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**FACULTÉ DES ÉTUDES SUPÉRIEURES
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**FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES**

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Ph.D. (Education)

GRADE / DEGREE

Faculty of Education

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

Reflection on Practice by Nursing Students During Early Clinical Experiences

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REFLECTION ON PRACTICE BY NURSING STUDENTS
DURING EARLY CLINICAL EXPERIENCES

by

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Submitted in partial fulfillment
of the requirements for
the degree of
Doctor of Philosophy (Education)

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May 2010

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395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence
ISBN: 978-0-494-69114-4
Our file Notre référence
ISBN: 978-0-494-69114-4

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Acknowledgments

My thesis supervisor, Dr. Bernard W. Andrews, has been generous with support and encouragement as I have progressed through the doctoral program. During Dr. Andrews' absence from the university, Dr. Raymond Leblanc was also particularly helpful. The efforts of both these individuals have been most appreciated and are gratefully acknowledged. Feedback from other committee members, Professors Pierrette Guimond, David Smith, and Marie-Josée Vignola, comments from the external evaluator, Dr. Judith Scanlan, and—in the early stages of the project—input from Dr. Margaret McKinnon are also acknowledged.

As well as the opportunity to grow as a researcher and educator at the University of Ottawa, my current academic endeavours have been enriched by experiences with the faculty and students of the University of Utah, Salt Lake City; Queen's University, Kingston; and Dawson College, Montreal—my current professional 'home.'

Among my childhood memories is a clear recollection of my parents declaring "Don't expect us to leave you any money, but we'll be happy to educate you as far as you want to go." Only recently have I come to appreciate the full extent of this commitment, made so many years ago and still honoured by my mother, now approaching the 11th decade of her life.

Abstract

Education for professional practice is a complex process. In recent years, increasing attention has focused on the importance of reflection as a significant component of preparation for practice. However, empirical evidence shedding light on the process of learning to reflect on practice is comparatively sparse. Practice-based attempts to systematically describe essential aspects of the process as it occurs in nursing students during early experiences with clients have been virtually nonexistent.

This exploratory study was undertaken to investigate reflection on practice by first year nursing students during early patient care experiences. Reflection, for purposes of the study, was considered a multi-step process consisting of three phases: awareness, critical analysis, and synthesis (emergence of changed perspectives). Constructivism, a theoretical position which focuses attention on the creation or construction of knowledge by the learner, provided the theoretical framework for the research. Particular attention was directed to describing aspects of the situation on which student reflections focused, how the reflection process changed over time, and ways of facilitating related learning.

Twenty-five students enrolled in the first year of a college-based nursing program, located in the downtown core of a large metropolitan area, volunteered to participate in this research. Data were collected during clinical conferences, focus groups, and individual interviews as participants reflected on practice in the course of a ten week block of early experiences with adult clients in acute care settings. Reflection was found to be a frequently occurring, fundamentally important activity among this group of participants. Principal foci of reflections were care-giving activities at the bedside, and the process of learning a professional role. Basic changes were noted in two major aspects of the reflecting process: participant input, and patterns of interaction during group sessions. Factors which were found to facilitate or impede reflection exerted their influence either directly by impacting reflecting activities while conferences, focus groups, and interviews were in progress, or indirectly by effecting the quality and quantity of practice-related information brought by participants to these sessions.

Findings underlined the potential significance of a number of factors in enhancing participant reflecting skills: growing ability to attend to, attach meaning to, interpret, and verbally describe essential aspects of patient care situations; ongoing opportunities to reflect and receive pertinent feedback; increased understanding of clinical expectations; and concurrent attendance at classes presenting relevant theoretical material. Questions about whether these factors are, in fact responsible for the changes noted, the extent of their relative importance, and the possible presence of other significant influences in these situations suggest fertile territory for further research.

TABLE OF CONTENTS

1. Introduction	1
2. Review of Literature	14
Professional Education and Practice-based Learning	14
Practice-based Learning: Novice to Expert	16
Practice-based Learning: Nursing Curricula	22
Reflection in Professional Education	25
Clarifying the Concept	25
Models of Reflection: Overview	28
Research into Reflection in Professional Education	30
The Research Problem	36
Conceptual Framework	36
Constructivism	37
Problem-solving and Reflection	40
Reflection: A Conceptual Model	42
Research Questions	48
3. Methodology	49
The Setting	50
Participants	53
Data Collection	58
Clinical Conferences	59
Focus Groups and Interviews	62
Data Analysis	65
Trustworthiness	70
4. Findings	74
Pattern of Reflecting Activity	77
Input-Prompt Cycles	78
Patterns of Prompting	83
Foci of Reflection	86
Patient Care Activities	87
Learning a Professional Role	88
Changes in Reflection	91
Participant Input	92
Broadly Based Changes	93
Stage-Related Changes	95
Awareness Phase	95
Analysis and Synthesis	98
Patterns of Interaction	101
Factors Facilitating or Impeding Reflection	106
Directly-Influential Factors	108
Teacher Behaviours	108
Listening Behaviour	112

Indirectly-Influential Factors	113
Preparation for Clinical Experience	114
Encounters with Professional Staff	115
Summary	116
5. Discussion	118
Research Findings and the Conceptual Model	119
Discussion of Findings: The Research Questions	122
Foci of Reflection	122
Changes in Reflection	126
Participant Input	126
Broadly Based Changes	127
Stage-Related Changes	129
Patterns of Interaction	133
Changes in Reflection and Behaviourist Theory	135
Factors Facilitating or Impeding Reflection	138
Directly-Influential Factors	138
Learning Situation Factors	145
6. Conclusion	152
Contributions and Limitations	154
Suggestions for Future Research	158
References	164
Appendix A Participants: Demographic Data	186
Appendix B Consent Forms	187
Appendix C Data Collection Protocols	189
Appendix D Changes in Reflection: Analysis	192
Appendix E Excerpt from Conference Data	194

