicine). In the context of this study, the two opposing sets of conditions for operation and comprehension learning may be reflected in the two different sets of learning conditions espoused in the programmes for Northern Ireland and the Republic. It is noted that the Northern programme inherently aims to provide learn-

ing conditions associated with comprehension learning. The Republic's syllabi of training, with the exception of the psychiatric programme, tend to reflect a medical model with a strong behavioural objectives approach with learning tending to be structured in a hierarchical manner. Comparative analysis on the ASI between the two countries, identified that the Northern cohort obtained a significantly higher score on comprehension learning, whereas the Republic obtained a significantly higher score on operation learning.

The quality of teaching, variety of teaching methods, the extent to which staff understand the learning requirements of students and levels of feedback, all appear as profound influences on student nurse learning.

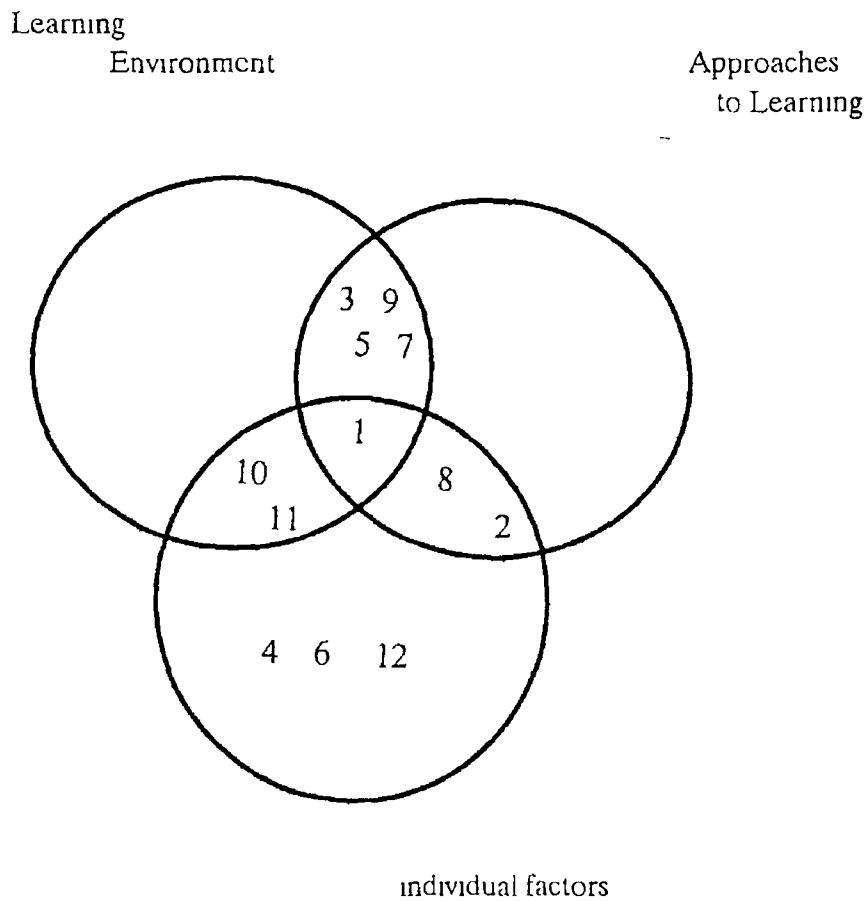
c) Antecedent and individual factors

It is accepted that many antecedent variables influence individual students in various learning situations. Student nurses, at the point of entry to nurse education and training programmes, have a variety of prior learning experiences which have been provided through primary and secondary schooling and developed through general life experiences. The extent to which prior learning experiences influence student nurse learning is unclear. This particular study involves an age criterion which distinguishes younger students (24 and under) from older students (25 and over). The quantitative analysis highlights factors which distinguish the two student groups. Such factors are consistently reflected across the various programmes of nurse training. The older age group exhibited a more stable profile with more self directed and independent experiences valued. More positive and confident learning attitudes including relating ideas and strategic approaches were also identified amongst the older student cohort. The younger age group had a much greater fear of failure, with disorganised study methods and surface learning approaches.

A number of issues, arising from the quantitative analysis which required further clarification were included in the schedule of questions for the interviews (Appendix F)

Figure 6

Heuristic model of learning in nurse education identifying factors influencing student nurse learning and their levels of interrelatedness



Factors

- 1 Understanding breadth and depth
- 2 Interest and relevance of content
- 3 Workload amount, pace and difficulty
- 4 Attitudes to course and enthusiasm
- 5 Assessment and examination - feedback
- 6 Organisation of study time and revision procedures
- 7 The course organisation, goals, expectations
- 8 Attitudes to learning
- 9 Teaching strategies
- 10 Definition of a good teacher
- 11 Levels of independence
- 12 Differences between teaching/learning in nurse education and that experienced in previous forms of education

CHAPTER 12

QUALITATIVE ANALYSIS (Republic of Ireland)

The summary text for the qualitative analysis is illustrated largely through quotations and where such individually held reflections are included, they are identified as such (All quotations made in this chapter were made by students from the Republic of Ireland cohort)

Perceptions of the Course

The main differences which were identified between nurse education and other previous education experiences related to the intensity of the course and the fact that levels of progress and success, in the main, were determined by the personal commitment of the student

Student nurses' perceptions of the course appear to be greatly influenced by work loads arising from both the employee aspect and the study element of the student nurse's role, individual experiences and particularly, influences at a personal level

"There's no way you could possibly study as much as you're told because of the heavy workload on the ward. You feel too shattered to come home in the evenings and open a book, the work load is crazy "

Students tended to describe intensity, in terms of workload and pace, rather than levels of course difficulty. The impact of such intensity on the educational environment is that it often creates an unsatisfactory learning environment which is summed up by the following comments,

"There's so much you have to cover and so much to be done on the ward that you come home drained and it's very difficult to sit down to try and study "

Another student stated

"Sometimes you're thrown in at the deep end. You actually end up having to do it even though you don't have the theory behind it."

The workload and pace of the course as determined and influenced by learning content and the employee's status had an overriding influence in every aspect of the student's life. It was typically summed up by one student

"Because of the heavy workload and commitment, you lose a lot and I won't say social life. I know I have no hobbies since I started nursing."

"You never seem to really get a break from it."

Positive perceptions of the course were expressed in terms of interpersonal skills development. A psychiatric student stated

"Your perception of things, your view of things, I don't think I've ever been in a job that pays so much attention to how you're feeling yourself."

Students reported that overall, they found the course interesting. Across the four different types of nursing, it was felt that the relevancy of the theoretical content was seriously affected by curricular arrangements. Particularly the failure to ensure that the theory which was given in school was related and linked to an appropriate and relevant clinical allocation, as for example, through a modular type programme

"Maybe what we did last year is sort of relevant now. Yet, you get the theory and if you don't go to that particular speciality immediately, it's not really relevant because you've probably forgotten it by the time you get there."

"I find it interesting, I enjoy it thoroughly. I love it, but sometimes I feel we do a lot of classroom work in detail that I might never touch on as a student."

Students, when asked about course organisation aims and objectives, generally expressed the view that overall the course was well organised in terms of the mechanical aspects. Student nurses from all four areas of nursing expressed dissatisfaction with the huge numbers of learning objectives with which they were presented with. It was also felt that many of the objectives were not clear. The range of comments in relation to aims and objectives included

"There's so many of them, so scattered " (RPN student)

"There's so much information. You might cover three systems in one week. It was hard to keep it all together and then you didn't get the opportunity in the finish " (RMHN student)

"There's too many. You know you're not going to achieve all of them " (RGN student)

The 25 and over age group, in accepting that there was a large number of learning objectives, attempted to exert a control over the situation. This was typically summed up by one respondent from the 25 and over age group

"You may not be clear about what you're supposed to be picking up but I usually tend to check it out "

The responses from the 24 and under age group differed from those of the 25 and over in terms of the course meeting with their expectations. The 24 and under respondents appear to enter nursing with less insight into the demands of the course. Comments received included

"I didn't know what to expect really. I didn't really know what it was all about "

"I didn't think there would be so much study involved "

The 25 and over age group appear to have been better prepared in terms of coping with levels of content and course demands. However, their expectations were not realised in other areas, for example, in personal contributions during the course.

"I thought that I would have more to offer in terms of being able to counsel people and meet their expectations when they came to you with a problem."

The formal aspects of the course and the effect on relationships was highlighted particularly in relation to the older student's expectations. On being asked 'does the course meet with your expectations' one 25 and over age group respondent stated:

"I suppose really it does. I just found when I started first, it was a long time since I called anyone 'Mr' or 'Miss'. I found that a bit strange where as most of the girls who had just left school would have been used to that."

QUESTION "Do you think that should change?"

ANSWER "I did six weeks out in psychiatric nursing. They call the tutors by first names. I think you could have a better relationship with someone that you didn't call 'Miss' or 'Mr' but that's because I'm older again."

On being questioned about levels of independence afforded through the course, the various responses given could best be distinguished on the basis of age. Generally, the older students felt that they had an insufficient amount of independence.

"I think there is too little independence. As we go through the course, it increases with your level of seniority but I think your competence as a person should be related to more than your year as a student." (Student 25 and over age group)

"I think there is too much independence." (Student 24 and under age group)

"You're left on your own to do a lot of study." (Student 24 and under age group)

It would appear that generally, staff attitudes to the student became more favourable as the student progressed through the training programme

" Moving into third year, you have a lot more independence People are more inclined to listen to you rather than send you off to do menial tasks "

Teacher/Student Relationships

Students were asked to describe a good teacher The factors identified, ranged from interpersonal skills, to competence as a teacher with good levels of knowledge Overall the older student respondents favoured more facilitatory and exploratory teaching approaches rather than didactic methods Characteristic features of a good teacher as described by the student respondents included,

"Someone who can relate what's done in the schools to the wards " (Student 24 and under age group)

"Someone who gets me to examine different approaches to the problem and would get me to come up with solutions and would help me along with exploring them " (Student 25 and over age group)

"If you had a problem with information, you could ask for clarification and they are able to answer you there and then instead of saying, 'I have to give you a reference to look up ' I don't like looking up references, I like the information to be handed to me " (Student 24 and under age group)

"When somebody listens to your opinion, you're more aware of them and you go to them for more information because you know they're interested and you're not going to be a nuisance " (Student 25 and over age group)

"They have to be interesting to listen to Able to arrange a class discussion, which is great When you hear someone else's opinion and with the tutor providing an input

into it as well, I find that is good I like to listen to people " (Student 25 and over age group)

"She gives you good notes gives you tips and you can ask questions and she will answer you back " (Student 24 and under age group)

"Somebody who'll not just read from a book, uses the overhead and uses diagrams and then gets us to do some topics ourselves We divide into groups and then we all give feedback " (Student 25 and over age group)

Students generally felt that as a learner and worker, senior nursing staff including teachers knew them well However, as a person, students believed that very few staff really knew them In relation to the latter, it was believed that there should be more opportunities for staff to get a better understanding of the student as a person One student stated

"I feel that we pass very quickly through the different units You tend to get involved with the persons you take care of then you move on again I just think it's hard to leave your feelings behind on a piece of paper because inevitably it's just somebody else who'll read it and it won't mean the same " (RMHN Student)

Positive reports were received in cases where students had personal tutors Students felt that this allowed an opportunity for at least one person to build up an impression of the student and their progress

Feedback to students was perceived as an important feature of the educational process and students felt that greater levels of feedback would be beneficial It was generally reported that students received a greater level of feedback about written work, than they did about practical assessment in the clinical area through the proficiency assessment format In relation to the clinical assessment it was felt that more feedback would be beneficial at the intermediate stage of proficiency assessment This would allow time to improve by the time of final assessment In

relation to clinical assessment students made other comments

"I sometimes think that if you have a personality clash with someone in the ward for the six or eight weeks while you're there, they might not give you a fair comment "

"You get your assessment at the end It's a piece of paper If you're not having a problem, you think they should be a bit more positive If you were told that you handled something well it would give you that bit of a boost "

The independence of the older student in relation to feedback was a factor and it was typified by the following comment

"Sometimes you have to go and look for it and I think if you do that then you get your feed back " (Student 25 and over age group)

Levels of Understanding

Levels of understanding appear to be greatly influenced by contextual factors Reaching an understanding as a result of a learning experience represents the ultimate achievement Systems of examination and assessment provide a means of testing understanding in most formal educational systems It may be argued that the basis for describing the experience and process of reaching understanding must be the individual's own account In the context of this study, students were asked, 'how do you know when you understand something' Such experiences were reported in a diverse form,

- 1) Understanding was viewed from the perspective of fulfilling the formal requirements

"When I'm able to feed it back to them, no problem "

- 2) Understanding was viewed at a personal interpretative level

"I put my understanding into action and if it has the results that I think it

should have, then I'm happy Then I think I understand it "

"If I can recall it myself, recite it back later on "

"If I can explain it in my words "

- 3) Understanding was viewed as a process aimed at incorporating values inherent to the examination system

"I studied with one of the girls and we would read it and we'd break it down to our language in our heads and then discuss it and then we'd answer a question or two from an examination paper We would check over the question and see what we thought "

The breadth and depth of understanding are fundamental issues in distinctions made between deep learning and surface learning In seeking clarification on breadth and depth of learning students were asked, 'Are you able to get as good an understanding of every subject as you would like?' The range of responses served to highlight the influential nature of factors such as curriculum design, content, examinations and the teacher

"You're kind of bombarded from all angles and the amount of stuff you have to get through So what you end up doing is kind of skimming over it It's really exam learning and some things you won't carry with you " (RMN student)

"I suppose we hit on a lot of subjects " (RMHN student)

"I was told that you only start to learn and understand things when you qualify because you're not under pressure During training, you tend to learn things out of a book If you can memorise it and know it on the day You only have six hours on the day of final examinations to prove yourself, so you have to remember the important bits " (RGN student)

"I find some things very hard to understand "

QUESTION "Do you just give up on them?"

ANSWER "Yes, I have so far anyway The nervous system is one of them "

QUESTION "Why do you think that is?"

ANSWER "It can be myself not paying attention or I just can't get the hang of it or maybe the teacher is not delivering it well " (RSCN student)

It would generally appear that the curriculum places a greater emphasis on breadth rather than depth Examinations also provide a fundamental and prevailing influence over patterns of learning for understanding

Teaching/Learning Strategies

Students' teaching/learning preferences ranged from teacher controlled situations to more student-centred teaching approaches Distinctions were made between the greater learning potential of student led situations and the less pressurised situation of the teacher providing the information The following passage from an interview highlights this point,

"The easiest one would be lecturing "

QUESTION "That's your preference?"

ANSWER "It's the one I have less pressure in I think more comes out of a group but that can be a tougher experience at the end of the day "

QUESTION "Tough in what way?"

ANSWER "In that it's very focused on you Say if you come up with something, the whole class is focused on you, it's not like you're looking out onto a lecturer "
(RPN student)

Another student stated

"It's easier to let a teacher stand at the top of the room and tell you but the things I've learned most are things I've actually done for myself "

The 25 and over age group of students generally expressed a greater preference for more student-centred methods with the 24 and under group having a greater preference for teacher controlled situations

"I don't like the endless blockade of writing You never take it in I like the idea of research " (Student 25 and over age group)

"I like the teacher to have notes, put them on a projector, and go down through it The thing I least prefer is someone who comes in and says 'Just read down through that yourselves " (Student 24 and under age group)

"I like to discuss things in a group situation I find that beneficial like you hear other sides of it and other opinions " (student 25 and over age group)

Students' teaching/learning preferences were not projected as being constant and finite Preferences were subject to change based on the nature of the material to be learned

"My preference really depends on what's being done "

"I think it depends on the subject Some subjects are basic whereas others such as counselling a patient is a step-by-step process with a lot of background work "

On being asked for their views on self directed learning (S D L) the 24 and under age group expressed less satisfaction with S D L than did the 25 and over age group

"I prefer when things are handed to you I know that sounds really lazy but I think it's easier to learn " (Student 24 and under age group)

"No I don't feel I learn from self-directed learning I prefer when the teacher stands at the top of the class with her handout and we all have handouts and we go through the whole thing word for word in simple format with diagrams " (Student 24 and under age group)

The Psychiatric Training Programme places a greater emphasis on self-directed learning Such an emphasis and influence was reflected by psychiatric student respondents

"Self-directed learning was a whole new concept to me I think it's kind of inbred into me Every ward I go on, I use it

QUESTION You say it is 'inbred ' What do you mean?

"I mean it's pushed on us so much that it's an adjustment I've had to make and it has stuck"

The 25 and over age group respondents expressed a greater preference for self-directed learning However, it was highlighted that S D L does not simply mean being left in groups or being sent to the library S D L requires coordination and structure in relation to investigating subject matter, reporting back, and validating the information The role of the teacher was perceived as being central in arrangements made for S D L

"For some things, it works There are some things you know little about You've

done no group work and you're told to go and find out and come back with something Personally, I think you need a little more structure " (Student 25 and over age group)

"Self-directed learning is good if you know how much you have to learn You're sent sometimes to the library and you're given a topic There's so much information and you don't know, you could be heading to be a doctor You don't know which of the levels is enough for you as a nurse If you know the level, self-directed learning is good because it wakes you up You're fed the information sometimes and you don't think about it that much " (Student 25 and over age group)

"In school, it rarely works We end up talking to each other There's too many of us together I find at home, if I set a couple of hours aside, that's fine I learn it then As adults we shouldn't require someone to keep a bit of order But if the tutor is there, it means we discuss something I find that beneficial You learn other sides of it and you hear other opinions " (Student 25 and over age group)

Distinctly different study patterns were identified between the older and younger student groups Generally the older students indicated a greater preference for group study and sharing of information

"Whenever I have to study, I go off and study it on my own and then we meet up and everybody will discuss it " (Student 25 and over age group)

"I prefer to study in a group with somebody else We might end up at the kitchen table and never leave it just talking about different things And yet at the end of the day, I think you learn so much by listening to what other people are saying " (Student 25 and over age group)

"We would just sit down and tackle a topic There's parts I might understand and she mightn't or vice versa So you explain those parts to each other and then we usually would be quiet for a few minutes and learn it and hear each other " (25 and over age

group)

"I prefer to study on my own because with a group I would only start messing"
(Student 24 and under age group)

Curriculum Influences

The students' organisation of study time, including revision procedures, espouses certain values inherent to the organisation of the curriculum. The quantitative element of the study identified that examination and assessment are very influential factors in determining learning approaches and experiences. Therefore, the students' attitude to study, including revision procedures, may provide a greater insight into espoused curriculum values. Student nurses, on being asked for their views on the number and type of assessments overall, reported a level of dissatisfaction. Distinctions were made between school assessment and clinically based assessment through proficiency assessment. The lack of integration between both was generally reported as a negative experience. Again, comments could generally be clustered meaningfully on the basis of age. The 25 and over age group generally believed that they are over assessed given the constraints of the training programme.

"In the first year we were given a big burst of exams that decided whether we continued or not. I think that was very hard and it wasn't really fair." (Student 25 and over age group)

In relation to clinical assessment

"I don't know if the ward sister really knows you. I don't think proficiency assessment is really relevant to us. Each block we have an exam. It's as much as we could really cope with. We're working all week. We just have two days off during the week and wouldn't really have time to sit more exams." (Student 25 and over age group)

The 24 and under age group viewed assessments and examinations as a means to an

end, and as being a reliable indicator by which the student could view their progress through the course. It was clear that students recognised that registration as a nurse was granted on the basis of successfully writing five essay questions over three hours on the day of final examinations. Students therefore, perceived examinations, which are mainly conducted as written examinations, as providing an opportunity for practising written essays.

"We had more exams earlier in the programme. They could give us a bit more to do when we're on the wards. They could have a little more contact with us while we're not in block." (Student 24 and under age group)

"Written exams are better for me. You can do the work on your own, present it. It's much easier than presenting a project." (student 24 and under age group)

From a range of items, students were asked which of them helped them most when revising for examinations. Such items included:

- 1 Lecture notes
- 2 Text books
- 3 Revision notes prepared by yourself
- 4 Revision with other students

The responses provided a good insight into the range of individual techniques of student nurses in relation to revising for examinations. Other students, as resource people, were strongly reflected in the responses of the older students and were succinctly summed up by one 25 and over age group respondent:

"When you talk something out with somebody, you don't need your notes. You're making sure you know it and you start developing confidence about it. Then there are things you don't know which other students will tell you. You also tell them things they don't know. And there's the things that nobody knows and we all have to find out."

Revision notes prepared by the students themselves were reported as being the greatest source of help when revising for examinations. This is an interesting finding given the emphasis placed on text books and the perceived importance of the teacher's contribution, particularly through the notes provided. Text books were perceived as an aid, however, it was the student's own interpretation of the information/knowledge documented in his/her own style that were deemed to be the most useful.

"I'd take a chapter and go through it and I would write out the main points myself and have it there, making sense for me." (RPN student)

The importance of personal notes in relation to clinical learning was highlighted by a number of students.

"On the wards, I jot down little things that I see wrong with the patient or the test that he is having done and when I go home, I look up the information more fully, then I keep these little notes." (RGN student)

The relationship between personal notes and past examination questions was highlighted.

"I would work out the chapters I have to do. When I know I have the chapter covered properly, I would go through past final examination papers and pick out questions and try them." (RSCN student)

I usually buy small cards, 8x4. Under the heading, I will write down the key words. These words will trigger off a whole area." (RSCN student)

Lecturers' notes were reported as being of limited use. In one extreme comment, one student stated:

"At the end of the block, I burn all the notes I've taken in class. I always do that. I

know it sounds crazy I have to make out my own notes In class, you're trying to take it down as fast as they are talking and putting it on the board I find if I stop for half an hour and listen, I will remember what they said " (student 25 and over age group)

As a final question, students were asked to reflect over the two years of their training to date and to identify the greatest influence on their learning approach The clinical area was identified as providing a prevailing influence, particularly as through being able to associate a condition with a patient In relation to clinical learning one student stated,

"I don't think you could go through a ward without learning good or bad "

Other factors identified included,
the willingness of nurses who have just qualified to teach the student

"They're fresh from their exams, they could give you a little lecture You feel more at ease with them and you can ask the stupid questions that you didn't want to ask somebody else "

The influence of nurse tutors in the clinical area

"They're a great help They're on the spot They're there to help you You just tend to remember everything they tell you in the clinical area "

The influence of role models

"You see some nurses, some sisters, they're so efficient and you just think I wouldn't mind being like her in ten years time They'd get you going "

Aiming for success in the final examination

"My biggest influence is to pass my finals at the end of three years "

Staff keeping up to date as an influence on quality of learning environments

"A lot of staff are here a long time The information we have now, they probably never had "

"She's new and has kept up to date and she has us going all the time Students would be continually going to her "

Psychiatric students particularly identified the positive influence of the experiential nature of the course

"I think being involved in a group in this class with the two tutors involved as well, it's a different method of learning which we never experienced in secondary school "
(RPN student)

"It gives me a lot of confidence I'm more prepared to learn You're sitting in a group with your peers Also, you're getting a lot of feedback from everyone (RPN student)

Discussion

The analysis of the interview transcripts provides clarification and confirmation on many of the significant issues raised in the quantitative section The issues which were raised in this chapter of the report serve to characterise the learning profile of the student nurses in the Republic and highlight the sensitivities of the apprenticeship system of nurse training Having stood the test of time, the apprenticeship programme is now a stable entity in nursing and consequently, aspects related to its organisation and examination are well established

Students do not perceive the course as being particularly difficult Course intensity is

created by having to fulfil a dual role as learner and employee. The shaping of the training programme around a model of service requirement from students and the resulting lack of integration of theory and practice induced a perception of being 'thrown in at the deep end'. It may therefore be the case that a major component of 'trial and error' learning is taking place.

Generally, the students found the course interesting. The level of interpersonal skills development in the psychiatric programme was particularly highlighted positively. As was the case in the quantitative section, the clinical area was perceived to provide a rich source of learning. This was greatly enhanced where students were able to associate clinical conditions with particular patients. The powerful influence of role models such as the ward sister in the clinical area was a factor, and, where such models were perceived positively and professionally, they made a marked impression on students.

Students having identified the clinical area as a primary source of learning, identified many unsatisfactory aspects which minimised their learning experiences. Their credibility in the clinical area was often determined by their ability to contribute to the work of the ward. Students reported that staff attitudes became more favourable as they progressed through the system and they became more skilled. Having stated the importance of the clinical area for learning purposes, students perceived themselves as receiving less quality feedback about clinical learning than they did about written work. Newly registered nurses were considered to be influential on the students' learning because of their willingness to teach, and their ability to identify with the student role by seeing things from the perspective of the student. It may therefore be argued that the roles of newly registered nurses should be examined and developed in this area of teaching skills.

The lack of academic accreditation for the programme was reflected in responses related to curriculum matters. The absence of a modular type programme, often resulted in students, either being given the nursing theory at a time unrelated to the relevant clinical experience and practice, or being allocated to specific clinical areas

and not having the necessary nursing theory. The multiplicity of learning objectives, their relevance and application was unclear to the students. Whereas the students aimed for understanding through their learning, it would appear that the programme tended to focus and concentrate the students' learning on breadth rather than depth. Examinations served as a bench mark for understanding and students tended to gauge progress on their ability to answer questions from past examination papers. Students generally felt unhappy about examinations, particularly the lack of continuous assessment. Given the educational constraints of the programme, students (particularly the older students) believed they were over assessed.

The importance to students of revision notes prepared by themselves raises fundamental questions about approaches to teaching, particularly when one considers the vast amount of time and effort put into providing such lecturers notes. It may be argued that classroom approaches should be examined for more creative ways of facilitating student nurses to prepare their own notes under the guidance of the teacher.

The choice of teaching/learning methods appears to be influenced by subject matter. Students, for instance, perceived the subject of counselling and communications as requiring a different approach to the learning of anatomy and physiology. The influence of the particular orientation and the espoused learning approaches were also apparent. The psychiatric programme stipulated a requirement for self directed learning and, as a consequence, psychiatric students expressed a greater preference for its use. As one psychiatric student stated 'Self directed learning is kind of inbred into me. It's an adjustment I had to make'. It was commented that student led learning and independent approaches created more anxiety than did teacher controlled situations. However it was highlighted that student centred methods facilitated more and better learning.

The importance of the personal support role of the tutor, as well as teacher, was identified. Unfortunately, students felt that senior nurses' impressions of the student were based on their potential worth as employee and few staff got to know them as a

person and this was viewed as being unsatisfactory

Distinctions made previously between older and younger students, were further substantiated. The profile of the older cohort was one of a more mature and stable attitude towards a learning situation than was the case with the younger cohort. They also appear to have entered nursing with a greater insight into the demands of the course. If confronted with a problem or a challenge the older students would seek clarification, a course of action not readily pursued by the younger students. The older cohort felt that various rules and formalities as stipulated, at times, interfered with personal rights, and was an inhibiting learning factor. It was felt that the use of first names encouraged better relationships and a better learning environment. The older students' preferred more independent learning approaches, with the teacher, very much perceived in a facilitatory, rather than didactic role. In contrast to the younger the older students were prepared to assert themselves to maximise learning opportunities. They indicated that they would seek feedback and clarification on learning objectives. As a more general point, the older students' approach and attitude to the interviews were noticeably more relaxed, and there appeared to be no sense of inhibition or being threatened by particular questions.

CHAPTER 13

QUALITATIVE ANALYSIS - Northern Ireland

Perceptions of the Course

The Northern Ireland students' perceptions of the course appear to have been influenced by the facts that

- 1 Project 2000 is a new course and nurse education is in a transitional stage. Consequently, students, in response to some questions, tended to reflect a "guinea pig" mentality about the course.
- 2 A number of "traditional students" (students trained through apprenticeship) remained in the system at the time of interviewing. Therefore, comparison between Project 2000 students and traditional students, particularly in relation to clinical skills was inevitable. The Project 2000 students generally reported this as having an unsettling effect on them.

As regards the course, the Northern cohort described intensity, in terms of level of course difficulty, and the amount of individual responsibility placed on them to be in charge of their own learning. This is in contrast to the Republic, where intensity was viewed in terms of workload and pace.

"Yes, I think it's quite difficult. There's an awful lot that you're expected to learn but a lot of that's determined by yourself - by how much you want to learn."

When asked how nurse education differs from other forms of education, responses highlighted the independence and self-directed nature of the learning.

"Probably differs a lot. I take responsibility more for my learning than I did in school. In school everything was really structured."

"You were given homework, whereas here you have a lot of self-directed learning and an awful lot more responsibility. If you don't want to study, you don't have to."

It would appear that students, generally, perceived responsibility as arising from studying and learning, whereas in the Republic, responsibility tended to be linked to duty and service responsibility. Another significant finding was that students were conceptualising and relating views about the lack of definition and clarity on nursing knowledge.

"You just have to encompass all these different aspects. If you were doing a degree in archaeology, you just do archaeology. But in nursing, we have so many different bits. You have to pick up all these bits gradually and put them all together" (student nurse, 24 and under age group)

In terms of interest and relevancy, students expressed disenchantment, particularly in relation to the common foundation programme (CFP). Students identified particular problems in the CFP arising from a lack of structure, too much freedom and the relevance of some placements. However, some students reported that the significance of the first eighteen months CFP was just now being recognised in the third and last year of the programme.

"In the common foundation programme, we didn't think we had learned anything. We wanted to be out on the wards. It has now only started to come together in the branch programme."

"In the CFP, I questioned the relevance of subjects like sociology and psychology. But I think now, in the latter half, I see where they fit in."

"In the last eight months, things are starting to consolidate and I'm starting to look back and say 'things I learned a while ago I can now relate to in the wards'."

Students questioned the relevance of some clinical placements during the common foundation programme

"When you've seen one nursing home, you've seen them all "

"I was in a kiddie's creche I was in it for two weeks helping small kids eat and play What does that have to do with nursing?"

"The CFP was far too long, it could be condensed "

"The branch programme clears your head, you know where you're going "

Students generally expressed realistic and positive comments in relation to course organisation, aims and objectives

"I would say any problems in organisation are due to the fact that we are only the second intake going through the course It's going to take a while for troubles to be ironed out "

Students generally indicated that they were clear about the aims and objectives of a particular learning experience Aims and objectives were perceived to be particularly useful when applied by the nurse tutor in the clinical area The 25 and over age group of students recognised the importance of the objectives, however, they expressed certain reservations about their presentation

"They're very waffley A twenty sentence paragraph may be used unnecessarily" (student 25 and over age group)

"Sometimes the aims and objectives are couched in flowery language" (student 25 and over age group)

The course generally matched the students expectations However, in relation to the

future, students expressed certain reservations

"It's just the way staff nurses are treated and the hierarchical structure really bugs me
There's no great solidarity among nurses So I'm sort of disappointed in that"
(student 25 and over age group)

"These days, you look six months down the road and you have so much knowledge to
gain and how in six months you're going to qualify to be a staff nurse and be expected
to know everything That's the scary part Whether it prepares me adequately for
when I qualify, I don't know "

"I think it's really good that you get a diploma and that you go into that depth of
knowledge I think it's important for a nurse to have knowledge At the end of the
day, you're going to be working in the ward and having knowledge doesn't necessarily
mean you can nurse a patient "

Students reported no constraints as regards levels of independence afforded during
the course In fact, some students reported that too much independence was given,
particularly during the CFP

"They don't push you enough in the early years It's not organised, so you don't really
know where you're at" (student 25 and over age group)

"It offered me too much independence early on I needed someone to motivate me"
(student 24 and under age group)

"I never felt controlled You're left a certain amount of time, and you know if you do
need help, it's there " (student 24 and under age group)

Teacher/Student Relationships

Based on students' reports, it would appear that the Project 2000 programme is conducive to good student/teacher relationships. The tutor visiting the clinical area (link tutor) was particularly highlighted in a positive way. The link tutor maintained constant communication between the clinical staff and the school. The mentoring role of the link tutor and personal tutor was highlighted very positively.

"I've had two, young, pleasant tutors who I can talk to about everything - not just about work. And if it wasn't for them, I wouldn't have done well in my exams."

"A personal tutor is a good idea. They serve as a link between the class and the teaching structure - particularly if you have any problems with assignments."

Certain negative attitudes about ward experiences and relationships were expressed.

"In the ward, you're treated with some sort of suspicion and people just don't know how to treat us. We're sort of supernumerary. You have to push yourself or people just leave you standing there" (student 25 and over age group)

Whereas the descriptions of a good teacher closely resemble those given by students in the Republic, subtle differences were identified between the two groups. The Republic cohort, in the main, tended to describe a good teacher in terms of teaching ability and providing knowledge. The Northern Ireland cohort, however, tended to highlight other features beyond teaching ability.

"Somebody who meets the students as an equal."

"Somebody who has had a lot of experience and who has kept clinically up to date."

"Someone who understands everything you're going through and makes themselves available to you."

The numerous references to tutors' clinical backgrounds and being a good teacher is a significant statement in the context of the role of the tutor in the Project 2000 programme

Other than personal tutors, students did not report that staff got to know them well. Some students expressed discontentment and highlighted the unsatisfactory arrangement of having one tutor in the CFP and having a different tutor in the branch programme. Most respondents felt that the situation would be improved by having the same tutor the whole way through the programme.

Students reported general satisfaction with levels of feedback.

"There is opportunity with your tutor to evaluate how you're getting on."

"You get a progress assessment done by your tutor and if you're not doing well, you'll soon know about it."

The democratic nature of the teacher/student relationship was also highlighted.

"We get personal reports done at the end of each term. Your personal tutor will take you and share the report and ask you if you're happy with it and if you are, you sign it. If you're not happy with it, you discuss it with her."

"In each ward, you have an assessment form to fill out. You can judge from one assessment form to the next how you are improving."

"We rate ourselves and then the facilitator you're assigned to will rate you and then the tutor has a view."

"QUESTION: Would there be a difference between the three assessments?"

ANSWER 'then you and you're tutor work out why you gave yourself such a grade and then you sit together and work out the final grade '"

Levels of Understanding

When asked "how do you know when you understand something", the interviewees, without exception, referred to nursing practice

"When I can visualise myself providing care for Mr X in the bed and he has got the condition, and I can work out what I am going to do "

"It's like relating what you're doing in school to your practice and you go out on the wards and actually do it "

"People shove all the information at you and you think where does it relate It's only when you're out on the wards and they say something related to the subject that it clicks "

" If I am out on the ward and I can relate the theory to what is happening to the patient, for example, if I can relate liver complaints to my knowledge of the liver "

The responses generally reflected the nature of the programme, which is modular in design As such, relevant theory is provided in advance of a particular clinical experience Students generally believed that a greater amount of clinical experience would greatly enhance understanding

"I don't feel the course offers you enough clinical experience "

Students generally reported that the course provided them with a depth of knowledge

"We're affiliated to a university and although it's supposed to be a diploma course, it seems more like a degree course. They expect so much and such very high standards" (student 25 and over age group)

Teaching/Learning Strategies

A majority of students, when asked about a preferred teaching strategy, responded by saying it was dependent on the subject and that a wide variety of teaching approaches was best. Some students expressed a dislike for challenging methods.

"I don't like debates. It's stressful getting up there in front of 80 people and everybody's judging you on how you do" (student 24 and under age group)

The independent nature of the programme was reflected in some responses.

"I like them to go through the basic points with me and then give me a reading list or suggest ways in which I could get more depth, originally having outlined what I specifically need to know."

In comparison to the Republic cohort, learning nursing procedures and skills was perceived quite differently by the Northern Ireland cohort.

"I would like more practicals."

QUESTION: What do you mean?

ANSWER: To go to the practical room to practice procedures.

QUESTION: Not go to the ward to practice?

ANSWER: We prefer to get to the practical room first to carry out certain things before we go to the ward and get thrown in at the deep end."

This demonstrates the students' perceived importance of a level of preparation before ever entering the clinical area to gain clinical experience with patients/clients

This is particularly revealing in the light of a similar comment made by a respondent from the Republic cohort who said

"Sometimes you're thrown in at the deep end. You actually end up having to do it even though you don't have the theory behind it."

As was the case with the Republic cohort, the 25 and over age group were more positive about self-directed learning (SDL)

"I think SDL is a good idea, certainly for a mature student

QUESTION Why for a mature student?

ANSWER Because you have put a lot more thought into going into nursing. I don't know how I would have felt about it at 18 or 20. I don't think I would have had the level of discipline" (student 25 and over age group)

The amount of self directed learning in the CFP is a cause of concern to some students

"SDL, everybody does what they want, there's no structure" (student 24 and under age group)

"SDL is a good idea. I think it's good to be in control of what you learn. In the CFP we have a lot of it and it's too much" (24 and under age group)

"SDL is good if you're a motivated person but sometimes you just can't be bothered" (student 24 and under age group)

"SDL could be good. In the CFP we really did not know where we were at and we did not use the time purposely. When I think of it, if we had it now in the branch programme you would be inclined to study. Now I would love a month off and I would study because I know I have to study" (student 25 and over age group)

When questioned about study patterns a clear majority of respondents preferred to study and revise on their own. In contrast, there was greater support for group study among the Republic respondents.