List of Figures

Figure 1	Reflection on Practice: A Model	47
Figure 2	Research Findings: Organizational Chart	77
Figure 3	Episode of Reflection	82
Figure 4	Pattern of Interaction: Early Group Sessions	103
Figure 5	Pattern of Interaction: Double Topic Reflection	104
Figure 6	Pattern of Interaction: Compound Reflection	104
Figure 7	Pattern of Interaction: Interrupted Reflection	104
Figure 8	Pattern of Interaction: Reintroduced Reflection	104

List of Tables

Table 1	Participants: Summary of Demographic Data	56
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CHAPTER I

INTRODUCTION

Education for professional practice has attracted major attention in recent years, both within the professional disciplines and in society at large. Concern with questions related to the pre-service preparation of prospective practitioners has become particularly evident. Although a variety of research has been undertaken, many significant areas related to learning during the critical clinical/field component of professional education remain markedly underexplored (Giebelhaus & Bowman, 2002; Gillespie, 2002; Glover, 2000; Lee, Cholowski, & Williams, 2002; Löfmark & Wikblad, 2001; Mamchur & Myrick, 2003; Ramage, 2004).

This study was undertaken to investigate reflection on practice by first-year nursing students during early patient care experiences. Particular attention was directed to describing aspects of the practice situation on which student reflections focus, how the reflection process changes over time, and ways of facilitating related learning. Research findings are expected to provide a basis for planning and facilitating the process of learning to reflect on practice during early clinical nursing courses.

For students embarking on a program of nursing education, learning is a complex process. As an integral part of this process, early assignments in the clinical area have a widely acknowledged significance (Cope, Cuthbertson & Stoddart, 2002; Giebelhaus & Bowman, 2002; Lee et al., 2002; Löfmark & Wikblad, 2001). Learning occurs as a result of guided practice in which students are assisted to respond to particular client situations, and to consider the process and consequences of these responses (Allen & Reidy, 1971; Benner, 1984; Duldt, 1995). Attention is therefore drawn to 'consideration of the process and consequences of these responses' as the basic link between practice and learning. Despite the dictionary view of consideration and reflection as essentially synonymous (Thompson, 2001), 'reflection'--for purposes of this study--is regarded as the key, though not necessarily the exclusive, element of the process of 'consideration.'

Commitment to the value of reflection on practice was not a prominent feature of the professional world into which the researcher was socialized--first, as a prospective nurse and later, as novice nurse educator--in the 1960's. At that time, nursing--driven by "concern with developing a body of knowledge and assuming professional status in the health care arena" (Munhall & Boyd, 1991, p. xvii)--was endorsing a technical-rational, positivistic, reductionistic, behaviouristic approach to intellectual endeavour (Munhall & Boyd; Pierson, 1998; Richardson, 1995;

Wilson-Thomas, 1995). Qualitative, inductive activities were seldom explicitly discussed as valuable and were very much underrepresented in resource material. Nevertheless, in reviewing personal experiences as part of the preliminary work for this research, the fact that such activities had long been implicit features of nursing education, was inescapable.

This introductory chapter will describe occasions for qualitative, inductive activities which, over the years, been implicit features of nursing education. It will also trace key aspects of the researcher's growing conviction, over a 40 year period, of the value of opportunities for reflection on practice in the preparation of prospective nurses, and of a more recently developed awareness that the process of learning to reflect on practice is an important facet of clinical nursing education.

For undergraduate nurses of the era in which the researcher was educated, opportunities were available to think back on, and consider their responses to, experiences at the bedside. However, such experiences were not deliberately planned to facilitate learning. While not apparently regarded as significant components of contemporary programs, discussions--almost always involving peers, often including more senior nurses, and periodically with teachers--were characteristic occurrences during 'slower' periods on the wards, mealtimes in the cafeteria, and 'after hours' sessions in nurses' residences. Reflection of a sort was an inevitable feature of the interactions in question. The significance of these occasions for the students involved was

demonstrated when, more than four decades after graduation, details of some such sessions were recalled during the May 2008 reunion of the researcher and her classmates (members of the Class of 1963, the Montreal General Hospital School of Nursing; personal communications).

In the late 1960's, educational facilities charged with the preparation of prospective practitioners continued to embrace an essentially quantitative, information-transmission, product-oriented, 'received view' of nursing knowledge (Bellman, 1996; Gendrop & Eisenhauer, 1996; Gillespie, 2002; Mountford & Rogers, 1996; Richardson, 1995). Practice experiences, while almost always including 'service' responsibilities, typically set aside at least one hour each day to be devoted exclusively to 'learning.' This period was generally occupied with instructor presentation of content relative to the setting in question. The researcher's use, as a beginning teacher, of this time for discussion and consideration of ongoing practice experiences was considered unconventional. After attending one such session, a British nurse educator, in Canada on a Nightingale Fellowship, commented that she had been amazed at the amount of time spent encouraging "[student] Anderson to reflect [emphasis added] on that one [patient-related] observation" (J. Robertson, personal communication, December 1968). This visitor acknowledged initially feeling sorry for the individual seemingly being required to think out loud in this way, but ultimately recognized the instructor's purpose, as well as the change taking place in the student's

understanding of her patient's situation.