Curriculum Influences

Continuous assessment techniques are part of the nurse education and training programme in Northern Ireland. Consequently, students appeared to be well informed about the requirements of individual assessments and were also well aware of the consequences of failure. However, taken overall, students expressed a general satisfaction with the realisation that registration as a nurse would not singularly be dependent on terminal examination, as is the case in the Republic of the Ireland.

" If you don't pass this one, you have to do it again. And then, you think if you fail again, well that's that "

The continuous assessment method insured that each assessment was formally recognised as a step towards completion of the course. This in itself, created a pressure for students to establish a high standard. An interesting point made by students was that despite such pressures, students felt in control of the assessment and that it was their efforts that would ultimately determine the standard.

"QUESTION: How could the intensity of the period of assessment be improved?"

ANSWER: If you plan your work better. I'm glad we're going into the final examination with half of it already done "

However a level of stress and anxiety is created around the time when assignments are due to be handed in

"Around exam times, everybody is just really worried. Everybody is panicking and worrying and there's so much stress put on you" (student 24 and under age group)

"There's too many essays in the CFP "

"Exam times are intense. I have been away from the exam scene and I found it stressful. But most people do" (student 25 and over age group)

Regarding the type of assessments, students reported that they had a variety of methods and they also expressed their preference for a variety of methods. The use of multiple choice questions was viewed positively by students. As part of continuous assessment, students had to undertake a research proposal. A number of students commented positively on this exercise.

A general level of concern was expressed by students in relation to clinical assessment. Students generally felt that clinically based staff lacked an understanding of the Project 2000 programme, particularly in relation to the levels of progress expected at various points in the programme.

"I'm now in my third year. Two and half months ago, somebody asked me if I knew how to do a blood pressure. Nobody knows what level you're at "

"I don't think the trained staff know what to expect from us at all. On my last placement, one of the nurses said, 'Can you take Mr X's blood pressure? Have you done that yet?' She said 'I don't mean to be rude, but I just don't know.' And I mean obviously we had done it "

When revising for exams, students reported that the greatest source of help was *revision notes prepared by themselves*.

"You condense the information to suit yourself "

"I put my revision notes on a tape and play them in a car I also play them at night before I go to bed and early in the morning because I know I can learn much better "

As a final question, students were asked to reflect over the two years and identify the greatest influence on their learning approach The influence of clinical learning featured highly in the students' replies The other main factor was the level of motivation to study at various points in the programme It would appear that during the common foundation programme, levels of motivation fell Students then had to try and get remotivated again during the branch programme as the learning demands increased

Discussion

The Northern cohort, in comparison to that in the Republic, held a different set of values about nurse education They perceived the course to be difficult and demanding in terms of depth of knowledge and assessment requirements The students gave an impression of being more questioning and assertive, particularly over conditions which may influence or direct their learning They were also more coordinated and vocal about wider professional issues, particularly conditions which might affect them as future staff nurses

The untested and experimental nature of the Project 2000 programme was evident in the responses This point was acknowledged by the students who adopted a realistic and objective view when expressing concerns Students were particularly vocal in their expressions of concern about the common foundation programme (CFP) They perceived a lack of structure and direction They also questioned the relevance of some of the content and placements provided during the CFP These factors contributed to an overall sense of disenchantment and a low level of motivation Students also reported an eagerness to get involved in the clinical nursing of sick people in hospital Overall, students felt that as learners, they could have been

challenged a little more during the CFP. Some students admitted that, as they were now getting involved in patient care, they were beginning to see the relevance of the knowledge provided during the CFP. It would appear that the CFP afforded too much independence, at too early a stage and a more balanced approach should be adopted in relation to the planning of the programme. Such a range of factors may account for the negative attitudes and surface learning approaches which were recorded during the first year on the approaches to learning inventory.

The independent learning status of the student and the consequent importance of good quality aims and objectives was stressed. Students believed that there may be a tendency to unnecessarily over-complicate and over-intellectualise the language used in learning objectives. Students did perceive the course as being of a high standard and providing a good depth of knowledge which they associated with academic accreditation and the award of a diploma.

The stress and demands of continuous assessment, particularly that which is associated with having to maintain a continuous standard to remain on the course, was a feature in the students' comments. Students were anxious about the consequences of failure however now that they were in the later stages of the programme, they were happy about having collected credits towards successful completion of the course. The utilisation of a range of assessment techniques, and particularly self-assessment, was reported positively by students.

For Project 2000 students clinical nursing was perceived as a prime source of learning. However, students were unhappy about certain aspects of the clinical learning environment. Some students felt that some registered nurses were unaware of their learning needs or their levels of attainment at particular points on the course. This, they believed, was not the case with the traditional programme where staff could conjure up an image of the attainments, needs and abilities of a first, second and third year student nurse. In attempting to combat this situation the older students were more assertive by 'pushing themselves' to prevent being 'left standing'. Students equated understanding, with ability to participate in nursing care. They also believed

that it was important to have a certain level of clinical skills proficiency before entering clinical areas to perform clinical skills on patients

The quality of tutor/student relationships appeared to be very important to students. Mentoring, teacher meeting the student as an equal understanding the student's personal needs, and teachers making themselves available and providing good levels of feedback, were all judged as vital elements in this relationship. Students valued the democratic nature of the programme, particularly, allowing opportunities for self assessment. The students identified the importance of tutors' clinical backgrounds and in keeping clinically up to date with clinical nursing knowledge. In some programmes of Project 2000 students have one tutor during the common foundation programme and a *different tutor for the branch programme*. It was felt that it would be much better if the student could continue with the same tutor from beginning to end.

Conclusions

"Sometimes you're thrown in at the deep end. You actually end up having to do it even though you don't have the theory behind it" (Student nurse, Republic of Ireland)

"We prefer to get to the practical room first to carry out certain things before we go to the ward and get thrown in the deep end" (Student nurse, Northern Ireland)

The above comments, from two student nurses, reflect fundamental and contrasting assumptions inherent in both types of programme. The Project 2000 programme aims to create "a knowledgeable doer" where theory and practice complement each other, in providing an understanding of nursing. In the apprenticeship system, theory and practice are provided in a disjointed and often unrelated pattern. This would appear to be primarily caused by building the programme of education around the necessity of having student nurses deliver actual nursing services. Some of the comments of the Northern Ireland students, as only the second group of students on this new programme, are influenced by the untested and very much experimental nature of the Project 2000 programme which does not yet appear to have established a stable set of learning conditions. The apprenticeship system has now been in existence for over 100 years, and, as such, the mechanics and structure of the programme are well established and stable.

The apprenticeship system is based on the premise that, "doing it" is often a useful way of "learning it" and, in turn, this would appear to be built on a trial and error approach to learning. Burnard and Chapman (1990) acknowledged the limitations of this approach, where students will constantly interact with different individuals and will learn to pick up nursing skills. In questioning such an approach, they state,

"Its ineffectiveness is obvious. Trial and error learning is painful, is inefficient in time and unreliable in outcome."

The Northern Ireland programme is perceived as allowing students, independence and self-direction and perhaps too much so, in relation to the common foundation programme. The levels of freedom which are afforded appear to have made the student more conscious of the importance of good quality aims and objectives. In the Republic, it would appear that a considerable number of learning objectives are used most with dubious interpretation and application. Students perceived the programme of nurse education and training in the Republic as placing an emphasis on breadth of knowledge, whereas the Northern Ireland programme is viewed as aiming to provide depth of knowledge.

Aspects related to the role of nurse tutor have been given a renewed emphasis in Project 2000. The nurse tutor role appears as central to ensuring quality in learning. Students highlighted aspects related to the clinical backgrounds of tutors, being up-to-date and having clinical involvement with the learning as being central issues in the maximisation of student nurse learning. A more democratic, rather than autocratic, role was perceived as being conducive towards enhancing the students education. The initial evaluation and feedback is reported as a vital ingredient to successful learning. Overall, students from both programmes believed that the nursing profession places too much emphasis on feedback in a negative situation, i.e., where the student has not achieved a satisfactory standard. Students felt that, giving praise and encouragement, is vitally important, in successful learning situations.

A greater level of personal development and understanding of the student as a person, and the trials and tribulations of being a student confronted with complex situations, would be a desirable feature in nurse education.

The whole area of study does highlight different scenarios, the Northern Ireland cohort with the possible exception of some older students, preferred to study on their own. The Republic, in contrast, had a greater preference for group study. This may be due to the fact that Northern Ireland have larger class sizes and students tend to feel more isolated. The Republic have smaller class sizes, and students appear to have developed a greater sense of camaraderie.

The student nurses' teaching/learning preferences appear to be subject-dependent. However, there is a greater preference for teacher controlled learning situations. The arrangements surrounding self directed learning appear to have contributed to its unpopularity for some students. Self-directed learning appears to have been applied as giving students a certain license and freedom to undertake a choice of study. Students indicated that this often contributed to unproductive learning patterns and that self-directed learning should have some structure, with the teacher occupying a more facilitative and involved role. The preference for "revision notes prepared by the students themselves" requires nurse educators to examine ways of including strategies to further enhance the preparation of the students' personal notes.

A difference in the values and views held by the older and younger students should be reflected in the curriculum orientation. The different views and values obtained from the four groups in the Republic and Northern Ireland supports the argument that learning is context dependent. Therefore teaching/learning strategies, educational methods and interactions and resulting values inherent in the system of nurse education do influence students. Younger students are more likely to be influenced by predominant and prevailing circumstances than are the older students.

Student nurse education is a complex phenomenon where students continuously find themselves in learning situations with an enormous potential for informal learning outside of the official curriculum. Therefore, the teaching staff need to spend time finding out about how their students learn the subject matter they teach. It is also clear that there is no single best way to teach and learn. There is therefore no possibility of finding single technical solutions to learning problems.

SECTION 5

SUMMARY AND CONCLUSIONS

Overview

This research study was concerned with student nurse education and training as provided through programmes of nurse education and training in Northern Ireland and in the Republic of Ireland. It was particularly concerned with student nurse learning approaches, learning experiences and teaching/learning preferences as described from the perspective of the student. A total of 1,122 student nurses were included in the study. This represented all student nurses who commenced nurse training in October 1991 in the Republic (N=714) and in Northern Ireland (N=408). By undertaking a comparative analysis of data, the influences of the different programmes of nurse education on learning was examined. Comparative analysis incorporated Northern Ireland and the Republic, the four programmes of nurse training in the Republic and an age factor distinguishing students 24 years and under from those 25 and over.

The research was essentially descriptive, and by means of a longitudinal approach, data were recorded in the first, second and third years of the programme. A research strategy of triangulation, including qualitative and quantitative measurements, was utilised in the collection of data. This research approach ensured breadth and depth of information on student nurse learning. The quantitative data were collected with instruments designed to measure approaches to learning, course experiences and teaching/learning strategies. The qualitative element included focused interviews and clarified the significant issues arising from the quantitative data analysis.

The student nurse's perspective formed the basis for judgments about nurse education and training in this study. The notion of examining learning from the perspective of the student as the consumer, and eventually the product of the educational system, is entirely consistent with the trend of accountability in publicly funded systems. This is based on the desired political objective of aligning nursing more closely with the goals of health services and the evolving health care trends.

Placing such a focus on nurse education is symbolic of the increased emphasis placed on practitioners and managers of nursing in a climate of efficiency, resource allocation and consumerism in health care. Therefore, this study fundamentally is derived from the increasing demand for economic models of nurse education as a process within a wider economic system which converts inputs (example, training costs) into outputs (example, registered nurses)

Performance indicators are a developing feature in educational systems. Quantifiable measures are reasonably well developed. However, as Ramsden (1985) suggested, the least refined performance indicators in education are those which concern one of its most important functions, teaching students. However, in all levels of education, there is an increased public awareness of the desirability for student evaluation of the quality of teaching and learning. The Irish Times (16 February 1983), outlined some of the concerns in Higher Education. It was highlighted, that generally, lecturers are employed for their mastery of the subject and it is often then assumed that they can convey the subject to a learner. The Irish Times article reported on a statement made by a representative of a student union,

"We have received many complaints from students about the lack of audio-visual aids and about the monotonous repetition of lecture notes, some lecturers have been reading the same notes, year-in and year-out"

In Britain, The Times Higher Education Supplement (18 March 1994) questioned the academic credibility of nurse teachers in Project 2000. It was argued that nurse teachers were deficient in their knowledge of biological sciences and it was identified that nursing should drop the requirement of an educational qualification in favour of nurse teachers holding degrees in academic subjects such as sociology and the biological sciences. It was suggested, that as medicine becomes more technologically advanced, and when nurses are increasingly required to practice in the community without supervision, that a lack of knowledge of the underlying science of medicine is positively hazardous. The article concluded that

‘Even the medical profession leaves the teaching of pre-clinical sciences to scientists. How is it that nurse teachers believe themselves able to instruct in subjects in which they are unqualified?’

This research is seminal in many respects since it provides a description of the relationships between how student nurses learn and the quality of learning. For nurse education, it challenges the notion of evaluating learning only in terms of numerical or quantifiable terms. In a context of nursing curriculum, it stresses the important functional relationship between intention, process and outcome and particularly between learning and the context of learning in nursing.

CHAPTER 14

THE FINDINGS

New Perspectives in Nurse Education

"The paradox of educational development in order to improve student learning, we must give attention to teaching and assessment. In order to improve teaching and assessment, we must look to student learning tinkering with what are assumed to be necessary learning skills without considering the learning context and the meaning of learning to the students is worse than useless" (Ramsden, 1985)

The process of data triangulation, and the interweaving of qualitative and quantitative findings, provided a rich source of information on student nurse learning, from the perspective of the student. In the broadest sense, the findings of this study may be beneficial in two distinguishable areas firstly as an evaluation of existing programmes and secondly, as a basis for policy development in the context of the evolving health services. The complexity of the topic of learning and the diversity of influencing factors as identified throughout the study, influenced decisions as regards the style of presentation of the findings.

This study identified a number of key factors which emerged from all measurements, and transcended all programmes, and therefore appear to be fundamental to student nurse learning. These are presented as twelve factors in a heuristic type model of student nurse learning which is discussed in Chapter 11 of this report. The findings therefore, will be explored in the context of the twelve factors, and where and when appropriate, individual propositions will be reflected on.

In devising a heuristic model, it became very clear that a number of dominant factors existed with a level of inter-relatedness occurring between them. The central argument in the study is that student nurse learning is context dependent. Therefore,

student learning profiles should not be seen as characteristic of the student but as a response to a situation. Students' constructs of learning in nurse education are dependent on their interpretation of the demands of the task, on the assessment and teaching to which it is linked, and on their previous knowledge, experience and personal characteristics. Although teachers do influence students' learning approaches, they do not determine them completely. Each individual student nurse interprets the requirement for him/herself.

The twelve factors in the heuristic model highlight the uniqueness of the student nurse's experience and the variety of qualities which they display as learners.

The major findings of the study are presented under each of the twelve factors and appropriate reflection will be made to distinguish the Republic and Northern Ireland, the four groups of student nurses in the Republic, and younger and older students. The twelve factors include:

- Factor 1 Understanding breadth and depth
- Factor 2 Interest and relevance of content
- Factor 3 Workload, amount, pace and difficulty
- Factor 4 Attitudes to course and enthusiasm
- Factor 5 Assessment and examinations - quality of feedback
- Factor 6 Organisation of study time and revision procedures
- Factor 7 Course organisation, goals and expectations
- Factor 8 Attitudes towards learning
- Factor 9 Teaching/Learning strategies
- Factor 10 Definition of a good teacher
- Factor 11 Levels of independence
- Factor 12 Differences between teaching/learning in nurse education and that experienced in previous forms of education

Factor 1: Understanding breadth and depth

Teaching for understanding represents the undisputable reserve of teachers. However, learning for understanding is the ultimate prerogative of students. It is perhaps on such a basis that the researcher makes the fundamental distinction between teaching and learning in nurse education. Learning is context dependent, and the formal and informal elements of the programme will create the learning context which will ultimately determine the levels of understanding achieved by the student. It is therefore difficult to engage in specific discussion on understanding since all other elements of the programme are determining factors.

This research has identified differences between groups of student nurses with regard to breadth and depth of understanding. It is clear that the Project 2000 programme has an explicit aim to provide nurses with a depth of knowledge. Students, however, reported predominant surface approaches and reproducing orientations during the common foundation programme. The Researcher concludes that it was the experimental nature of the programme and particularly, the lack of a stable set of learning conditions, that provided a major influence on students' approaches to learning. The cohort from the Republic on the other hand, reported a stable and deep learning orientation. This was attributed to the well established system of nurse training in the Republic, particularly the structural aspects of the programme. The Northern Ireland cohort perceived the programme as emphasising a good depth of knowledge and understanding of the clinical sciences. The Republic of Ireland programme was perceived as providing breadth of knowledge and understanding rather than depth of knowledge. In the Republic, the psychiatric cohort, particularly, reflected a very positive learning for understanding profile. The sick children's cohort portrayed a rather narrow, superficial and unimaginative type of educational approach with rote learning and learning restricted to a defined syllabus with predominant surface learning approaches.

Factor 2. Interest and relevance of content

Levels of interest and relevance have a major influence on levels of understanding. Student nurses from the Republic found the course interesting and most of the content relevant. Psychiatric students found that the emphasis placed on interpersonal skills development to be particularly interesting and relevant. Students from Northern Ireland had a rather ambivalent attitude concerning interest and relevance of content. The CFP appeared to have conjured up a degree of disenchantment and cynicism in students as it did not match the expectations of students. Students often failed to understand the relevance of some of the theory and the purpose of placements within the CCP. However, as they progressed through the programme, and reflected on previous knowledge and experiences gained in the early stages, they came to perceive a greater level of relevance in the content and experiences provided. The researcher would conclude, that from the Northern Ireland student nurse's perspective, the interest and relevant factor is mechanical (i.e., curriculum) rather than a structural (i.e., model) problem.