As the 1960's drew to a close, the emergence of a trend toward "accommodation of multiple paradigms in nursing" became evident (Munhall & Boyd, 1991, p. xi), and my beliefs in an inductive, practice-to-theory type of learning began to receive occasional encouragement and reinforcement. A significant encounter with this changing perspective occurred at a faculty meeting when the Director of Nursing Education, responding to instructors' complaints of insufficient time for content presentation during clinical assignments, suggested--to everyone's surprise--that perhaps they were "trying to be too didactic" (F. I. MacKenzie, personal communication, November 1969). Implied approval of other approaches, possibly including my own, seemed clear from this remark.

Further indication of a shifting focus was, to some extent, evident with the publication, in 1971, of "Learning to Nurse: The First Five Years of the Ryerson Nursing Program." In this book, learning was recognized as a process occurring as the student is assisted to respond "to the individual [patient care] situation, to attach meaning to her experience, and to use it to enlighten and test out her ideas in subsequent situations" (Allen & Reidy, 1971, p. 267). The authors' emphasis on "the dynamic nature of learning which occurs on an ongoing basis as insight and understanding gained from examining and reflecting [emphasis added] on patient-care experiences are incorporated into subsequent learning

situations" (Brown, 1996, p. 2) was basically important in drawing the researcher's attention to the role of reflection in facilitating an inductive, practice-to-theory approach to the preparation of prospective practitioners.

During the 1980's, reflection became an increasingly frequent topic of discussion in the literature of the practice professions, particularly in the fields of teacher and nurse education (Greenwood, 1993). At the same time, resources describing a number of fresh approaches to teaching and learning were also published. These approaches emphasized active construction of knowledge by the learner (Harris & Graham, 1994) and included, implicitly or explicitly, reflection as an essential element of the learning process. 'Constructivism,' as described by Joyce and Weil (1996), was seen as encompassing non-directive teaching, discovery learning, cognitivism, concept attainment and inductive thinking models. 'Reflective practice,' as conceptualized by Schön (1983, 1987), incorporated the notion that resolution of complex practice problems required, in addition to application of relevant theory, 'reflection-in-action' (thinking about practice in the course of the practice experience) and 'reflection-on-action' (looking back on and reconsidering practice experiences). Recognition of connections between these perspectives and my own long-held beliefs provided valuable opportunities for expanding and enriching my ideas about reflection and learning, and for viewing reflection in somewhat broader context.

As new initiatives in curriculum development were widely prevalent in the closing years of the 20th century, nursing education seemed ripe with promise for program change based on innovative views of teaching and learning. However, in spite of efforts to incorporate principles and practices of reflection into 'new' curricula, nursing education continued to be dominated by "the belief that scientific knowledge should be applied to practice if correct nursing actions were to result" (Heath, 1998, p. 1054). Programs were most often planned so that one "part of the teaching concentrated on theoretical knowledge, the other part on the application of knowledge skills within the clinical setting" (Lowe & Kerr, 1998, p. 1030).

In such settings, reflecting activities--certainly less congruent with the overall approach than in constructivist programs--make their contribution as an 'add-on' feature of clinical experiences rather than as an integral part of a comprehensive approach to learning. As work on this research began, the researcher's teaching activities were being carried out in this type of environment. Clinical 'post-conferences,' during which teachers met with their student groups following patient care assignments to discuss the events of the day, had become an integral part of virtually all practice-based experiences. These sessions might be used for multiple purposes but reflection on bedside experiences was always included. As might be expected, the value of learning which occurs as a result of reflecting activities seemed well accepted as a

useful aspect of clinical experiences, but was less readily embraced as a significant feature of the program as a whole. This seemed to suggest inconsistency in teacher perspectives over time, possibly moving back and forth from views of “knowledge as fact to...knowledge as construction” (Mountford & Rogers, 1996, p. 1128).

In considering this apparent dichotomy, several ideas outlined by Mountford and Rogers (1996) were found useful. These authors describe alternate perspectives in which teacher roles are seen, on the one hand, “as transmitting information...[and], at the other extreme,... as helping students to interpret and respond to information” (p. 1128). They further note the existence of a continuum between these perspectives, indicating that every teacher’s practice “tends to emphasize one or the other of the two views” (p. 1128). Their idea of a teacher’s practice occupying a particular place on a continuum seemed, however, somewhat static. Nevertheless, my attention was immediately drawn to the potential usefulness of the continuum as a means for conceptualizing variation in an individual teacher’s practice, depending on the circumstances and surroundings in which learning is being facilitated.

The suggestion that occasions for learning reflect the dominant teacher perspective at the time in question, along with the idea that “learners are quick to adapt themselves to the learning environment” (Mountford & Rogers, 1996, p. 1128), offer a possible explanation for

the apparent ease with which students seem to adapt to varying emphasis on reflection at different points in time in our program. Feedback from the researcher's clinical groups over a period of years--while frequently less-than-enthusiastic about their ability to participate in, and learn from, classroom and laboratory situations--has remained consistently positive about the benefits derived from opportunities to reflect during clinical experiences.

Although my personal beliefs about the importance of reflection on practice in the preparation of prospective nurses have been reinforced, expanded and enriched by student feedback and by the growing body of literature discussing reflection, ongoing concerns continue to exist in connection with my efforts to facilitate students' reflections on practice. Wide variation in reflective skills seems to exist in every student group at the outset of clinical experiences in the middle stages of our three year program. The reasons for these differences are not immediately obvious. Do opportunities to reflect during earlier experiences contribute to these differences? Are they related to particular activities during previous experiences? What is it about the experiences that allows or encourages some students to become more skillful reflectors than others? How much is known about reflection during these earlier experiences? The lack of empirical evidence shedding light on these questions suggested the possibility that systematic, research-based description of reflecting activities during early clinical

experiences might be a useful contribution to the growing knowledge base in the area of learning to reflect on practice.