Factor 3 Workload, amount, pace and difficulty

Generally, student nurses perceive nurse education as being heavily content laden with insufficient time being afforded to get through all of the content. The distinguishing characteristic was that in the Republic of Ireland, student nurses described intensity and workload in terms of fulfilling a role as learner and employee, whereas the Northern Ireland student nurses described intensity in terms of learning demands and levels of course difficulty and assessment. Student nurses from the Republic were quite relaxed about the study and learning element of the programme, however, they did perceive themselves as not being able to take on any more theory or assessments, given the constraints of the programme. Student nurses from general and sick children's, nursing, particularly found the pace to be very fast and demanding and as providing little time for reflection. It therefore may be concluded, that in Northern Ireland, the programme concentrates the student's focus on aspects related to education and learning, in the Republic the requirement of service distracts the

student from a main focus on aspects related to education and learning

Factor 4 Attitudes to course and enthusiasm

An interesting pattern of events was identified as regards attitudes to the course. Project 2000 students, during the CCP, were cynical and disenchanted with the programme. However, as they progressed through the course, they reported much more positive attitudes. On the other hand, students in the Republic of Ireland were much more positive in the early part of the course, however, as they progressed through the course, their attitudes became far less positive. Older students appear to respond more positively to a Project 2000 type programme than they do to the values and approaches inherent in the traditional apprenticeship type training programme. The older group in the Republic, particularly, found hierarchical aspects, including patriarchal and matriarchal attitudes, uncomfortable and unsatisfactory to suitable learning conditions.

Factor 5 Assessment and examinations - Quality of Feedback

Assessment, examination and feedback exerts a very powerful influence on student nurse learning patterns. The number and type of assessments/examinations appears as a major influence in the student's focus of learning and the depth and breadth of student learning. A system of examination in nursing is perceived as testing memorised facts rather than understanding. Project 2000, in being a new course, and in striving for academic credibility appears to have laboured the area of assessment and examination. In contrast to the Republic, there is a greater number of assessments and level of diversity in assessment techniques, and this appears to have had a negative influence on learning. Students were experiencing a great fear of failure and being anxious about assessments. This appears to have been a primary factor in encouraging surface learning approaches, and discouraging deep learning. Continuous assessment techniques may also have influenced learning approaches by inducing persistent levels of anxiety in students as they aimed for consistently high standards, as required for maintaining their place on the course. This point has

previously been highlighted as far back as 1972. A student wrote,

"comparing continuous assessment with a final examination is like comparing months of nagging tooth ache with a sharp short pain of having the tooth removed" (Cowell, 1972)

Whereas continuous assessment was viewed as being more stressful than formal examination, students did perceive a sense of achievement throughout the course. Students in the Republic felt particularly aggrieved about the absence of continuous assessment, and the lack of recognition of their many successes during the course. They believed their future to be determined by their ability to pass the final registration examination. The type of assessment also influenced learning approaches. It has been shown that multiple choice approaches encouraged surface approaches to learning. In Northern Ireland colleges, the multiple choice question format is employed as an assessment technique, whereas in the Republic, essays are the main written approach to examination and assessment. The researcher would conclude that assessment and examination techniques provide a major influence in engendering surface approaches in Northern Ireland and deep approaches in the Republic. In the Republic of Ireland, the sick children's nurses were particularly anxious about assessment approaches, as compared to students from mental handicap and psychiatric nursing. This again may have been a contributing factor to a negative learning profile demonstrated by student nurses from sick children's nursing.

Feedback was projected as a vital cog in the wheels of evaluation and learning. The long standing nursing issue of positive feedback as being preferable to negative feedback was again raised by students. Student nurses believed that giving praise and encouragement is vitally important in successful learning situations. The profession of nursing was perceived as over concentrating on providing feedback in negative circumstances, when a mistake had been made. The researcher concludes that a much more balanced approach should be adopted to feedback and that such feedback should create a more positive dynamic in the profession. Nurse tutors must get better at telling people that they are doing a good job. Student nurses, particularly in

relation to clinical learning, perceived themselves as receiving less quality feedback than they do about written work. This should be of particular concern during a period of history, where it has been argued, that learning from practice and the issue of competency are indicators of professional maturity. Overall, student nurses from Northern Ireland perceived themselves as receiving better quality of feedback than students from the Republic of Ireland.

Factor 6 Organisation of study time and revision procedures

The structure and sequence of the course is a vital determinant of the student's organisation of study time. In the Republic, students have disorganised study methods, and it would appear, that the requirement of service, including unsocial hours, night duty, etc. influences the amount and quality of time available for study. Students in the Republic, overall, had a greater preference for group study. The study group, besides providing a learning focus, also served as a support group in a cathartic sense, where students could ventilate their feelings. The Northern Ireland students, generally, preferred to undertake individual study, away from the group setting. The more academic orientation, greater depth of knowledge and larger class sizes appears to have influenced study patterns in Northern Ireland. Therefore, students were provided with few opportunities to get to know one and other. In this study, older students had a greater preference for group study methods.

Student nurse revision procedures highlight a dilemma for nurse educators. All student nurses had a greater preference for "revision notes prepared by themselves". This issue should be considered by teachers of nurses when one recognises the amount of time and effort put into preparing such lecture notes. The researcher concludes that, classroom approaches should be examined for more creative ways of facilitating student nurses to prepare their own notes, under the guidance of the teacher.

Factor 7 Course organisation, goals and expectations

Distinctions between Northern Ireland and the Republic which have influenced levels of understanding have been made in an earlier part of this chapter. Recruits, particularly younger students enter nursing with many pre-conceived romantic ideas about nursing and it would appear, that the mind-set of the student nurse moves through various stages from 'romanticism' to 'idealism' to 'realism'. 'Romanticism' are those pre-conceived rather 'Mills and Boon' type images of nursing. 'Idealism' refers to the earliest images established through the earliest forms of teaching and introductory experiences of nursing. 'Realism' is the point of accepting learning conditions, in schools and clinical areas as they are. It is at the point of acceptance of reality, that learning in nursing, appears to be most successful.

In this study, Project 2000 students are anxious about certain placements in the CCP, as they do not match their romantic notions of nursing, which is nursing sick people in an acute hospital. The students were quick to reject the use of children's creches, nursing homes, etc as a nursing experience. However, having accepted the reality, later in the programme, the relevance of such experiences were more acceptable.

It is quite clear that irrespective of the programmes of a particular type of nursing, student nurses perceived the clinical area as the primary source of learning. Therefore, a school or college of nursing must ensure a quality learning environment in clinical areas. Unfortunately, student nurses in this study concluded that the arrangement for clinical learning is unsatisfactory. In the Republic, service requirements supersede the learning needs, and the students believe, that their credibility in the ward area, is determined by their ability to contribute to the work of the ward. In Northern Ireland, nursing staff were unaware of the students' learning needs or their levels of attainment at particular points in the course. Curriculum designers and teachers of nursing, in the interest of positive learning experiences, must consciously set out to correct any misconceptions there are in relation to clinical learning.

Colleges/schools of nursing, and their staff, essentially must clarify the course in a context of the student's perception and recognise the transition from romanticism to realism. An audit of clinical learning conditions and a greater emphasis on structured clinical learning and supervision is important. In Northern Ireland, a greater level of available information to registered nursing staff in clinical areas about Project 2000, would be a positive step towards improving clinical nurse learning.

Factor 8 Attitudes towards learning

It was identified that attitudes to learning are influenced by the individual's perceptions of the course. The course also determines a fairly consistent set of attitudes in all of the participants of a particular course, as was the case in the common foundation programme in Project 2000 and in the apprenticeship system in the Republic. The study identified the age of the learner as being a fundamental determinant of learning attitude. Positive learning attitudes can be reinforced by providing learning conditions which accommodate the basic differences between younger and older students in approaches to learning.

The older student adopted a more mature, reflective, and autonomous attitude, to learning. As a group of learners, the older students were much more homogeneous and consistent in their learning attitudes and consequently, were not so influenced by the different demands from the different programmes. Their more assertive and mature learning attitude provided them with a greater confidence in attempting to manipulate a variety of learning conditions. In contrast, the younger student was more likely to be influenced by predominant and prevailing circumstances and they were anxious and insecure in their learning attitudes. Overall, the older students appear to be less happy with basic education approaches applied in nurse education, particularly those espoused in the apprenticeship system in the Republic.

The motivation for learning may arise from within the programme. The negative influence of the CCP on motivation to learning induced a cynical and disenchanted attitude. A motivating factor in Project 2000 was the award of a qualification, and

students were conscious of career development. The course itself was perceived as a means to a end. Students in the apprenticeship system, however, displayed a more vocational attitude in their learning orientation, with less interest in self promotion and the course was perceived as an end in itself. Distinctly different attitudes were identified between the four groups in the Republic. Differences in learning approaches were identified between sick children's and mentally handicapped, and between psychiatric and general students. The programme of sick children's nursing in comparison with the other programmes, has a requirement for a greater number of weeks in the hospital services, and there are excessive demands for services made on this group. In particular, a negative learning profile was identified for the sick children's group. The psychiatric student programme is far less demanding as regards service requirement and a particularly positive learning profile was identified for this group.

Factor 9: Teaching/Learning strategies

The student nurse's choice of teaching/learning strategy is highly influenced by subject matter. The finding of significant differences between the various groups of students suggests that the contextual educational backgrounds, through a dominant curriculum orientation and teaching approach, may influence teaching/learning preferences. The influence of the self directed learning orientation in the psychiatric curriculum highlights this point. Psychiatric students indicated that self-directed learning has been conducted well and students have adopted it as an approach to learning. Student nurses do prefer teacher-directed methods, however, it would appear that self-directed learning approaches, particularly in general nursing, and Project 2000, have been applied in a less than satisfactory way. Failure to facilitate suitable learning environments has contributed to unproductive learning patterns and therefore, an unpopularity as regards choice of method. Self-directed learning approaches have a particular appeal to older students. It was indicated that self directed learning and individual learning approaches created more pressure than did teacher-controlled situations. However, it was highlighted that the student-centred methods facilitated more, and better, learning. The choice of teacher controlled

learning preferences for Project 2000 students suggests the need for further research and analysis to determine correlations between teaching and student learning given the increased emphasis on student-centred learning in Project 2000

Unlike the programme in the Republic of Ireland, the Northern Ireland programme places an emphasis on computer assisted learning and it is interesting that student nurses have a significantly greater preference for computer assisted learning than do students in the Republic of Ireland. It therefore may be argued, that it is possible, for nurse educators to play a greater role in diverting the student nurse to a greater level of appreciation and understanding of information technology, through facilitating computer assisted learning. Older students are more fixed in their teaching/learning preferences and are not so influenced by contextual differences as are younger students. A diversity in student nurse choice for teaching/learning strategies does support the need for teachers in nursing to have formal training in teaching methods. There is also, clearly, a need for defined criteria for effective teaching.

Factor 10: Definition of a Good Teacher

The study suggests that a good teacher in nursing cannot be described in the conventional sense of someone who imparts knowledge to an empty vessel. Unlike systems of higher education, learning environments in nursing are a complex proliferation of events, ranging from classroom to critical incidents and events involving birth, death and sickness. Therefore, before defining a good teacher, there is the question of who is a teacher of nursing. Student nurses perceive nurse teachers in many forms,

- (i) the influence of positive role models such as the ward sister,
- (ii) newly registered nurses because of their willingness to teach and ability to identify with the student role and being able to see things from the students point of view,
- (iii) the influence of peers through group study seminars and project presentation
- (iv) Mentors and preceptors through individual and contractual learning relationships with students

It therefore may be concluded that there are many teachers of nursing and much teaching of nursing outside of the registered nurse teachers' offerings. However, in spite of the number of contact persons, students felt a sense of personal isolation and a lack of personal support. Therefore, a very important emerging issue is the quality of student teacher relationships. Students, particularly from Northern Ireland, highlighted the importance of teachers meeting the student as an equal, making themselves available, and providing good levels of feedback. Student nurses do perceive the nurse tutor as occupying a pivotal and central role in their learning. Students also have very definite views about tutors' clinical backgrounds, their being up-to-date, and being involved in the clinical areas to enhance the learning environment. Tutors must review their relationship with students, particularly, with older students. The extent of the requirement for formal relationships, the use of first names, and understanding of individual needs, are fundamental issues which can either enhance or inhibit learning potential. Nursing has traditionally placed a greater emphasis on teaching rather than learning. In re-directing the focus to learning, tutors must adopt less didactic roles and provide more facilitatory and less directive approaches. The tutor must also adopt a more active role in the clinical environment by enabling things to happen for learning purposes. Providing a list of learning objectives in a clinical area should no longer be viewed as a panacea for student nurse learning. Education is heavily content laden, and a shortage of time often limits learning to a defined syllabus, this will continue to present a dilemma for nurse tutors. It is also often the case in the Republic, that student's examination results, unfortunately, continue to be a source of unfounded evaluative comment. It is concluded that nurse teachers need to reflect on what they do, particularly that which influences the relationship between the student and what they learn. It is then the responsibility of the nurse tutor to act on what they have learned about that relationship and their part in it.

Factor 11 Levels of Independence

Independence is a relative factor which is influenced primarily by programme, subject to be learned, and age of learner. Programmes aimed at more autonomous learning

will require, a particular emphasis in supportive learning strategies. The Project 2000 programme encourages independent learning conditions. Consequently, students in Northern Ireland were more assertive than in the Republic in highlighting the importance of good quality aims and objectives in directing their learning oriented activities. The continuous assessment approach encouraged the individual to establish a standard throughout the Project 2000 course. This, in itself, was perceived as placing the control of assessment at the level of the individual. The inclusion of self-assessment was perceived as democratic and acceptable and as respecting the importance of the individual engaged in the education process. Independence for the learner does not imply a solitary existence outside of teacher structured situations.

Teacher support is essential to ensuring positive attitudes in the independent learning status. This point may be highlighted in relation to the psychiatric student nurse where students did perceive themselves as having independence, however, students did not perceive the course as giving them a lot of choice in what they had to learn. Therefore, independence was presented within a prescribed format. Older students, as learners, place a greater value on independence. Patriarchal and matriarchal attitudes, including various rules and formalities, were perceived as sometimes interfering with their rights, and were viewed as an inhibiting learning factor. It is concluded that independence does not mean a license for trial and error. Independence operates within the boundaries of a course and by means of information and support structures, the student becomes self confident and less dependent, leading to a maturity in learning orientation.

Factor 12 Differences between teaching/learning in nurse education and that experienced in previous forms of education

No student who enters nursing has not previously experienced some form of teaching and learning. The antecedent learning status of the student, in a fundamental way, is influenced by previous learning experiences. Students therefore, have preconceived ideas about learning, however uncertain they may be about its application in a context of nursing. In comparing nurse education with other forms of education, students

identified the level of personal commitment required from student nurses as being a major issue. Nurse students, generally, have had previous class room learning experiences, however the notion of learning in the clinical environment is new. This is further compounded by the wearing of a uniform and an imposed new status on the learner. Students, as learners, are products of their previous learning environments. It is therefore important to assess teaching/learning preferences at the commencement of nurse training. Understanding the individual's learning profile may provide an aid to success by facilitating preferred teaching/learning conditions. Therefore, learning can be constructed from a positive standpoint of building on the student's strengths. Nurse education traditionally has tended to build on a new beginning around the individual without including the individual's learning past.

Implications for Nursing Education

"To make meaning, means to make sense of an experience, we make an interpretation of it. When we subsequently use this interpretation to guide decision making or action, then making meaning becomes learning" (Mezirow, 1990, p1)

Learning in nursing has been traditionally perceived as occurring in two different environments: the school of nursing and the clinical area. This research identifies that learning in the clinical area is based predominantly on learning to perform while in the school, learning is viewed as understanding what is being communicated. This study perceives a need for the integration of theory and practice and suggests that the way forward is by the incorporation of significant learning contextual factors into the development and operation of the nursing curriculum. This will serve to focus the system on variability in the quality of learning rather than on stability in human attributes and nurse education will operate on a built-in assumption that intervention can improve learning. It is clear, that during this present decade, much of the impetus for change and innovation in health care has come from government reforms. In such a climate, nurses' freedom to learn as health workers is relative to their ability to justify what is appropriate to learning about health care and about exactly what it is they want to achieve by learning. This could be described as

freedom to learn with responsibility. Fundamentally this study provides a basis for determining how the objectives of the profession and the health services generally might best be realised and therefore it offers an insight into how we might move forward, in both countries.

Essentially, this study, through its findings, provides information on two main issues:

- (a) it provides the nursing profession with an evaluation of learning in nurse education and how certain tools may be used to evaluate such education
- (b) it provides educators with a series of factors which are considered important in the development of a learning orientated curriculum in such education

Consistent with trends in health care and activities in other occupations and professions, the future role of nurse education should be to prepare the nurse for lifelong learning and innovation, not for a lifelong job. The reality is that the assumption that pre-registration nurse education provides knowledge and skills which lasts for life is obsolete. A nurse's knowledge and skills will have to be continuously upgraded throughout a nurse's professional career. As Cross (1981) argued, it would be difficult to live in a society which is changing as much as ours, without continuing to learn new things. She goes on to state,

‘that when life was simpler, one generation could pass along to the next generation what it needed to know to get along in the world. Now the world changes faster than the generations and individuals must live in different worlds in their lifetimes’ (p1)

The changing activity in health services and the inclusion of greater levels of technology will mean that nurses may have several careers during their professional working lives and they will increasingly have to take responsibility for their own learning and in-career development. Education, therefore, will be a critical resource in nursing. The quality of student nurse learning, with a focus on learning how to learn, in a fundamental way, will be a major determinant of attitude toward life long learning.

In an evaluative sense, this study does confirm some of the findings of previous research on nurse education and training and provides an important insight into a system in a rapid process of transition. Some of the findings of the evaluative studies on Project 2000 programmes in England (NFER 1994, Elkan et al 1993) are confirmed in a context of Northern Ireland. The interest and relevance of some elements of the CCP and the need to promote its significance to students from the beginning of the programme is confirmed. An insecurity is imposed on students by the traditional thinking of registered staff in clinical areas, where students consider themselves to be less competent in practical skills than they believe traditionally trained student nurses to be at the equivalent stage of training. The negative impact of assessment and examination on the depth of learning introduced a sense of pseudo-intellectualism as nurse education moves from its traditional mould to a new paradigm.

In the Republic, some of the hallmarks of the traditional apprenticeship system are clear. The service requirements of students superseded their learning needs. Students in the main had to chart their own passage in providing care with the possibility of providing perfunctory and incorrect care. Learning situations were often taken for granted and the concepts of 'learning from practice and learning in practice' are not comfortable in today's clinical area where there is a rapid turnover of patients/clients and an increasing level of sophistication and technology.

At this critical period in the evolution of nurse education, where there is a move towards a new paradigm, it is vital that the process of nurse education is derived from a viable model of learning. There is evidence in this research, to suggest, that in nurse education, there should be a greater emphasis on learning rather than on teaching.