In recent years, ongoing efforts to ensure adequate preparation of candidates for contemporary practice have led to incorporation of principles and practices of reflection into revised and redefined professional curricula. In programs based on such curricula, development of reflective skills is a significant focus of student learning, particularly during face-to-face experiences with clients. However, literature related to reflection by nurses consists predominately of discussion and commentary rather than reports of research undertakings. Attempts to consider this aspect of the learning process are further frustrated by considerable inconsistency in the use of the term 'reflection' in available resource material. Nevertheless, empirical evidence which might contribute to the resolution of these difficulties is comparatively sparse (Burton, 2000; Duke & Appleton, 2000; McAlpine & Weston, 2000; Teekman, 2000). A search of major data bases in April 2009 (CINAHL, ERIC, HealthSTAR, Medline) yielded no reports of practice-based attempts to systematically describe essential aspects of the process of reflection as it occurs in nursing students during early experiences with clients.

As indicated previously, this research was undertaken to investigate student reflecting activities during early patient care experiences, with the expectation that findings would contribute to the

growing body of knowledge in the area of learning to reflect on practice. As presented above, Chapter I has traced the researcher's growing conviction, over a 40 year period as a nurse and nurse educator, of the value of opportunities for reflection on practice in the preparation of prospective practitioners, as well as a more recently developed awareness that the process of learning to reflect on practice is an important facet of clinical nursing education.

Chapter II offers a review of relevant literature, and focuses particularly on an overview of selected themes in the area of practice-based preparation for professional practice, as well as dealing with concepts specifically related to the study of reflection in education for professional practice. This chapter also describes the theoretical framework for the study: it discusses constructivism as it applies to education for professional practice; and it outlines the relationship between reflection and problem-solving in professional practice. A conceptually-based model of reflection is also presented, with three research questions designed to shed light on aspects of the practice situation on which participants' reflections focus, changes in reflection as participants progress through early practice based experiences, and factors found by participants to facilitate or impede the process of reflection.

Chapter III outlines the research methodology. The chapter describes the college-based nursing program selected as the setting, the

25 undergraduate students who volunteered to become involved in the study as participants, and data collection through participant observation and audio-tape recording of practice-based conferences, focus groups, and individual interviews. Analysis of data is also outlined with emphasis on the 'constant comparative method' (Merriam & Simpson, 1995; Strauss & Corbin, 1994) used in sorting and categorizing data recorded in verbatim transcripts of tapes and noted on written observation protocols. Trustworthiness is also discussed, in particular, procedures used to address the issues of credibility, transferability, dependability, and confirmability.

Chapter IV describes the research findings. Foci of participant reflections include patient care activities and the ongoing process of learning a professional role. Changes in reflection as the semester progressed are evident in the areas of participant input during reflecting episodes and in patterns of interaction during group sessions. Factors found to facilitate or impede reflection are identified as teacher behaviours, participant listening behaviour, and the extent to which the clinical setting supports participant practice.

Chapter V suggests that practice-based attempts to explore aspects of reflection investigated in this study have been surprisingly limited. Findings from a variety of sources related to the current project are found to be consistent with--and most often indirectly supportive of--the results of the current project. Results are recognized as

confirming, on the basis of empirical evidence, the conceptual model adopted for the study.

Chapter VI summarizes study results. The description of essential aspects of reflection during early practice-based experiences is described as a contribution to knowledge in the area of learning to reflect on practice. Potential for further research is identified in relation to the development of reflective skills during more advanced clinical challenges, in other types of nursing programs, and in preparation for practice in other professional disciplines.

CHAPTER II

REVIEW OF LITERATURE

Contemporary nursing practice incorporates complex cognitive and practice skills, the development of which extends throughout the period of pre-service education and beyond. Reflection on practice by students during early clinical courses may be seen as demonstration of a behaviour essential to learning, and to nursing, during the practice-based component of a program of professional education. This review of literature will therefore include an overview of selected themes in the area of practice-based preparation for professional practice, as well as dealing with concepts specifically related to the study of reflection in education for professional practice.

Professional Education and Practice-Based Learning

Professions, as formally organized disciplines, have evolved over time in response to the demand for specialized services to meet complex social needs. Preparation of prospective practitioners to render such services necessarily includes pre-service field/clinical encounters with clients in practice settings. Despite the acknowledged importance of

such encounters, significant aspects of this vital component of professional education have received comparatively little attention from researchers (Giebelhaus & Bowman, 2002; Gillespie, 2002; Glover, 2000; Lee et al., 2002; Mamchur & Myrick, 2003; Ramage, 2004; Roberts, While & Fitzpatrick, 1995).

Preparation for professional practice, in contemporary society, occurs under the auspices of post-secondary educational institutions. Programs of professional education, most often based in colleges and universities, are charged with the responsibility for preparing prospective practitioners to apply appropriate resources to the solution of problems within their area of competence (Brandon & Majumdar, 1997; Roberts et al., 1995). In discharging this obligation, each type of program includes face-to-face encounters with consumers in field/clinical situations. These experiences provide opportunities for students to gain insight into practice, to apply theoretical knowledge, to practise specific technical skills, and to begin evaluating their own strengths and weaknesses (Duldt, 1995).