In nurse education, the teaching of nursing, as influencing the learning of nursing, requires further examination and debate. The role of the nurse tutor in the clinical area in the Republic appears to be insignificant. The implementation of Project 2000 has not, as yet, resulted in a marked altered division of responsibility for teaching and

supervision of student nurses in the clinical areas. This research identifies that the student nurse does value the nurse tutor in the clinical area, particularly through the contact time, and as advocate and mentor. The refreshing and positive influence on student nurses of newly qualified staff nurses, as identified in this study, does suggest the need for pilot schemes that might evaluate such a teaching role, in a context of staff nurse career development. This research confirms the students' preferences for teacher centred approaches. However, the study identifies the need for an evaluation of the whole concept of self-directed learning in nurse education, with particular reference to the role of the nurse teacher. Nurse education has also a responsibility to provide an appreciation of, and basic skills, in information technology.

This research identifies the need for a more concentrated focus on the personal development of the student. The importance of personal support roles, through mentoring and getting to know the learner as a person, are vital elements in the educational process. Student nurses do not enter a learning situation as an empty jug needing to be filled with learning (the so-called 'jug and mug' theory). They come to the learning situation, with preconceptions, and feelings engendered by the transition from childhood to teenager to adult. In such a context, nurse education must take nothing for granted, and must define the fixed variables in the learning environment and discuss the implications for individuals in their learning responsibilities. A major element of teacher learner interaction should therefore be aimed at empowering the learners to define their own reality as they progress through the education and training programme. A previous study, (Bradby 1990), has demonstrated the lengths that nurses go to as an occupational group, to avoid addressing some of the very emotional and painful aspects of learning, and dealing with the internal conflict brought about by working with people at their most vulnerable and dependent. In nurse education, therefore, there must be a greater focus on the affective domain of learning and nurse educators will have to recognise both positive and negative influences which emotional responses can have on a person's willingness and readiness to learn.

The nursing curriculum is heavily content laden and therefore requires a greater

definition, as regards variations, in depth or breadth, in particular subject areas. Student nurses perceive a great incoherency in the application of the curriculum in the Republic of Ireland. In some cases, the failure to facilitate the theory at a time appropriate to practice, as through a modular curriculum design, has seriously disadvantaged the student as a learner. There must therefore be a greater emphasis on curriculum development in the Republic of Ireland.

This research has identified specific differences between older and younger students as regards learning. In the interest of achieving quality learning systems, it is considered important that such differences, be not only reflected in a course philosophy, but also in day to day operational teaching/learning strategies. Inclusion of the older students' learning approaches, and preferences, are essential to productive nurse education and training patterns. This is even more important in the light of the expected increase in the number of older students entering nursing in the future due to changing demographic circumstances.

The differences identified between the five groups of student nurses in the five different programmes supports the context dependency of learning. However, the various patterns in relationships identified between the groups of students have further implications. In the Republic of Ireland, general students reported a learning profile more akin to sick children's students and psychiatric students reported a learning profile more akin to mental handicap students. Such findings provide support for the establishment of a level of common core programmes between general and sick children's and between psychiatric and mental handicap with a greater specialisation in particular areas following registration. This proposal is further strengthened by the practice emphasis. General and sick children's student nurses primarily provide care for physical ailments of a medical and surgical nature. Psychiatric and mental handicap nurses, primarily, provide care to persons with mental and brain disorders including psychological and socially related problems. Traditionally, the curriculum for general and sick children's nursing has adopted a predominant biological and physiological basis whereas the curriculum for psychiatric and mental handicap nursing has predominantly been based on the behavioural and

The pattern of results obtained for the four groups in the Republic raises the issue of distinctly different professional sub cultures and values within the various divisions of registers of nursing. This finding raises the question as to what extent the common foundation programme in Northern Ireland (where all students irrespective of registration are provided with a common education) either weakens or strengthens the sense of professional identity with the sub cultural aspects and values of general, psychiatric, mental handicap and sick children's nursing.

As a final remark, the profession of nursing must be deliberate in pursuing quality learning in nurse education and training and must be determined in its explicit procurement of the type of education desirable for the future practice of nursing. We must now ask ourselves, does nursing require practitioners who are subservient and compliant to demands from above or does it need practitioners who are self-directing, problem solvers and analytical. Learning, as the functional responsibility of the student nurse responding to the system, will ultimately determine the answer to that question.

Limitations of the study and recommendations for further research

- 1 Project 2000 is a new programme and students were in their first year when some of the data were obtained. Therefore some of the results pertaining to Northern Ireland may have been the result of the major change involved, rather than the specific characteristics of the new curriculum.
- 2 Correlations between the scales of the approaches to learning instrument and the scales of the course experience instrument would have provided a broader and fuller perspective on learning. It is the intention of the researcher, at a later date, to explore the possibility of correlations on the basis of individual school/college results.

- 3 The collection of data from nurse tutors as regards their perceived role in student nurse learning would have provided an interesting discussion point in the context of this study. It is recommended that smaller scale, and more intensive, research involving a number of schools and including the student and teacher be undertaken to examine learning. Such research should examine the study patterns of students, including keeping diaries, recording type of study and periods of time spent studying.
- 4 In this study, teaching was examined from the perspective of the student only. Further research, which includes the nurse tutor, should be undertaken, to investigate the influence of the nurse teacher on student learning by virtue of their predominant teaching strategy. In the Republic, an investigation to identify the predominant teaching strategy employed by nurse tutors in general, psychiatric, sick children's and mental handicap nursing would provide a basis for correlating teacher applied strategies against student nurse and teaching learning preferences.
- 5 The approach to the collection of data on the teaching/learning preferences instrument restricted the statistical analysis. As the questionnaire included ratings, the results cannot be judged as precise measurements. However, in the context of the overall research and the literature, they do confirm certain patterns.
- 6 The research could have provided a greater breadth of information on learning, had further analysis been undertaken on the basis of sex of the student. The small number of males in this study, in certain categories, reduced the potential for this exercise.
- 7 The inclusion of elements related to examination performance would have facilitated certain correlations of learning approach and experiences against examination results.

- 8 As distinctions were made between learning in the clinical area and learning in the classroom, it is recommended that a further study be undertaken to evaluate the learning contextual differences between the two environments

- 9 Piloting of a new curriculum on the basis of the findings of this thesis is recommended

APPENDIX A

APPENDIX A

APPROACHES TO LEARNING QUESTIONNAIRE

INFORMATION AND INSTRUCTIONS PRIOR TO COMPLETION

Dear Students,

I request your help with this piece of nursing research which I, as a nurse, believe is significantly important in the context of evaluating nurse education and training

The research is aimed at gaining an understanding of the learning styles of student nurses and the research will be conducted with the help and co-operation of all student nurses who commenced a first programme of nurse education and training in Northern Ireland and the Republic of Ireland in Autumn 1991

As the research methodology primarily aims to examine nurse education from the perspective of the student nurse, each individual student nurse's help is vital to the success of this project

I therefore request your co-operation by completing this questionnaire. Later on in your training I will be contacting you again so as to obtain further information

INSTRUCTIONS TO STUDENTS ABOUT COMPLETING THE QUESTIONNAIRE

- 1 Please reply to all questions. Remember **there are no right or wrong answers.**
- 2 No personal identification is requested on the questionnaire and all information will be treated confidentially by the researcher
- 3 Answers are required to 64 individual questions. Circle the number beside each statement which best conforms to your answer. (See page 2 of the questionnaire for further explanation.)
- 4 When the questionnaire is completed it should be given to your course tutor

Thank you in anticipation of your support

Seamus Cowman

APPENDIX B

APPENDIX B

COURSE EXPERIENCE QUESTIONNAIRE

INFORMATION AND INSTRUCTIONS PRIOR TO COMPLETION

Dear Students

Thank you for your help last year when you completed my research questionnaire. I now once again request your help and co-operation by completing a further questionnaire.

Just to remind you that the research is aimed at gaining an understanding of the learning approaches of student nurses and the research will be conducted with the help and co-operation of all student nurses who commenced a first programme of nurse education and training in Northern Ireland and the Republic of Ireland in autumn 1991.

As the research methodology primarily aims to examine nurse education from the perspective of the student nurse, each individual student nurse's help is vital to the success of this project.

The research once completed hopefully will contribute significantly towards understanding nurse education and training. I therefore request your co-operation by completing this questionnaire.

INSTRUCTIONS TO STUDENTS ABOUT COMPLETING THE QUESTIONNAIRE

- 1 Please reply to all questions. Remember there are no right or wrong answers.
- 2 No personal identification is requested on the questionnaire and all information will be treated confidentially by the researcher.
- 3 Answers are required to 30 individual questions. Circle the number beside each statement which best conforms to your answer. A greater explanation on how to answer is on page 1 of the questionnaire.
- 4 When the questionnaire is completed it should be given to your course tutor.

Thank you in anticipation of your support.

Seamus Cowman

APPENDIX C

APPENDIX C

Section A

BACKGROUND DETAILS

1 AGE (Please circle appropriate code number)

18 or less	1
19-21	2
22-24	3
25-34	4
35 or more	5

2 SEX (Please circle appropriate code number)

Male	1
Female	2

3 HOW WELL DO YOU THINK YOU ARE DOING SO FAR ON THE COURSE, COMPARED TO OTHER STUDENTS?

Badly	1
Below Average	2
Average	3
Above Average	4
Very Well	5

Section B

APPROACHES TO STUDYING

In this section I would like you to show whether you agree or disagree with each of the statements listed below. I am interested here in your approach to studying.

Please circle the number beside each statement which best conforms with your view.

- 4 - means Definitely agree
- 3 - means Agree with reservations
- 1 - means Disagree with reservations
- 0 - means Definitely disagree
- 2 - is only to be used if the item doesn't apply to you or you find it impossible to give a definite answer

CODE

- 4 - Definitely agree, 3 - Agree with reservations
 - 1 - Disagree with reservations, 0 - Definitely disagree
 - 2 - does not apply/cannot give a definite answer
-

- | | |
|---|-----------|
| 1 I find it difficult to organise my study time effectively | 4 3 1 0 2 |
| 2 I try to relate ideas in one subject to those in others, whenever possible | 4 3 1 0 2 |
| 3 Although I have a fairly good general idea of many things, my knowledge of the details is rather weak | 4 3 1 0 2 |
| 4 I enjoy competition. I find it stimulating | 4 3 1 0 2 |
| 5 I usually set out to understand thoroughly the meaning of what I am asked to read | 4 3 1 0 2 |

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

6	Ideas in books often set me off on long chains of thought of my own, only vaguely related to what I was reading	4	3	1	0	2
7	I chose nursing mainly to give me a chance of a really good job after becoming a registered nurse	4	3	1	0	2
8	Continuing my education was something which happened to me, rather than something I really wanted for myself	4	3	1	0	2
9	I like to be told precisely what to do in essays or other assignments	4	3	1	0	2
10	I often find myself questioning things that I hear in lectures or read in books	4	3	1	0	2
11	I generally prefer to tackle each part of a topic or problem in order, working out one at a time	4	3	1	0	2
12	The continual pressure of study - assignments, deadlines and competition - often makes me tense and depressed	4	3	1	0	2
13	I find it difficult to "switch tracks" when working on a problem I prefer to follow each line of thought as far as it will go	4	3	1	0	2
14	My habit of putting off study leaves me with far too much to do at the end of study block or just before examinations	4	3	1	0	2
15	It's important to me to do really well in nursing	4	3	1	0	2

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

16 Tutors/lecturers seem to delight in making the simple truth unnecessarily complicated	4	3	1	0	2
17 Distractions make it difficult for me to do much effective study in my own time	4	3	1	0	2
18 When I'm doing a piece of work I try to bear in mind exactly what that particular tutor/lecturer seems to want	4	3	1	0	2
19 I usually don't have time to think about the implications of what I have read	4	3	1	0	2
20 Tutors/lecturers sometimes give indications of what is likely to come up in exams, so I look out for what may be hints	4	3	1	0	2
21 In trying to understand a puzzling idea, I let my imagination wander freely to begin with, even if I don't seem to be much nearer a solution	4	3	1	0	2
22 My main reason for being here is that it will help me to get a better job	4	3	1	0	2
23 Often I find myself wondering whether the work I am doing here is really worthwhile	4	3	1	0	2
24 I generally put a lot of effort into trying to understand things which initially seem difficult	4	3	1	0	2
25 I prefer courses to be clearly structured and highly organised	4	3	1	0	2

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

26 A poor first answer in an examination makes me panic	4	3	1	0	2
27 I prefer to follow well tried approaches to problems rather than anything too adventurous	4	3	1	0	2
28 I'm rather slow at starting to study in my own time	4	3	1	0	2
29 In trying to understand new ideas, I often try to relate them to real life situations to which they might apply	4	3	1	0	2
30 When I'm reading I try to memorise important facts which may come in useful later	4	3	1	0	2
31 I like to play around with ideas of my own even if they don't get me very far	4	3	1	0	2
32 I generally choose courses more from the way they fit in with career plans than from my own interests	4	3	1	0	2
33 I am usually cautious in drawing conclusions unless they are well supported by evidence	4	3	1	0	2
34 When I'm tackling a new topic, I often ask myself questions about it which the new information should answer	4	3	1	0	2
35 I suppose I am more interested in the qualifications I'll get than in the course I'm taking	4	3	1	0	2

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

36 Often I find I have to read things without having a chance to really understand them	4	3	1	0	2
37 If conditions aren't right for me to study, I generally manage to do something to change them	4	3	1	0	2
38 In reporting back on a patient's care I like to try to work out several alternative ways of interpreting his problems	4	3	1	0	2
39 My main reason for being here is so that I can learn more about the subjects which really interest me	4	3	1	0	2
40 In trying to understand new topics, I often explain them to myself in ways that other people don't seem to follow	4	3	1	0	2
41 I find I have to concentrate on memorising a good deal of what we have to learn	4	3	1	0	2
42 It is important to me to do things better than my friends, if I possibly can	4	3	1	0	2
43 I find it better to start straight away with the details of a new topic and build up an overall picture in that way	4	3	1	0	2
44 Often when I'm reading books, the ideas produce vivid images which sometimes take on a life of their own	4	3	1	0	2
45 One way or another I manage to get hold of the books I need for studying	4	3	1	0	2

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

46 I often get criticised for introducing irrelevant material into my essays or tutorials	4	3	1	0	2
47 I find that studying academic topics can often be really exciting and gripping	4	3	1	0	2
48 The best way for me to understand what technical terms mean is to remember the text-book definitions	4	3	1	0	2
49 I certainly want to pass the next set of exams, but it doesn't really matter if I only just scrape through	4	3	1	0	2
50 I need to read around a subject pretty widely before I'm ready to put my ideas down on paper	4	3	1	0	2
51 Although I generally remember facts and details, I find it difficult to fit them together into an overall picture	4	3	1	0	2
52 I tend to read very little beyond what's required for completing assignments/examinations	4	3	1	0	2
53 Having to speak in class is quite an ordeal for me	4	3	1	0	2
54 Puzzles or problems fascinate me, particularly where you have to work through the material to reach a logical conclusion	4	3	1	0	2
55 I spend a good deal of my spare time in finding out more about interesting topics which have been discussed in classes	4	3	1	0	2

CODE

- 4 - Definitely agree, 3 - Agree with reservations
1 - Disagree with reservations, 0 - Definitely disagree
2 - does not apply/cannot give a definite answer
-

56 I find it helpful to 'map out' a new topic for myself by seeing how the ideas fit together	4	3	1	0	2
57 I seem to be a bit too ready to jump to conclusions without waiting for all the evidence	4	3	1	0	2
58 I hate admitting defeat, even in trivial matters	4	3	1	0	2
59 I think it is important to look at problems rationally and logically without making intuitive jumps	4	3	1	0	2
60 I find I tend to remember things best if I concentrate on the order in which the tutor/lecturer presented them	4	3	1	0	2
61 When I'm reading an article or research report, I generally examine the evidence carefully to decide whether the conclusion is justified	4	3	1	0	2
62 Tutors/lecturers seem to want me to be more adventurous in making use of my own ideas	4	3	1	0	2
63 When I look back, I sometimes wonder why I ever decided to come here	4	3	1	0	2
64 I find nursing topics so interesting, I should like to continue with them after I finish this course	4	3	1	0	2

APPENDIX D

APPENDIX D

COURSE EXPERIENCE QUESTIONNAIRE

1 Age (Please circle appropriate code number)

- | | |
|------------|---|
| 18 or less | 1 |
| 19 - 21 | 2 |
| 22 - 24 | 3 |
| 25 - 34 | 4 |
| 35 or more | 5 |

2 Sex (Please circle appropriate code number)

- | | |
|--------|---|
| Male | 1 |
| Female | 2 |

Please circle the number beside each statement which most accurately reflects your view

1 - means Definitely agree

2 - means Agree but with reservations

3 - means That you are not sure or that it does not apply

4 - means Tends to disagree

5 - means Definitely disagree

Please answer all questions

- | | | |
|---|--|-----------|
| 1 | It is always easy here to know the standard of course work expected of you | 1 2 3 4 5 |
| 2 | There are few opportunities to choose the particular areas you want to study | 1 2 3 4 5 |
| 3 | The teaching staff of this course motivate students to do their best work | 1 2 3 4 5 |
| 4 | The study work load is too heavy | 1 2 3 4 5 |
| 5 | Lecturers here frequently give the impression that they have not anything to learn from students | 1 2 3 4 5 |
| 6 | You usually have a clear idea of where you are going and what is expected of you in this course | 1 2 3 4 5 |
| 7 | Staff here put a lot of time into commenting on student's work | 1 2 3 4 5 |

Code 1 - Definitely agree 4 - Tend to disagree
 2 - Agree with reservations 5 - Definitely disagree
 3 - Not sure or does not apply

8	To do well on this course all you really need is a good memory	1 2 3 4 5
9	The course seems to encourage us to develop our own academic interests as far as possible	1 2 3 4 5
10	It seems to me that the syllabus tries to cover too many topics	1 2 3 4 5
11	Students have a great deal of choice over how they are going to learn in this course	1 2 3 4 5
12	Staff here seem more interested in testing what we have memorised than what we have understood	1 2 3 4 5
13	It is often hard to discover what is expected of you in this course	1 2 3 4 5
14	We are generally given enough time to understand the things we have to learn	1 2 3 4 5
15	The staff make a real effort to understand difficulties students may be having with their course work	1 2 3 4 5
16	Students here are given a lot of choice in the course work they have to do	1 2 3 4 5
17	Teaching staff here normally give helpful feedback on how you are doing	1 2 3 4 5
18	Our lecturers/tutors are extremely good at explaining things to us	1 2 3 4 5
19	The aims and objectives of this course are not made very clear	1 2 3 4 5
20	Teaching staff here work hard to make their subjects interesting to students	1 2 3 4 5
21	Too many staff ask us questions just about facts	1 2 3 4 5
22	There is a lot of pressure on you as a student here	1 2 3 4 5

Code 1 - Definitely agree 4 - Tend to disagree
 2 - Agree with reservations 5 - Definitely disagree
 3 - Not sure or does not apply

- | | | |
|----|--|-----------|
| 23 | Feedback on student work is usually provided <u>only</u> in the form of marks and grades | 1 2 3 4 5 |
| 24 | We often discuss with our lecturers or tutors how we are going to learn in this course | 1 2 3 4 5 |
| 25 | Staff here show no real interest in what students have to say | 1 2 3 4 5 |
| 26 | It would be possible to get through this course just by working hard around exam times | 1 2 3 4 5 |
| 27 | This course really tries to get the best out of all its students | 1 2 3 4 5 |
| 28 | There is very little choice in this course in the ways by which you are assessed | 1 2 3 4 5 |
| 29 | The staff here make it clear right from the start what they expect from students | 1 2 3 4 5 |
| 30 | The sheer volume of course work to be got through in this course means you cannot comprehend it all thoroughly | 1 2 3 4 5 |

APPENDIX E

APPENDIX E

Please rank the following teaching/learning methods as 1,2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 in order of your preference

(1 = Most preferred 12 = Least preferred)

Films	_____
Library Work with self-directed learning	_____
Lectures	_____
Computer assisted learning	_____
Role play	_____
Use of models/objects	_____
Videos	_____
Seminars	_____
Demonstration and practice	_____
Slides	_____
Group Work	_____
Care Studies	_____

APPENDIX F

APPENDIX F

SCHEDULE OF QUESTIONS

The focused interviews were based around the following subject areas. The schedule of questions was used creatively and students were allowed to expand on their answers.