Learning takes place under the guidance of a competent faculty member. Student-teacher interaction occurs in small groups which rarely consist of more than ten individuals. Experiences are further characterized by significant contacts with professionals employed in the practice setting (Vollman, 1990). Such associations may be formal arrangements in which practitioners assume direct supervisory responsibility for students (Byrne, 1988), or be limited to incidental

communication and consultation.

Practice-Based Learning: Novice to Expert

Programs of professional education differ considerably in the degree to which competent practice is expected at various points during, as well as on completion of, pre-service preparation. In describing such levels of practice, a novice-to-expert range of competencies is typically recognized. For this project exploring learning during early practice-based experiences, information related to novice level performance is clearly most pertinent. Nevertheless, as novice-to-expert progressions are recognized in connection with many types of skill acquisition, resources discussing relevant research into various levels of performance in multiple fields have also been considered.

In attempting to generate theoretical principles which might account for expertise in a variety of undertakings, Ericsson and Smith (1991) emphasize the particular importance of acquired characteristics and of the process by which they are acquired. Research undertakings shedding light on performance skills, particularly at the expert level, in the fields of chess (Charness, 1991), physics (Anzai, 1991), medicine (Patel & Groen, 1991), motor skills such as sports and dance (Allard & Starkes, 1991), music (Sloboda, 1991), literacy (Scardamalia & Bereiter, 1991), electronics, and history (National Research Council, 2002) have made significant contributions to the knowledge base in this general area of inquiry.

However, in discussing the relationship between medical and other

types of expertise, Patel and Groen (1991) observed that “medicine is a somewhat peculiar domain, different from others studied by investigators of expert-novice differences” (p. 120). On the one hand, these authors acknowledged the problem-solving nature of their practice profession and the usefulness of theories of expertise as a means of describing problem-solving processes. They also drew attention to the work of Ericsson and Smith (1991) which emphasized “the unique ability of experts to plan and reason about problem situations” (p. 28), and the research in which Anzai (1991) discussed “differences between experts and novices in physics problem-solving...[which] revealed the qualitative differences in their problem representations: Experts tend to represent physics problems in abstract terms,...whereas novices often use naive concepts...that are more directly related to the real world” (p. 65). On the other hand, Patel and Groen recognized a number of factors including reliance on both scientific and situational knowledge, the person-to-person interaction imbedded in medical problem situations, the necessity for rapid problem solving under stressful conditions, and the unpredictability of the clinical milieu as circumstances limiting the generalizability of their results, as well as the applicability of findings from other fields to their profession.

Many of the characteristics limiting the generalizability of research results as described by Patel and Groen (1991) are equally applicable to other practice professions. Indeed, in nursing, levels of expertise are

discussed almost exclusively in terms of a model generated within the profession by Patricia Benner (1984). While the Dreyfus Model of Skill Acquisition (Dreyfus and Dreyfus, 1986) among airline pilots was acknowledged as the underlying theoretical foundation of this model, one of Benner's later works (Benner, Tanner & Chelsea, 1996) indicated a shift from reliance on the ideas articulated by Dreyfus and Dreyfus to a more collegial relationship with these researchers.

In developing her model, Benner (1984) recognized that practitioners deal with incoming environmental stimuli in terms of previously acquired knowledge and experience. The processing of this information is influenced by fundamental differences in the way that practitioners--as they become increasingly proficient--view nursing situations. These differences develop progressively as a result of encounters with clinical situations in which preconceived notions are refined and modified. For experts, primary organization of incoming stimuli is based on a single complex mental image, which is developed and refined as a result of many previous encounters with similar whole practice situations. Individuals at decreasing levels of proficiency, having had fewer and fewer opportunities to develop and refine their conceptual repertoires, must rely on concepts which are more simple, more concrete and less comprehensive to organize incoming environmental information.

The Benner (1984) model, as initially outlined, was based on "qualitative review of more than 100 interviews and observations in

which nurses shared narratives of their clinical nursing practice” (Nuccio et al., 1996, p. 30). It describes five stages of nurse development: novice, advanced beginner, competent, proficient, and expert. The existence of a “continuum of skill acquisition and development that the nurse moves through when he/she is...new to the nursing profession or transitioning to a new clinical area” (Hom, 2003, p. 38) is emphasized. Subsequent studies (Benner & Tanner, 1987; Benner, Tanner & Chelsea, 1992; Benner et al., 1996), which also relied on narrative accounts of practicing nurses, reinforced the usefulness of this model. The fact that stages were derived from, and confirmed by, “the analysis of narratives (nurses’ stories) which described actual practice tends to lend authenticity and credibility” (Hegedus, 1999, p. 1092) to the model.

The Benner ‘novice-to-expert’ model, as described in 1984, has been widely accepted as a framework for nursing research, and is frequently cited in nursing literature. Subsequent studies by Benner and her colleagues (Benner & Tanner, 1987; Benner et al., 1992, 1996), which relied on narrative accounts of practicing nurses in a number of clinical areas, reinforced the results of the initial study.

Investigations by other researchers have also contributed to the widespread acceptance of the model. For example, McGregor (1991), studying 10 clinical nurse specialists using a qualitative case study method, reported that all participants progressed through each of Benner’s stages during their careers. A group of nurse administrators

and practitioners validated Benner's original findings through analysis of "140 narratives...sampled purposively from [graduate] nurses with varying years of clinical experience....Based on the nursing practice revealed within the narratives, definitions of five stages of clinical practice development were identified,...stages comparable to Benner's novice-to-expert categories" (Nuccio et al., 1996, p. 31). Data collected during 36 hours of participant observation and 20 hours of situation-based interviews with 10 peer-identified expert nurses enabled Brykczynski (1998) to report results which also validated Benner's work. Other studies (Cusson & Viggiano, 2002; Ebright, Urden, Patterson, & Chalko, 2004; Meretoja, Eriksson, & Leino-Kilpi, 2002; Polge, 1995) have described results 'consistent' with the model. The finding that--when coached--six newly-graduated nurses began to construct knowledge based on context (Forneris & Peden-McAlpine, 2007), may suggest a possible refinement to the model's differentiation between practice at novice and advanced beginner levels. Available resource material is thus seen to include a number of studies supporting the usefulness and applicability of the Benner model to clinical nursing practice.

Focusing once again on pre-service preparation for nursing practice, it is noted that experiences in patient care settings have long been recognized as essential to the development of professional competence (Vollman, 1990). In this study, the significance of clinical experiences in developing the ability to reflect on practice is emphasized.

The student entering the clinical learning situation is seen as an individual possessing innate sensory capabilities and learned cognitive skills as well as some situation-specific preparation for the experience. As indicated previously, the student is assisted to respond to the situation, to examine the process and consequences of this response, and to learn from the experience. Although reflection may occur during any phase of the clinical experience, it is most prominent as students examine the process of responding to patient situations, and consider the consequences of their responses. As this is essentially consistent with the view of clinical learning articulated by Benner (1984) in her book "From Novice to Expert," it is not surprising to find that several of this author's insights and findings have been useful in developing the current project.

The specific importance of Benner's novice-to-expert model for this research is found in her description of learning at the novice level of skill acquisition. An individual at any level of clinical competence, according to Benner (1984), enters the practice setting with "foreknowledge" or "set," a precondition deriving from previously acquired knowledge and experience. As a practitioner encounters actual patient care situations, this foreknowledge is refined and modified. Learning thus occurs as a result of interaction between the individual's prior knowledge and the realities of the practice setting.

The first year student is typically at the novice stage of skill acquisition. Foreknowledge consists of context-free information and

guidelines learned in preparation for early patient contacts, as well as preconceived notions about nursing practice. The practice setting offers many opportunities to develop awareness of the contextual significance of this information. Although the specific importance of reflection to professional growth is not a focus of the original Benner (1984) work or any of her subsequent publications (Benner & Tanner, 1987; Benner et al., 1992, 1996), clinical 'debriefing' sessions at which reflection is a principal activity provide opportunities to engage in the processes she describes--refining, elaborating, and disconfirming foreknowledge. Debriefing conferences thus provide a learning environment which fosters the development of early ability to deal with patient-care situations in terms of the shared meanings associated with nursing practice.

Practice-Based Learning: Nursing Curricula

An historical overview of preparation for nursing practice on the North American continent reveals an early period of essentially apprenticeship training. Attempts had been made to transplant Florence Nightingale's ideas which had ushered in the modern era of nursing in Britain. However, following arrival in the New World, her educational model had substantially deteriorated (Bevis & Watson, 2000). Instead of the independent training programs envisioned by Nightingale, nursing schools were almost always located within, and dependent on, hospitals. Service requirements of the sponsoring institutions inevitably took priority over the educational needs of prospective practitioners. Nevertheless, the first

decades of the 20th Century were marked by recognition of the general inadequacies of contemporary efforts to educate competent nurses. Notable in Canada, the Weir Report (1932), commissioned by the Canadian Nurses' Association, called for fundamental reforms in the preparation of prospective practitioners. At this time, nursing was gradually becoming established in institutions of higher education, thereby providing opportunities for programs to grow and develop in a more academic context. Practice settings, however, retained their importance as preferred environments for the learning of practice skills.

Following World War II, increased allocation of monies began to flow into both research and education in nursing. Behaviourism was emerging as the predominant force in education, professional education and nursing education. Principles of curriculum development outlined by Tyler (1950) rapidly became the accepted model in articulating programs of study designed to prepare prospective nurses (Bevis & Watson, 2000). An essentially quantitative, information-transmission, product-oriented, 'received view' of nursing knowledge (Bellman, 1996; Gendrop & Eisenhauer, 1996; Gillespie, 2002; Mountford & Rogers, 1996; Richardson, 1995) was inevitably incorporated into such curricula. Faculty-formulated objectives--carefully crafted to describe only specific, objective, measurable behaviours--dictated the selection of practice-based experiences. However, as the 20th century drew to a close, increasing concern began to focus on the inadequacies for professional education of a model that "ignores all

aspects of education not covered by behaviours and finite preconceived measurable outcomes” (Bevis, 2000, p. 32).

In recent years, the need has been recognized for an alternate paradigm for nursing education (Bevis & Watson, 2000; Tanner, 1990; Rentschler & Spegman, 1996). This reality acknowledges that, in order to meet the challenges of the 21st Century, the totality of experiences in programs of nursing education must be grounded in the realities of clinical practice (Bevis, 2000). Resources emphasize the essential importance of a shift away from a dualistic, reductionistic, objective, logico-deductive, positivist, quantitative perspective to an holistic, inductive, qualitative, caring, human-experience-valuing orientation in nursing education (Bellman, 1996; Bevis & Watson, 2000; Gillespie, 2002; Mountford & Rogers, 1996; Munhall & Boyd, 1993; Pierson, 1998; Wilson-Thomas, 1995). Several models, congruent with the desired shift, are currently being generated with the ultimate aim of better educating nurses (Bevis & Watson). These models are consistent with theoretical perspectives which embrace, implicitly or explicitly, the constructivist notion of active creation of knowledge by the learner (Watson, 2000).