Comment on the content of your course in relation to relevancy and interest.

Is your course well organised and are the aims and objectives always clear?

How do you find the workload on the course?

Is it difficult?

What about the pace of the course?

Does the course meet with your expectations?

In relation to teaching and learning are there differences between nurse education and other forms of education you have experienced?

On this course what are the two greatest influences on your learning approach?

How would you describe a good teacher?

What type of teaching strategy do you like the teacher to use?

Does your choice remain constant with every subject?

What are your views on self directed learning?

In relation to learning does this course offer you too much or too little independence?

Are you able to get as good an understanding of every subject as you would like?

Do you prefer to revise and study on your own or in a group?

How do you know when you understand something?

Do you feel senior staff and teachers get an adequate impression of you during the course?

Do you think there is a technique involved in sitting for exams?

What are your views on the type and number of assessments on this course?

Do you have a preference for a particular type of exam?

Which of the following helps you most in revising for exams

Learning from original notes?

Text books?

Revision notes prepared by yourself?

Revising with other students?

REFERENCES

REFERENCES

- Abel Smith, B (1975) A History of the Nursing Profession, London Heinemann
- Alderton, J (1983) 'In training but I want to be educated', Nurse Education Today, 3, 29-31
- Alexander, M (1984) 'Learning to nurse beginning has implications for continuing', Nurse Education Today, 4, 4-7
- Alexander, M E (1983) Learning to Nurse Integrating Theory and Practice Edinburgh Churchill Livingstone
- Allport, G W (1937) Personality, New York Holt
- Akinsanya, J (1993) Preparation of Nurse Teachers a rethink, Nursing Standard, 8 (5), 28-30
- An Bord Altranais, (1987) Conditions of Suitability for Schools of Nursing/Midwifery
- An Bord Altranais (1991) Consultative Document on Nurse Education and Training, Interim Report of the Review Committee
- An Bord Altranais (1994) The Future of Nurse Education and Training in Ireland
- Armstrong, Esther (1979) Address given at the annual conference of the association of health careers advisors In Greaves, F (1984) Nurse Education and the Curriculum, Kent Croom Helm,
- Ashworth, P D Longmate, M A (1993) 'Theory and practice, Beyond the dichotomy' Nurse Education Today, 13, 321-327
- Astin, A W (1968) The College Environment, Washington D C American Council on Education
- Athlone Report (1938) Interdepartmental Committee on Nursing Services London H M S O
- Balme, H (1937) A Criticism of Nursing Education, London Oxford University Press
- Baly, M (1981) Florence Nightingale's influence on nursing today In Pringle, J (1984) 'Education for a profession Some lessons from history' International Jr Nursing Studies, 21 (3), 153-163

G

- Baly, M (1980) Nursing and Social Change London Heinemann
- Barrett, E A.M (1991) 'Theory of or for nursing' Nursing Science Quarterly, 4 (2), 48-49
- Barker, E (1985) 'Continuing education, answer to education's needs' Weather Vane, 54 (3), 19-20
- Barris, R Kielhofner, G, Bauer, D (1985) 'Learning preferences, values and student satisfaction', Journal of Allied Health, 14, 13-24
- Bassett, C C (1993) The role of nurse teacher as researcher British Journal of Nursing, 2 (18), 911-918
- Beckwith, J B (1991) 'Approaches to learning their context and relationship to assessment performance' Higher Education, 22, 17-30
- Benner, P (1989) 'Performance expectations of new graduates' Paper presented at the AACCN invitational conference on critical care nursing at the Baccalaureate level Strategies for the future, San Antonio, Texas In Cervero, R M (1992) Professional Practice, Learning and Continuing Education an integrated perspective International Jnr of Lifelong Education, 11(2), 91-101
- Bendall, E (1973) 'The relationship between recall and application of learning in trainee nurses', Unpublished PhD Thesis, University of London
- Benner, P (1984) From Novice to Expert, Excellence and Power in Clinical Nursing Practice California Menlo Park Addison Wesley
- Benohel, J (1984) 'Advancing nursing science qualitative approaches' Western Journal of Nursing Research, 6(3), 1-8
- Benton, D C Cormack D (1991) 'Reviewing and evaluating the literature' In Cormack, D (Ed) The research process in nursing Oxford Blackwell
- Best, J W (1970) Research in education New York Prentice Hall
- Bevis, O Watson, J (Eds), (1989) Toward a Caring Curriculum A New Pedagogy for Nursing New York National League for Nursing
- Bevis, E O (1988) New directions for a new age, In Curriculum revolution Mandate for Change, New York, National League for Nursing
- Bevis, O (1989) 'Illuminating the issues Probing the past A history of nursing curriculum development - The past shapes the present' In Bevis O Watson J (Eds), Toward a Caring Curriculum A New Pedagogy for nurses New York National League for Nursing
- Biggs, J B (1979) 'Individual differences in study processes and the quality of learn-

ing outcomes', Higher Education 8, 381-394

Biggs, J B (1978) 'Individual and group differences in study processes', British Journal of Educational Psychology, 48, 266-279

Biggs, J B (1985) 'The role of meta-learning in study processes', British Journal of Educational Psychology, 55, 185-212

Biggs, J B (1993) 'What do inventories of students' learning processes really measure? A theoretical review and clarification' British Journal of Educational Psychology, 63, 3-19

Birch, J A. (1975) To nurse or not to nurse an investigation into the causes of withdrawal during nurse training London Royal College of Nursing

Blagg, J D (1985) 'Cognitive styles and learning styles as predictors of academic success in a graduate allied health education programme', Journal of Allied Health, 14 (1), 89- 98

Bloom, B S , Englehart, M D Furst, E J , Hill, H W , Drathwohl D R (Eds) (1956) Taxonomy of Educational Objectives New York Longmans green

Borg W, Gall M (1979) Educational research an introduction New York Longmans

Bowden, J A (1988) 'Achieving change in teaching practices' In Ramsden, P (ed) Improving Learning New Perspectives, London Kogan, pp 255-267

Boud D (Ed) (1985) Problem based learning in education for the professions HERDSA Sydney, Australia

Boyd, N J , Baker, C M (1987) 'Using Television to Teach', Journal of Nursing and Health Care 8 (9), 522-527

Bradby M B (1990) 'Status passage into nursing Undertaking nursing care', Journal of Advanced Nursing, 15, 1363-1369

Brennan, J L , Percy, K A. (1977) 'What do students want? An analysis of staff and student perceptions in British Higher Education', In Bonboir, A. (Ed), Instructional Design in Higher Education, European Association for Research and Development in Higher Education, 1, 125-152

Briggs Report (1972) Report of the Committee on Nursing, London H M S O

Brookfield, S D (1986) Understanding and Facilitating Adult Learning, San Francisco Jossey Bass

Brown, H N (1981) 'Factors that affect success in nursing education an explanatory study', Unpublished doctoral dissertation, University of North Carolina at Greensboro

- Burnard, P , Chapman, C M (1990) Nurse Education - The Way Forward, London, Scutari Press
- Burnard, P , Morrison, P (1992) 'Students' and lecturers' preferred teaching strategies', International Journal of Nursing Studies, 29 (4) 345-353
- Burnard, P (1989) Exploring Nurse Education Views of Experiential Learning A Pilot Study Nurse Education Today, 9, 39-45
- Burnard, P (1991) Experiential Learning in Action, Aldershot Avebury
- Burnard, P (1992) 'Learning from experience nurse tutors' and student nurses' perceptions of experiential learning in nurse education, some initial findings', International Journal of Nursing Studies, 29 (2), 151-161
- Cahill, R , Madigan, M J (1984) 'The influence of curriculum format on learning preference and learning style', The American Journal of Occupational Therapy, 38 (10), 683-686
- Campbell, D T, Fisk, D W (1959) 'Convergent and discriminant validation by the multitrait-multimethod matrix', Psychological Bulletin, 56, 81-105
- Canfield, A A (1980) Learning Styles Inventory Manual, Birmingham M I Humanities media
- Capra, F (1986) Deep ecology the new vision of reality Paper presented at Public Forum Scholar - Leadership Enrichment Programme, University of Oklahoma In Haase J E and Myers S T (1988) Reconciling paradigm assumptions of qualitative and quantitative research Western Journal of Nursing Research, 10(2), 128-137
- Castledine, G (1979) 'Assessing ward assessments', Nursing Mirror, 148(14), 10
- Castles, M R (1987) Primer of Nursing Research Philadelphia W B Saunders
- Cervero, R M (1992) 'Professional practice, learning and continuing education An integrated perspective', International Journal of Life Long Education 11 (2) 91-101
- Cheren, M (1990) 'Promoting active learning in the work place' In Smith R M et al (Eds), Learning to learn across the lifespan, San Francisco Jossey Bass
- Chessil, G (1986) 'Learning styles in first year medical students', Medical Teacher 8, 125-135
- Chickering, A.W (1969) Education and Identity, San Francisco Jossey-Bass
- Chinn, P L (1985) 'Debunking myths in nursing theory and research', Image the Journal of Nursing Scholarship, Vol XVII, No 2, 45-49

- Christensen, M G, Lee, C A.B, Bugg, P W (1979) 'Professional development of nurse practitioners as a function of need motivation, learning style and locus of control', Nursing Research, 28, 51-56
- Clark, M (1986) 'Action and reflection practice and theory in nursing', Journal of Advanced Nursing, 11, 3-11
- Clarke, R M (1986) 'Students' approaches to learning in an innovative medical school a cross sectional study', British Journal of Educational Psychology, 56, 309-321
- Clifford, C (1993) The role of nurse teachers in the empowerment of nurses through research Nurse Education Today, 13, 47-54
- Cochenour, C (1992) 'Self-learning packages in staff development', Journal of Nursing Staff Development, May/June, 123-127
- Cohen, L, Manion, L (1984) Research methods in education Kent Croom Helm
- Cole, N (1990) 'Conceptions of educational achievement', Educational Researcher, 19, 2-7
- Colgan, A (1992) 'The preferred learning strategies of student nurses', Nursing Review, 10, 5-8
- Colucciello, M L (1988) 'Creating powerful learning environments', Nursing Connections, 1 (2), 23-33
- Commission of the European Community Advisory Committee on Training in Nursing (1990) 'EEC guidelines on reducing the gap between theory and practice in programmes leading to qualification as a nurse responsible for general care', (111/D/5044/1/89-EN) Brussels Commission of the European Communities
- Condell, S, Elliott, N (1989) 'Gagnes' theory of instruction its relevance to nurse education', Nurse Education Today, 9, 281-284
- Conklin D N (1983) 'A study of computer assisted instruction in nursing education' Journal of Computer Based Instruction, 9(3), 98-107
- Coulter, M A (1990) 'A review of two theories of learning and their application in the practice of nurse education', Nurse Education Today, 10, 333-338
- Cowell, B (1972) Who's for Exams? The Times Higher Education Supplement, June 16th
- Cowman, S (1990) 'Nursing research in Ireland, A cause for concern' Irish Nursing Forum and Health Services Journal, 8 (4), 32-33
- Cowman, S (1985) An exploratory study of nurse education and training within the

clinical areas using the perceptions of psychiatric and general nurse learners, Unpublished MSc Thesis, University of Surrey

Cowman, S (1993) 'Triangulation a means of reconciliation in nursing research', Journal of Advanced Nursing, 18, 788-792

Cowman, S (1994) 'Teaching/learning preferences of student nurses in the Republic of Ireland, Background issues and a study' International Journal of Nursing Studies (In Press)

Cranston, C M & McCort, B (1985) 'A learner analysis experiment cognitive style versus learning style in undergraduate nursing education', Journal of Nursing Education, 24 (4), 136- 138

Crawshaw, C A. (1978) Selected nurse tutors perceptions of their actual and potential clinical involvement with their learners, MSc thesis, University Manchester (Unpublished)

Crooks ,T J (1988) 'The impact of classroom evaluation practices on students', Review of Educational Research, 58, 438-481

Cross, K P (1976) Accent on learning San Francisco Jossey Bass

Cross, K P (1981) Adults as learners San Francisco, Jossey Bass

Crotty, M (1993) 'The changing role of the nurse teacher' Nurse Education Today, 13 (6), 415-420

Crotty, M , Butterworth, T (1992) 'The emerging role of the nurse teacher in Project 2000 programmes in England a literature review', Journal of Advanced Nursing, 17, 1377-1387

Cunningham, M J , Trickey, B A. (1983) 'The correlation of learning styles with student preference in academic and clinical course work' Occupational therapy Journal of Research, 3, 54-55

Curry, L (1983) 'An organisation of learning styles theory and constructs', Paper presented at the Annual Meeting of the American Educational Research Association Montreal, Canada In Marshall, J C (1987) Examination of a Learning Style Topology Research in Higher Education, 26(4), 417- 429

Dalton, B M (1969) 'Withdrawal from training of R N M S student nurses', Nursing Times, Occasional Paper, 2 65 (3)

Davis, B D (1983) 'Student nurses perception of their learning and significant others', In Davis, B D (Ed) Research into Nurse Education, Croom Helm, Kent

Davis, C (Ed) (1980) 'A constant casualty nurse education in Britain and the USA to 1939', In Davis C Rewriting Nursing History, Kent, Croom Helm

- De Coux, V M (1990) 'Kolb's learning style inventory a review of its application in nursing research', Journal of Nursing Education, 29(5), 202-207
- De Tornyay, R (1984) 'Research on the teaching learning process in nursing education', Annual Review of Nursing Research, 2, 193-210
- Della-Dorra D , Blanchard, L J (1979) 'Moving towards self directed learning highlights of relevant research and promising practice', Association for Supervision and Curriculum Development, Alexandria, VA.
- Denzin, N (1970) 'Strategies of multiple triangulation', In Denzin, N (Ed) The Research Act New York McGraw Hill, pp 297-331
- Department of Health (1984) Planning for the Future, Report of a study group on the development of psychiatric services, Dublin Government Publications
- Department of Health (1986) Health the Wider Dimensions A Consultative Document on Health Policy, Dublin Government Publications
- Department of Health (UK) (1989) A strategy for nursing London Department of Health
- Department of Health (UK) (1989) Education and Training Working Paper 10 , H M S O London
- Department of Health (UK) (19) A Strategy for Nursing, Midwifery and Health Visiting in Northern Ireland
- Dingwall, R , McIntosh, J (Eds) (1978) Readings in the sociology of nursing, London Churchill Livingstone
- Douglas, J W B, (1976) 'The use and abuse of national cohorts In Shipman M D The organisation and impact of social research London Routledge and Kegan Paul
- Duckworth, K , Fielding, G , Shaughnessey, J (1986) The relationship of high school teachers, class testing practices to students feelings of efficacy and efforts to study Eugene OR Centre for Educational Policy and Management, Oregon University
- Duff, V , Johnston, N , Laschinger, H (1992) 'Learning styles of Chinese nursing faculty and career choice preferences', Journal of Advanced Nursing, 17, 229-233
- Duffy, M E (1985) 'Designing nursing research the qualitative-quantitative debate' Journal of Advanced Nursing, 10, 225-232
- Duffy, M E (1987) 'Methodological triangulation a vehicle for merging quantitative and qualitative research methods', Image Journal of Nursing Scholarship, 19(3), 130-133
- Dunn R , De Bellow, T , Brennan, P , Kromsky, J , Murrain, P (1981) 'Learning style

researchers define differences differently', Educational Leadership, 38, 372-375

Dunn, R , Dunn, K , Price, G E (1978) Learning Style Inventory', Lawrence, KS Price Systems

Dux, C M (1989) 'An investigation into whether nurse teachers take into account the individual learning styles of their students when formulating teaching strategies', Nurse Education Today, 9, 186-191

Eisemann, R (1972) 'Creativity in nursing students and their attitudes towards mental illness', Journal of Clinical Psychology, 28, 218-219

Elkan, R , Hillman, R , Robinson, J (1993) The implementation of project 2000 in a Health Authority The effect on the nursing service A second interim Report Nottingham, University of Nottingham

Entwistle, N J , Hanley, M Hounsell D J (1979) 'Identifying distinctive approaches to studying', Higher Education, 8, 365-380

Entwistle, N J , Entwistle, A C (1991) 'Contrasting forms of understanding for degree examinations the student experience and its implications', Higher Education, 22, 205- 227

Entwistle, N J , Ramsden, P (1983) Understanding student learning London Croom Helm

Entwistle, N J , Tait, H (1990) 'Approaches to learning, evaluations of teaching and preferences for contrasting academic environments', Higher Education 19, 169-194

Entwistle, N J , Wilson, J D (1977) Degrees of Excellence The Academic Achievement Game', London Hodder & Stoughton

Entwistle, N J (1978) 'Knowledge structures and styles of learning a summary of Pask's recent research', British Journal Educational Psychology, 48, 255-265

Entwistle, N J (1987) 'A model of the teaching-learning process' In Richardson, J T E , Eysenck, M W Warren Piper, D (Eds) Student Learning Research in Education and Cognitive Psychology London S R H E /Open University Press, pp 13-28

Entwistle N J (1989) 'Approaches to studying and course perceptions the case of the disappearing relationship', Studies in Higher Education, 14, 155-156

Entwistle, N J (1991) 'Approaches to learning and perceptions of the learning environment', Higher Education, 22, 201-204