At present, behaviourist influence remains disproportionately powerful in programs offering preparation for nursing practice (Bevis & Watson, 2000). Alternate models, although rich with potential for future improvement and change, must be regarded as works-in-progress. Nevertheless, these models contribute to legitimizing previously

underemphasized elements and aspects of nursing curricula, elements such as “the teaching of inquiry, reflection [emphasis added], criticism, independence, creativity, and caring” (Bevis, 2000, p. 33); thereby reinforcing the usefulness--for nursing education--of inquiry into these phenomena.

Reflection in Professional Education

Reflection has a long, but not always prominent, history as a valued component of education for professional practice. As early as 1904, “Dewey (1965) wrote that the primary purpose of teacher preparation programs should be to help students reflect upon the underlying principles of practice” (Goodman, 1984, p. 9). Throughout most of the 20th century, however, a utilitarian approach emphasizing training in behavioural tasks dominated programs of professional education (Adler, 1991). In the 1980's, the contributions of theorists such as Schön (1983, 1987), Mezirow (1981), and Cruickshank (1985) were largely responsible for stimulating a wave of enthusiasm for considering the usefulness of reflection and reflective practices in education for professional practice.

Reflection in Professional Education: Clarifying the Concept

Although frequently discussed in both educational and nursing literature (Greenwood, 1993), the concept of reflection as it applies to education for professional practice lacks fundamental clarity (Atkins & Murphy, 1993; Burton, 2000; Cotton, 2001; Henderson, Berlin, Freeman, & Fuller, 2002; McAlpine & Weston, 2000; Nicholl & Higgins, 2004; Rodgers,

2002; Rogers, 2001; Williams, 2001). Nursing is a problem-solving process, and programs of nursing education inevitably emphasize the development of problem-solving skills. Reflection is often discussed in connection with problem solving and the closely related process of critical thinking (Brookfield, 1987; Kuiper & Pesut, 2004). Such discussions reveal a number of inconsistencies. Some studies treat reflection as a subcategory of critical thinking and/or problem-solving (Baker, 1996; Boyd & Fales, 1983; Brookfield, 1987; Jacobs, Ott, Sullivan, Ulrich, & Short, 1997; Harrington, 1995; Kennison, 2006; Lasater, 2007), while others describe critical thinking as a subcategory of reflection (Armaline & Hoover, 1989; Atkins & Murphy, 1993; Boud, Keough, & Walker, 1985; Burnard, 1989; Durgahee, 1998; Ross, 1989; Scanlan & Chernomas, 1997; Walker & Redmond, 1999; Yost, Forlenza-Bailey & Shaw, 2000). Although reflection is generally accepted as a specialized form of thinking, reflection and critical thinking are variously seen as occurring within the framework of traditional problem-solving (Jones & Brown, 1991; Klaassens, 1988; Kuiper & Pesut, 2004; Malek, 1986; Nehring, Durham, & Macek, 1986; Sedlak, 1997), as 'add-on' features enriching problem-solving (Conger & Mezza, 1996; Pless & Clayton, 1993; Roberts et al., 1995; Saylor, 1990), as occasions for problem-solving (Baker, 1996; Bullough, 1989; Davies, 1995), and as entirely separate from problem-solving (Ford & Profetto-McGrath, 1994; Jacobs et al., 1997; Lewis & Smith, 1993).

Several authors offer insights into these inconsistencies. Atkins

and Murphy (1993), after reviewing the work of various theorists (Boud et al., 1985; Boyd & Fales, 1983; Mezirow, 1981; Schön, 1987, 1991; Van Manen, 1977), portray reflection as a multi-stage process which includes both critical analysis and synthesis. Critical analysis is described as “examining the components of a situation, identifying existing knowledge, challenging assumptions and...exploring alternatives.... Synthesis is the integration of new and previous knowledge” (p. 1190), resulting in changed conceptual perspectives. These ideas are broadly consistent with most definitions of critical thinking. According to Stephenson (1985), synthesis also includes using new knowledge in a creative way to solve problems - a clear link to problem-solving.

Lewis and Smith (1993) consider usage of the term ‘critical thinking’ vis-à-vis ‘problem solving.’ Problem solving and critical thinking are discussed as characteristic of the sciences and humanities, respectively. The need “to develop a conceptualization that will encompass both problem solving and critical thinking” is emphasized. To this end an inclusive term--‘higher order thinking’--is offered and defined as occurring “when a person takes new information and information stored in memory and interrelates and/or arranges and extends this information to achieve a purpose or find answers in perplexing situations” (p. 136).

A synthesis of the elements of reflection in professional education would closely resemble the Lewis and Smith (1993) definition, and is enriched and clarified by considering the similarities between their

ideas and the Atkins and Murphy (1993) and Stephenson (1985) definitions of the components of reflection. Reflection, in the context of professional education, may then be seen as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop alternate and enriched perspectives. The process of reconsidering previous understandings in the light of insights derived from newly completed experiences is consistent with “reflection-on-action” as described by Schön (1983, 1987). Learning is implicit in the emergence of alternate and enriched perspectives (Atkins & Murphy; Scanlan & Chernomas, 1997). When knowledge is used to resolve practical issues, problem solving has occurred; thereby reinforcing the links between problem solving, critical thinking and reflection.