Entwistle N J (1984) 'Contrasting perspectives on learning', In Marton, F , Hounsell, D J , Entwistle, N J (Eds) The Experience of Learning Edinburgh Scottish Academic Press pp 36-55

- Ferguson, L (1992) 'Teaching for Creativity', Nurse Education, 17 (1), 16-19
- Ferrell, B (1978) 'Attitudes towards learning styles and self direction of ADN students', Journal of Nursing Education, 17, (2) 19-22
- Field, P A Morse, J M (1985) Nursing Research The Application of Qualitative Approaches Kent Croom Helm
- Fielding, N G , Fielding J L (1986) Linking data (Sage University paper series on Qualitative Research Methods, vol 4), Beverly Hills New York
- Finch, J (1986) Research and policy - the uses of quantitative methods in social and educational research London Falmer
- Fizzell, R L (1984) 'The status of learning styles', Educational Forum, 48, 303-312
- Fox, D (1983) 'Personal theories of teaching', Studies in Higher Education, 8(2), 151-163
- Fransson, A (1977) 'On qualitative differences in learning IV Effects of intrinsic motivation and extrinsic test anxiety on process and outcome', British Journal Educational Psychology, 47, 244-257
- Frazier, Z (1982) The effects of the attitude of learning preference on two variations of guided design instruction with nursing students, Unpublished doctoral thesis University of San Francisco
- Friedson, E (1986) Professional powers Chicago The University of Chicago press
- Freire, P (1972) Pedagogy of the Oppressed London Penguin
- French, P (1992) 'The quality of nurse education in the 1980's', Journal of Advanced Nursing, 17, 619-631
- Fretwell, J E (1978) Socialisation of nurses teaching and learning in hospital wards, Unpublished PhD Thesis, University of Warwick
- Fretwell J E (1985) Freedom to change - the creation of a ward learning environment London Royal College of Nursing
- Fry, C F (1976) 'Interactive television in continuing education', The Journal of Continuing Education in Nursing, 7 (3) 26-32
- Gaff, J G , Crombag, H F M , Chang, T M (1976) 'Environments for learning in a Dutch University', Higher Education, 5, 285-299
- Gaff, J G , Wilson, R C (1971) 'Faculty cultures and interdisciplinary study, Journal of Higher Education, 42(3), 186-201

- Gagne, R (1970) The Conditions of Learning, (2nd ed) New York Holt-Rhinehart and Winston
- Gagne, R M (1985) The conditions of learning and theory of instruction, London Holt-Rhinehart & Winston
- Gallego, A P , Goodey, B , Lovett, P Docking, S P , Hide, S E , Beallte, A (1980) 'The working life of the nurse teacher', Nursing Times, 76(32), 1409-1411
- Gardner, G (1978) Social Surveys for Social Planners Sydney Holt, Rinehart and Winston
- Garity, J (1985) 'Learning styles basis for creative teaching and learning , Nurse Educator, 10 (2), 12-15
- Garvey, M , Bootman, J L , McGhan, W F (1984) 'An assessment of learning styles among pharmacy students', American Journal of Pharmaceutical Education, 48, 134-140
- Gaston, S (1988) 'Knowledge retention and attitude effects of computer-assisted instruction ' Journal of Nursing Education, 27(1), 30-34
- General Nursing Council for England & Wales (1977) Education Policy Document 77/19A
- Gibson, S (1980) 'A critique of the objectives model of curriculum design applied to education and training of district nurses', Journal of Advanced Nursing, 5, 161-167
- Gillies, D A. (1984) Effect of advanced organizers on learning medical surgical nursing content by baccalaureate nursing students', Research in Nursing and Health, 7, 173-180
- Glaser, B G , Strauss, A L (1967) The discovery of grounded theory Strategies for qualitative research Chicago Aldine
- Glendon, K., Ulrich, D (1992) 'Using cooperative learning strategies', Nurse Educator, 17(4), 37-40
- Good, W J , Hatt, P K (1952) Methods in Social Research New York McGraw-Hill
- Goodenough, D R (1976) 'The role of individual differences in field dependence as a factor in learning and memory', Psychological Bulletin, 83, 675-694
- Gott, M (1979) 'Student nurses introductory course preparation and work world expectations', International Journal of Nursing Studies, 16(4), 307-317
- Gott, M (1982) 'Theories of learning and the teaching of nursing', Nursing Times, Occasional paper 78 (11), 41-44

- Gould, J F , Bevis, E O (1992) 'Here there be dragons departing the behaviourist paradigm for state board regulation', Nursing & Health Care, 13 (3), 126-133
- Grasha, A.F (1984) 'Learning styles the journey from Greenwich Observatory (1796) to the college classroom (1984)', Improving College and University Teaching, 32, 46-53
- Gregorc, A F (1979) 'Learning/teaching styles potent forces behind them', (Editorial) Educational Leadership, 36, 234-236
- Guildford, J P (1959) 'Three faces of intellect', American Psychologist, 14, 469-479
- Gunning, C S (1981) Relationship among field independence, critical thinking ability and clinical problem-solving ability of Baccalaureate nursing students, Unpublished doctoral dissertation, University of Texas
- Hamilton, A (Ed) (1977) Beyond the numbers game London Macmillan
- Haase J E Myers S T (1988) 'Reconciling paradigm assumptions of qualitative and quantitative research', Western Journal of Nursing Research, 10(2), 128-137
- Hanrahan, E (1970) Report on the Training of Student Nurses, University College Dublin
- Harper, C , Kember, D (1986) 'Approaches to Study of Distance Education Students', British Journal of Education Technology, 3, (17), 212-222
- Harper, G Kember, D (1989) 'Interpretation of factor analysis from the approaches to studying inventory', British Journal of Educational Psychology, 59, 66-74
- Harvey, T J , Vaughan, J (1990) 'Student nurse attitudes towards different teaching/learning methods', Nurse Education Today 10, 181-185
- Heath, B (1964) The Reasonable Adventurer, Pittsburgh University of Pittsburgh Press
- Hector, W (1973) The Work of Mrs Bedford Fenwick and the Rise of Professional Nursing, London RCN
- Henderson V (1966) The Nature of Nursing, New York MacMillan
- Highfield, M (1988) Learning styles, Nurse Educator, 13(6), 30-33
- Hirst, P H , Peters, R S (1980) The Logic of Education London Routledge and Kegan Paul
- Hodges, S A. (1988a) 'Individual learning styles of student nurses, their teachers and ward sisters,' Journal of Advanced Nursing, 13, 341-344

- Hodges, L C (1988b) 'Students entering professional nursing learning style, personality type and sex role identification', Nurse Education Today, 8, 68-76
- Holden, R (1991) 'In defence of Cartesian dualism and the hermeneutic horizon', Journal of Advanced Nursing, 16, 1375- 1381
- Holloway, I Pearson, J (1987) 'Nurse education as social control', Nurse Education Today, 7, 235-241
- Horder Committee (1943) The Nursing Reconstruction Committee, London Royal College of Nursing
- Huch, M (1981) Adult students locus of control learning style and satisfaction with the Baccalaureate nursing programme Unpublished PhD Thesis, Hattiesburg, University of Mississippi
- Hume, B E (1981) 'Behavioural objectives in nurse education', Nursing Times, 77 (49), 2111-2112
- Hunt, D E (1979) 'Learning style and students needs an introduction to conceptual level' In Keefe, H W (Ed) Student Learning Styles Diagnosing and Prescribing Programmes Reston, VA National Association of Secondary School Principals
- Hunt, J M (1971) The teaching and practice of basic nursing procedures in three hospitals, Unpublished M Phil Thesis, University of Surrey
- Hurst, K. (1985) 'Problem solving tests in nurse education', Nurse Education Today, 5, 56-62
- Ismeurt, J , Ismeurt, R , Miller, B (1992) 'Field dependence/ independence considerations in staff development', The Journal of Continuing Education in Nursing, 23(1), 38- 41
- Jacobs, R L (1982) 'The relationship of cognitive style to the frequency of proctor/student interactions and achievement in a PSI course', Journal of Industrial Teacher Education, 19, 18-26
- Jick, T D (1979) 'Mixing qualitative and quantitative methods triangulation in action', Administrative Science Quarterly, 24, 602-611
- Johnson, L (1987) An investigation of learning styles of BSN student nurses, Unpublished doctoral dissertation, Chicago Northern Illinois University
- Jones, D C (1975) 'Food for thought' London Royal College of Nursing
- Joughin, G (1992) 'Cognitive style and adult learning principles' International Journal of Lifelong Education, 11(1), 3-14
- Joyce, C R B , Hudson, L (1968) 'Student style and teaching styles - an experimental

study', British Journal of Medical Education, 2, 28-32

Judge Report, (1985) The education of nurses a new dispensation, Royal College of Nursing, London

Katz, N , Heimann, N (1991) 'Learning style of students and practitioners in five health professions', The Occupational Therapy Journal of Research, 11 (4), 238-244

Keck, J F (1992) 'Comparison of learning outcomes between graduate students in telecourses and those in traditional classrooms', Journal of Nursing Education, 31(5), 229-234

Keefe, J W (1979) 'Student learning styles diagnosing and prescribing programmes', Reston, VA The National Association of Secondary School Principals

Keefe, J W (1982) 'Assessing student learning styles an overview' In, Student learning styles and brain behaviour Reston, VA The National Association of Secondary School Principals pp 43-53

Kember, D Harper, G (1987) 'Implications for instruction arising from the relationship between approaches to studying and academic outcomes', Instructional Science, 16, 35-46

Kerlinger, F N (1970) Foundations of Behavioural Research, New York Holt-Rhinehart and Winston

Kirby, P (1979) Cognitive Style, Learning Style and Transfer Skill Acquisition, Information Series No 195, The National Centre for Research in Vocational Education, Ohio State University

King, J E (1994) A comparative study of adult developmental patterns of generic students and RN students in a baccalaureate nursing programme and the correlation of impact of the educational experiences on the developmental patterns Unpublished doctoral dissertation, Vanderbilt University

King, I M , (1970) Toward a Theory for Nursing, New York Wiley and Son

Kirby, C , Slevin, O (1992) A new curriculum for care In, Project 2000 The Teachers Speak Slevin, O Backenham, M (Eds) Campion Press 57-88

Knowles, M S (1970) The modern practice of adult education From Pedagogy to Androgogy Cambridge Cambridge Book Company

Knowles, M S (1978) The Adult learner A Neglected species (2nd ed) Houston , Gulf

Knowles, M S (1980) The modern practice of Adult education From Pedagogy to Androgogy 2nd ed, Chicago Follett

- Koch, B , Rankin, J (1984) 'Swift idiots in the classroom', Senior Nurse, 1(32), 17-18
- Koch, B W , Rankin, J A , Stewart, R (1990) 'Nursing students' preferences in the use of computer assisted learning', Journal of Nursing Education, 29(3), 122-126
- Kolb, D A. (1976) The learning style inventory, Technical Manual, Boston McBer
- Kolb, D A , Wolfe, D , Fry, R et al (1981) Professional education and career development A cross-sectional study of adaptive competencies in experiential learning, Life Long Learning Project, Final Report Cleveland Case Western Reserve University
- Kolb, D A. (1984) Experiential Learning Experience as the Source of Learning and Development Englewood Cliffs, NJ Prentice Hall
- Kolb, D A. (1985) Learning Style Inventory, Technical Specifications, Boston McBer
- Krikorian, J , Paulanka, B J (1984) 'Students' perceptions of learning and change in the psychiatric clinical setting', Perspectives in Psychiatric Care, XX11 (3), 118-124
- Kulhavy, R W (1977) 'Feedback in written instruction', Review of Educational Research, 47, 211-232
- Lancet Report (1932) The Report of the Commission on Nursing, London HMSO
- Lange, C (1972) A study of the effects on learning of matching the cognitive styles of students and instructors in nursing education, Unpublished doctoral thesis Michigan State University
- LaPeyre, E (1992) 'Nursing students' learning styles a comparison of degree and non-degree student approaches to studying', Nurse Education Today, 12, 192-199
- Laschinger, H K., Boss, M W (1984) 'Learning styles of nursing students and career choices', Journal of Advanced Nursing, 9, 375-380
- Laschinger, H K , Boss, M W (1989) 'Learning styles of baccalaureate nursing students and attitudes towards theory based nursing', Journal of Professional Nursing, 5(4), 215- 223
- Laschinger, H K (1986) 'Learning styles of nursing students and environmental press perceptions of two clinical nursing settings', Journal of Advanced Nursing, 11, 289-294
- Laschinger, H K (1987) Learning styles of baccalaureate nursing students and attitudes towards theory based nursing a validation study of Kolb's theory of experiential learning, Unpublished doctoral dissertation, Ontario University of Ottawa
- Laschinger, H K. (1992) 'Impact of nursing learning environments on adaptive

- competency development in baccalaureate nursing students', Journal of Professional Nursing, 8(2), 105-114
- Lauder, W (1992) 'Teaching theoretical nursing', Nurse Education Today, 12, 65-68
- Laurillard, D M (1978) A study of the relationship between some of the cognitive and contextual factors involved in student learning, Unpublished PhD Thesis University of Surrey
- Laurillard, D M (1979) 'The process of student learning', Higher Education, 8, 395-409
- Lave, J (1988) 'Expertise on the bench modelling magistrates' judicial decision making' In Chi, M T H, Gaser, R, Farr, M J Hillsdale, N J The nature of expertise Lawrence Erlbaum pp 229 -259
- Lawton, D (1973) Social Change Educational Theory and Curriculum Planning London Hodder and Stoughton
- Leeson, J, Gray, J (1978) Women and medicine Tavistock
- Leininger, M M (1985) 'Nature, rationale and importance of qualitative research methods in nursing' In Leininger M M (Ed) Qualitative Research methods in Nursing (New York, Grune and Stratton
- Lelean, S, Clark, M (1990) Research resource development in the United Kingdom International Journal of Nursing Studies 27, 123-138
- Lewin, D C, Jacka, K (1985) 'The clinical learning of student nurses- part 1 curriculum in nursing education research unit', Kings College Hospital, Chelsea University of London
- Lewin, D C & Leach, J (1982) 'Factors influencing the quality of wards as learning environments for student nurses', International Journal of Nursing Studies, 19 (3), 125-137
- Linares, A.Z (1989) 'A comparative study of learning characteristics of RN and generic students', Journal of Nursing Education, 28(8), 354-360
- Llorens, L A., Adams, S P (1978) 'Learning style preferences of occupational therapy students', The American Journal Occupational Therapy, 32, 161-164
- Loesch, T, Foley, R (1988) 'Learning preference differences among adults in traditional and non traditional baccalaureate programmes', Adult Education Quarterly, 38 (4) 224- 233
- Lutz, E M, Petrovic, K, Miller, C (1991) 'The empowering nature of educative learning', Journal of Nursing Education, 30(1) 40-42

- Maclean, B L (1992) 'Technical curriculum models are they appropriate for the nursing profession?' Journal of Advanced Nursing, 17, 871-876
- Macneil, R D (1980) 'The relationship of cognitive style and instructional style to the learning preference of undergraduate students', Journal of Educational Research 73, 354-359
- Maggs, C J (1978) 'Towards a social history of nursing', Nursing Times Occasional papers, 74 (14), 354-359
- Maggs, C (1980) Aspects of General Hospital Nursing 1881-1914 Unpublished PhD Thesis University of Bath
- Marcinek, M (1983) An analysis of learning style of R N students basic nursing students and nurse educators in a basic baccalaureate nursing programme, Unpublished doctoral dissertation, Morgantown West Virginia University
- Marsh, H W (1987) 'Students evaluations of university teaching research findings, methodological issues, and directions for the future', International Journal of Educational Research, 11, 253-288
- Marshall, J C (1987) 'Examination of a learning style topology', Research in Higher Education, 26, (4), 417-429
- Marshfield, G (1985) 'Issues arising from teaching interpersonal skills in general nurse training', In Kagan, C (Ed) Interpersonal Skills in Nursing Research and Applications, London Croom Helm
- Martin, J L (1973) 'The scope for learning', Nursing Times, Occasional Paper, 69 (29), 113-116
- Marton, F, Svensson, L (1979) 'Conceptions of research in student learning', Higher Education, 8, 471-486
- Marton F (1975) On non-verbatim learning 11 - the erosion effect of a task induced learning algorithm, Reports from the Institute of Ed , No 40, University of Gothenburg
- Marton, F (1976) 'What does it take to learn? some implications of an alternative view of learning' In Entwistle, N J (Ed), Strategies for Research and Development in Higher Education, Amersterdam Swets & Zeitlinger
- Marton, F (1978) Describing conceptions of the world about us, Research Report from the Institute of Education, University of Gothenburg
- Marton, F (1981) 'Phenomenography describing conceptions of the world around us , Instructional Science, 10, 177-200

- Marton F Saljo R, (1976,a) 'On qualitative differences in learning 1 outcome and process', British Journal Educational Psychology, 46, 4-11
- Marton, F Saljo, R (1976,b) 'On qualitative difference in learning II - Outcome as a function of the learner's conception of the task', British Journal Educational Psychology, 46, 115-127
- McCaugherty, D (1991) 'The theory-practice gap in nurse education, its causes and possible solutions findings from an action research project', Journal of Advanced Nursing, 16, 1055-1061
- McCleod, D B , Adam, U M (1979-1980) 'The interaction of field independence with small group instruction in mathematics', Journal of Experimental Education, 48, 118-124
- McCloskey, J C (1981) 'The professionalisation of nursing United States and England', International Nursing Review, 28 (2), 40-47
- McMillan, M A , Dwyer, J (1990) 'Facilitating a match between teaching and learning styles', Nurse Education Today, 10, 186-192
- McFarlane, J (1987) The Role of nurse graduates in the health service in the year 2000 Nurse Education Today, 7 (1), 38-41
- Meleis, A , Price, M (1988) 'Strategies and conditions for teaching theoretical nursing an international perspective', Journal of Advanced Nursing, 13, 592-604
- Melia, C (1983) 'Students Views of Nursing', Nursing Times, 78, 24-27
- Merritt, S L (1983) 'Learning style preferences of baccalaureate nursing students,' Nursing Research, 32(6), 367-372
- Merritt, S L (1989) 'Learning styles theory and use as a basis for instruction' In Review of Research in Nursing Education, Holzmer, W L , National League for Nursing Publications, 15, 2219 1-31
- Merton, R K., Kendall, P L (1946) 'The focused interview' American Journal of Sociology, 51, 541-557
- Messick, S and Associates (1976) 'Individuality in learning', San Francisco Jossey Bass
- Meyer, J H F , Muller, M W (1990) 'Evaluating the quality of student learning 1 - an unfolding analysis of the association between perceptions of learning context and approaches to studying at an individual level', Studies in Higher Education, 15(2), 131-154
- Meyer, J H F , Parsons, P (1989) 'Approaches to studying and course perceptions using the Lancaster Inventory a comparative study, Studies in Higher Education, 14

(2), 137-153

Meyer J H F (1988) 'Student perceptions of learning context and approaches to studying', South African Journal of Higher Education, 2, 73-82

Meyer, J H F (1991) Study orchestration the manifestation, interpretation and consequences of contextualised approaches in studying Higher Education, 22, 297-316

Mezirow, J (ed), (1990) Fostering critical reflection in adulthood - A guide to transformative and emancipatory learning San Francisco, Jossey Bass

Miaskowski, C (1990) The future of oncology A historical perspective The Nursing Clinics of North America Advances in Oncology, 25(2), 461-473

Millonig, V L (1988) 'Television an alternative delivery method in continuing education', The Journal of Continuing Education in Nursing, 19, 54-57

Mitchell E S (1986) 'Multiple triangulation a methodology for nursing science', Advances in Nursing Science, 8(3), 18-26

Mollet, E (1913) 'What is the present position of the nurse in the estimation of the general public', British Nursing Journal, 51, 310-311

Morgan, A, Gibbs, G , Taylor, E (1980) Students' Approaches to Studying the Social Science and Technology Foundation Courses Preliminary Studies, Milton Keynes, Study Methods, Group Report No 4, The Open University, Institute of Education Technology

Mostyn, B (1985) 'The content analysis of qualitative research data A dynamic approach' In Brenner, M , Brown, J , Canter, D (Eds) The research interview uses and approaches London Academic Press

Myers, I B (1962) 'Manual for Myers-Briggs type indicator', Princeton, NJ Educational Testing Service

Newble, D , Clarke, R (1987) 'Approaches to learning in a traditional and an innovative medical school', In Student Learning Research in Education and Cognitive Psychology Richardson, J T E Eysenck M W , Warren Piper D (Eds), Open University Press, 39-46 Guildford, SRHE

Newble, D I , Gordon, M I (1985) 'The learning style of medical students', Medical Education (Australia), 19 (1), 3-8

N F E R (1994) Challenges and change in nurse education - A study of the implementation of Project 2000 National Foundation for Educational Research in England and Wales

Nightingale, F (1875) British Library Additional Manuscript 47718, 9-11 In 'Educa-

tion for a profession some lessons from history' Prince, J (1984) International Journal of Nursing Studies, 21(3), 153-159

Nightingale, F (1867) 'F Nightingale writing to Mary Jones' Greater London Records Office, HI/ST/NCI/67/1, November, 1867

Nolan, R (1987) Nurse teachers at work, Unpublished Ph D study, University of Cardiff

Norris, J (1986) 'Teaching communication skills effects of two methods of instruction on selected learner characteristics', Journal of Nursing Education, 25(3), 102-106

Northrup, D T (1992) 'Disciplinary perspectives Unified or Diverse' Nursing Science Quarterly, 5 (4), 155-157

Nuffield Report (1953) Work of nurses in hospital wards Report of the Job Analysis, London Nuffield Provincial Hospital Trust

O'Kell, S P (1988) 'A study of the relationship between learning style, readiness for self-directed learning and teaching preference of learner nurses in one health district', Nurse Education Today 8, 197-204

Ogden, A (1980) 'Teaching/learning styles cognitive mapping, the experiences of one nurse education programme', The Journal of New York State Nurses Association, 11(1), 42-45

Ogier, M (1980) A study of ward sisters' leadership style and verbal interaction with nurse learners, Unpublished PhD Thesis, University of London

Orem, D E (1971) Nursing concepts of practice, New York McGraw-Hill

Orton, H D (1980) Ward learning climate and student nurse response, M Phil Thesis, Sheffield Polytechnic

Orton, H D (1981) Ward learning climate and student nurse response, Nursing Times Occasional Papers, 77(17), 65-68

Ostmoe, P, Van Hoozer, H L, Scheffel, A L, Crowell, C M (1984) 'Learning style preferences and selection of learning strategies Consideration and implications for nurse educators', Journal of Nursing Education, 23(1), 27-30

Ostrow, L C (1986) 'The interaction of cognitive style teaching methodology and cumulative GPA in baccalaureate nursing students', Journal of Nursing Education, 25 (4), 148-155

Parfitt, B (1989) 'A practical approach to creative teaching, an experiment', Journal of Advanced Nursing, 14, 665-677

- Partridge, R (1983) 'Learning styles a review of selected models', Journal of Nursing Education, 22(6), 243-248
- Partlett, M , Hamilton, D (1972) Evaluation as illumination. A new approach to the study of innovatory programmes Occasional paper 9 Edinburgh Centre for Research in the Educational Sciences, University of Edinburgh
- Pask, G (1976a) 'Styles & strategies of learning', British Journal of Educational Psychology, 46, 128-148
- Pask, G (1976b) 'Conversational techniques in the study and practice of education', British Journal of Educational Psychology 46, 12-25
- Payne, S , Jowett, S , Walton, I (1991) Nurse Teachers in Project 2000, Slough, NFER
- Perry, W G (1970) Forms of intellectual and ethical development in the college years a scheme New York Holt Rinehart & Winston
- Peters, R S , (1966) Ethics and Education, London Allen and Unwin
- Platt Report (1964) A reform of nursing education, London Royal College of Nursing
- Plovnick, M S (1975) 'Primary care career choices and medical student learning styles', Journal of Medical Education, 50, 849-855
- Polit, D , Hungler, B (1991) Nursing Research, Principles and Methods, 4th ed , Philadelphia Lippincott
- Pollitt, A.B , Huchinson, C , Entwistle, N J , de Luca, C (1985) What Makes Examination Questions Difficult? Edinburgh Scottish Academic Press
- Powell, J H (1989) 'The reflective practitioner in nursing', Journal Advanced Nursing, 14, 824-832
- Prince, J (1982) Florence Nightingale's Reform of Nursing 1860-1887, Unpublished PhD Thesis, University of London
- Prince, J (1984) 'Education for a profession some lessons from history', International Journal of Nursing Studies, 21 (3), 153-163
- Prosser, M , Miller, R (1989) "The "how" and "what" of learning physics', European Journal of the Psychology of Education, 4, 513-528
- Prosser, M Trigwell, K (1990) 'Student evaluations of teaching and courses student study strategies as a criterion of validity', Higher Education, 20, 135-142
- Quinn, F (1980) The Principles and Practice of Nurse Education, London Croom

Helm

Quinlan, O M , Blatt, S J (1972) Field articulation and performance under stress
Differential prediction in surgical and psychiatric nursing training Journal of Consult-
ing and Clinical Psychology, 39 (3), 517

Raichura, L (1978) 'Learning by doing', Nursing Times, 83(13), 59-61

Ramprogus, V K (1988) 'Learning how to learn nursing', Nurse Education Today,
81, 59-67

Ramsden, P (1979) 'Student learning and perceptions of the academic environment',
Higher Education, 8, 411-427

Ramsden, P (1985) 'Student learning research Retrospect and prospect' Higher
Education Research and Development, 4(1), 51-69

Ramsden, P (1987) 'Improving teaching and learning in higher education a case for
a relational perspective', Studies in Higher Education, 12, 275-286

Ramsden, P (1991) 'A performance indicator of teaching quality in higher educa-
tion the course experience questionnaire', Studies in Higher Education, 16 (2), 129-
150

Ramsden, P (1989) 'Perceptions of courses and approaches to studying an encoun-
ter between paradigms', Studies in Higher Education, 14(2), 157-158

Ramsden P, Entwistle N J (1981) 'Effects of academic departments on students'
approaches to studying', British Journal of Educational Psychology, 51, 368-383

Reid N (1985) 'The effective training of nurses manpower implications', Interna-
tional Journal of Nursing Studies, 22(2), 89-98

Reilly, D , Oermann, M (1985) The clinical field its use in nursing education,
Norwalk, CT Appleton-Century, Crofts

Remington, M A , Kroll, C (1990) 'The 'high-risk' nursing student identifying the
characteristics and learning style preferences', Nurse Education Today, 10, 31-37

Report of Working Party (1972) 'Psychiatric nursing services of health boards',
Dublin Government Publications

Resnik, L B (1987) 'Learning in school and out' Educational Researcher 16, 13-20

Revans, R M (1964) Standards for morale Cause and effect in hospitals, Nuffield
Provincial Hospital Trust, Oxford University Press

Rezler, A G , French, R M (1975) 'Personality types and learning preferences of
students in six allied health professions', Journal of Allied Health, 4, 20-26

- Rezler, A G , Rezmovic, V (1981) 'The learning preference inventory', Journal of Allied Health, 10, 28-34
- Richardson, J T E (1990) 'Reliability and Replicability of the approaches to studying questionnaire', Studies in Higher Education, 15(2), 155-168
- Richardson, M (1988) 'Innovating androgogy in a basic nursing course an evaluation of the self directed independent study contract with basic nursing students', Nurse Education Today, 8, 315- 324
- Roberts, J D , While, A E , Fitzpatrick, J M (1992) 'Simulation current status in nurse education', Nurse Education Today, 12, 409-415
- Rogers, C R , (1983) Freedom to learn for the eighties, Ohio Merrill Columbus
- Rogers, M E (1970) An Introduction to the theoretical basis of nursing, Philadelphia F A Davis
- Rogers, J C , Hill, D J (1980) 'Learning style preferences of bachelors and masters students in occupational therapy', American Journal of Occupational Therapy, 34, 789-793
- Roy, S C (1976) Introduction to Nursing, an Adaptation Model, Englewood Cliffs, New Jersey Prentice Hall
- Runciman, R (1983) Ward sisters at work, Edinburgh Churchill Livingstone
- Rvle, G (1994) The concept of mind The University of Chicago Press
- Sadler, G R , Plovnick, M , Snope, F C (1978) 'Learning styles and teaching implications', Journal of Medical Education, 53, 847-849
- Saljo, R (1979) Learning in the learners perspective I - some common-sense conceptions, No 76, Reports from the Institute of Education, University of Gothenburg
- Sand, O (1955) Curriculum Study in Basic Nursing Education New York G P Putnam and Sons
- Schmeck, R R (1983) 'Learning styles of college students', In Dillon, R F and Schmeck, R R (Eds), Individual Difference in Cognition, Vol 1, New York Academic Press, pp 233-279
- Schon, D A. (1983) The Reflective Practitioner New York Basic Books
- Schon, D A. 1987) Educating the Reflective practitioner San Fracisco Jossey Bass
- Scribner, S (1986) Thinking in action some chacteristics of practical thought In Sternberg, R J , Wagner, R k (eds), Practical intelligence, nature and origins of competence in the everyday world Cambridge University Press

- Seideman, M N (1983) Student nurses learning styles based on ELT from three types of nursing programmes, Unpublished doctoral dissertation, University of Southern California, Los Angeles
- Seymer, L (1960) Florence Nightingale's Nurses, London Pitman
- Sheehan, J (1986) 'Curriculum models product versus process', Journal of Advanced Nursing, 11, 671-678
- Sheppard, C, Gilbert, J (1991) 'Course design, teaching method and student epistemology', Higher Education, 22, 229-249
- Silcock, P (1991) 'Learning nursing what factors are responsible for a lack of creativity?' Nursing Practice, 4(3), 24-28
- Sims, C H, McMillan A. (1991) 'Stakeholder evaluation a model for decision making in problem-based learning' Nurse Education Today, 11, 439-447
- Siplon, K.K (1990) A study of learning style preferences among teachers of nursing and nursing students in Idaho, Unpublished Ed D thesis, University of Idaho
- Skinner, B F (1953) Science and Human Behaviour, New York MacMillan
- Slevin, O D'A Lavery, M (1991) 'Self directed learning and student supervision', Nurse Education Today, 11, 368-377
- Smith, J R (1974) Assessing the cognitive style of students in the nursing care of patients having retinal detachments, Unpublished doctoral thesis, Wayne State University
- Smith, L (1982) 'The influence of tradition in nursing', Occasional Papers Nursing Times, 78(12) 45-48
- Spark, M (1961) The Prime of Miss Jean Brodie Harmondsworth, Penguin
- Sternberg, R J (1986) All's well that ends well, but its a sad tale that begins at the end A reply to Glaser American Psychologist, 40, 571-573
- Stafford, E M (1986) 'Relationship between occupational therapy student learning styles and clinic performance', The American Journal of Occupational Therapy, 40 (1), 34-39
- Stern, P N (1980) 'Grounded theory methodology Sts uses and processes' Image, 12 (11), 20-23
- Stewart, I (1947) The education of nurses, historical foundations and modern trends, New York MacMillan

- Svensson, L (1977) 'On qualitative differences in learning III - study skill and learning', British Journal Educational Psychology, 47, 233-343
- Sweeney, J F (1986) 'Nurse education learner centred or teacher centred', Nurse Education Today, 6, 257-262
- Sweeney, J F (1990) 'The learner centredness of two registered general nursing and two registered mental nursing courses as perceived by third year students', Journal of Advanced Nursing, 15, 1208-1219
- Taba, H (1962) Further Development, Theory and Practice, New York Harcourt, Brace and World
- Tamir, P (1985) 'Meta-analysis of cognitive preferences in learning', Journal of Research in Science Teaching, 22(1), 1- 17
- The Irish Times (1993) Education and Living Supplement, February 16
- The Times, Higher Education Supplement (1994) 'Failed cosmetic surgery', Opinions and letters, March 16
- Thomas, J W , Rohwer, W D (1986) 'Academic studying the role of learning strategies', Educational Psychologist, 21, 19-41
- Thomas, P (1986) The structures and stability of learning approaches, Unpublished PhD Thesis University of Queensland, Australia
- Thomas, P R , Bam, J D (1984) 'Contextual dependence of learning approaches the effects of assessments', Human Learning, 3, 227-240
- Thorndyke, R L (1932) The Fundamentals of Learning, New York Teachers College Bureau of Publications
- Thorndyke, E L (1949) Selected Writings from a Connectionist's Psychology New York Appleton, Century and Crofts
- Thurnstone, L L (1948) 'Psychological implications of factor analysis', American Psychologist 3, 402-408
- Till, T (1980) 'Sex-role identity and image of nursing', Nursing Research 5, 295-300
- Treacy, M M (1987) In the pipeline a qualitative study of general nurse training with special reference to the nurse's role in health education, Unpublished PhD Thesis, University of London, Institute of Education
- Treece, E , Treece, J (1986) Elements of nursing research, 4th ed , St Louis C V Mosby
- Trigwell, K, Prosser, M (1991) 'Improving the quality of student learning the influ-

ence of learning context and student approaches to learning on learning outcomes', Higher Education, 22, 251-266

Tyler, R (1949) Basic principles of curriculum and instruction, Chicago University of Chicago Press

United Kingdom Central Council for Nursing Midwifery and Health Visiting, (1986) Project 2000 A new preparation for practice, London

Van Dover, L , Boblin, S (1991) 'Student nurse, computer experience and preferences for learning', Computers in Nursing, 9 (2), 75-79

Vaughan, B A (1990) 'Student nurse attitudes to teaching/learning methods', Journal of Advanced Nursing, 15, 925-953

Verohnick, P J , Seaman, C C (1978) Research methods for undergraduate students in nursing New York Appleton-Century-Crofts

Vittetoe, M C Hooker, E (1983) 'Learning style preferences of allied health practitioners in a teacher education programme', Journal of Allied Health, 12, 48-55

Vittetoe, M C (1983) 'A study of learning style preference of medical technology and physical therapy students', American Journal of Medical Technology, 49, 661-664

Van Rossum, E J , Schenk, S M (1984) 'The relationship between learning conception study strategy and learning outcome', British Journal Educational Psychology, 54, 73-83

Ward R (1992) 'Interactive video an analysis of its value to nurse education', Nurse Education Today, 12, 464-470

Warner, S , Tenney, J (1985) 'A test of computer assisted instruction in teaching nursing research', Western Journal of Nursing Research, 7 (11), 132-134

Watkins, D Hattie, J (1985) 'A longitudinal study of the approaches to learning of Australian tertiary students', Human Learning, 4, 127-141

Watkins, D (1987) 'Accepting personal responsibility a pre-condition of deep level learning', Research Development in Higher Education, 9, 136-140

Watkins, D (1982) 'Identifying the study process dimensions of Australian University students', The Australian Journal of Education, 26, 76-85

Watkins, D (1983) 'Assessing tertiary study processes', Human Learning, 2, 29-37

Wells, D , Higgs, Z R (1990) 'Learning styles and learning preferences of first and fourth semester Baccalaureate degree nursing students', Journal of Nursing Education, 29(9), 385-390

- Wickendon, A. (1988) Self-directed learning in nurse education a case study on an orthopaedic ward, Unpublished PhD Thesis, University of London
- Wilkerson, N N (1986) 'Relationship between preferred learning and clinical achievement of baccalaureate nursing students', ERIC Document Reproduction Service No ED 280 347
- Witkin, H A , Moore, C A , Goodenough, D R , Cox, P W (1977) 'Field dependent and field independent cognitive styles and their educational implications', Review of Educational Research, 47(1), 1-64
- Witkin, H A (1976) 'Cognitive style in academic performance and in teacher student relations', In Messick, S and Associates, Individuality in Learning, San Francisco Jossey- Bass
- Witkin, H A & Goodenough, D R (1981) Cognitive Styles Essence and Origins, New York International University Press
- Wong, J (1979) 'The inability to transfer classroom learning to clinical nursing practice a learning problem and its remedial plan', Journal of Advanced Nursing, 4, 161-168
- Woodham-Smith, C (1950) Florence Nightingale 1820 1910 London Constable
- Wood Report (1947) Report on the Committee on the Recruitment and Training of Nurses, London H M S O
- Working Party Report on General Nursing, (1980) Department of Health, Dublin Government Publications
- World Health Organisation (1991) 'Reviewing and reorienting the basic nursing curriculum', Nursing in Action Project, Health for All Nursing Series, No 4, p 43
- Worrell, P J (1990) 'Metacognition implications for instruction in nursing education', Journal of Nursing Education, 29(4), 170-175
- Wunderlich, R Gjerde, C (1978) 'Another look at learning style inventory and medical career choice', Journal of Medical Education, 53, 45-54
- Young, A. (1983) Aspects of nurse training in Northern Ireland, Centre for Applied Studies, New University of Ulster
- Young, A P (1991) Law and professional conduct in nursing London Scutari press
- Zemaitis, M L (1987) 'Learning styles, learning preferences and registered nurse students in baccalaureate nursing programmes', Dissertation Abstracts International, 47, 4304A University Microfilms No 8707568