Models of Reflection: Overview

As an integral part of the recent upsurge of interest in reflection on professional practice, a number of models of reflection have been proposed. Indeed, after an extensive review of resources, mainly in the fields of nursing and education, Brookes (2001) summarized 41 such models (pp. 288-303). Consideration of these summarized ‘models and frameworks’ indicates that reflection may be variously conceptualized as a comprehensive process incorporating essential elements or sub-processes (Atkins & Murphy, 1993; Baker, 1996; Boud et al., 1985; Boyd & Fales, 1983; Korthagen, 1985; Reid, 1993; Ross, 1990), as a

series of 'levels' progressing from less-to-more-sophisticated types of cognitive activity (Astor, Jefferson & Humphreys, 1998; Griffiths & Tann, 1992; King & Kitchener, 1994; Powell, 1989; Smith & Hatton, 1993; Van Manen, 1977; Wellington, 1996; Zeichner & Liston, 1987), as a component of some larger process (Brookfield, 1991; Carr & Kemmis, 1986; Cruickshank, 1987; Teekman, 2000; Von Wright, 1992), as a method of inquiry (Kim, 1999; Shapiro & Reiff, 1993), as particular analogies and metaphors (Armaline & Hoover, 1989; Ertmer, 1996; MacKinnon, 1996), or as terminology requiring specific definition (James & Clark, 1994; Jarvis, 1992; Johns, 1998).

Among the most frequently discussed models, in the literature of the practice professions, are those portraying reflection as a series of 'levels' progressing from less-to-more-sophisticated types of cognitive activity. Superficial consideration suggests that these models simply break the process into hierarchically-arranged levels, variously based on consciousness or awareness (Mezirow, 1981; Powell, 1989), developmental stages (Parchelo, 1992), cognitive sophistication (Boud et al., 1985), and deliberative rationality (Van Manen, 1977). However, looking more deeply, it can be seen that differences "are largely those of terminology, detail and the extent to which the processes are arranged in a hierarchy" (Atkins & Murphy, 1993, p. 1189). This statement is supported by the analysis, undertaken by Atkins and Murphy, of reflection as proposed by a number of theorists (Boud et

al., 1985; Boyd & Fales, 1983; Mezirow, 1981; Schön, 1987, 1991; Van Manen, 1977). These authors identify three key stages of reflection--awareness of uncomfortable feelings, critical analysis of feelings and thoughts, and new perspectives--and propose a model outlining these stages and the relationships between them. The usefulness of this model is enhanced by the fact that essential components are not merely identified as forms of reflection requiring further explanation, but consist of well-delineated and defined elements which offer insight into the overall process of reflection in professional education.

Research into Reflection in Professional Education

Sources reporting the results of systematic investigation of reflection and reflective processes during the field/clinical component of professional education are, as indicated previously, comparatively few in number. A number of projects have investigated the benefits resulting from the incorporation of particular opportunities for reflection into programs of professional education. Various forms of group sessions and 'journaling' related to field/clinical experiences were the principal methods used to enhance reflective skills. Some studies shed light on the actual nature and development of reflective processes while others confine themselves to considering other learning outcomes occurring as a consequence of reflection. The majority of studies were conducted at the descriptive level of inquiry or were based on comparative analysis of groups.

Descriptive studies focusing on the effects of experiences designed to promote the learning of reflective processes acknowledge the use, by students, of a variety of levels of reflection. These are reported with reference to levels outlined by a number of theorists (Andrews, Stryk & Kenny, 1996; Kitchener & King, 1981; Mezirow, 1981; Powell, 1989; Van Manen, 1977). Liimatainen, Poskiparta, Karhila and Sjögren (2001), after investigating reflective learning in 16 undergraduate nurses over a three year period through analysis of yearly videotaped health counselling sessions and stimulated recall interviews, reported that half of their participants' demonstrated reflection at Mezirow's level of 'critical consciousness,' while others did not progress beyond the lower level of 'consciousness' (p. 654). Hartrick (2000), after studying eight experienced health care providers during a project designed to enhance their development of family health promotion practices over a twelve month period, found that all practitioners had "experienced what Mezirow (1981) termed a perspective transformation" (p. 32). However, findings of both these studies must be interpreted in light of the fact that the participant numbers were relatively small, and investigations focused on single aspects of nursing practice.

Other studies reported somewhat less encouraging findings. Dinkelman (2000) studied the development of critical reflection in three pre-service teachers during a semester of student teaching. Andrews,

et al. (1996) used a naturalistic approach to study 41 post-degree teacher education candidates. Richardson and Maltby (1995) explored reflection on practice experiences through the analysis of 30 diaries written by nursing students and an open unstructured focus group interview of eight participants. Ferguson (1989) documented the practicum experiences of 25 prospective teachers through student logs, lesson plans, and post-experience assessments of teaching activities by students and assisting teachers. Ross (1989) reviewed 134 theory-to-practice papers written by teacher education students. However, little progression by participants towards more frequent use of 'higher' levels of reflection was evident during the course of any of these studies.

Reports of these investigations indicate the likelihood that factors such as the circumstances under which reflection occurs, aspects of the situation on which attention focuses, and the possibility of delayed effects of learning influenced the results obtained. Consequently, findings have not led to a rejection of the value of these learning experiences; but rather to the notion that a broader view of the total learning situation must be considered if the processes of reflection in professional education are to be more fully explored.

Studies also report other educational outcomes of reflection on practice during field/clinical experiences. A recurring theme was improved ability to relate theory and practice (Davies, 1995; Ferguson, 1989; Goodman, 1984; Hartrick, 2000; Peden-McAlpine et al., 2005;

Ross, 1989; Severinsson, 1998; Smith, 1998; Suhre & Harskam, 2001). Kenny and Andrews (1996) noted a focus on a “practice-to-theory linkage rather than on theory-to-practice” (p. 79). Other outcomes included recognition that reflection in groups also provided significant opportunities to learn from sharing experiences and for mutual support during the often-stressful field/clinical placements (Davies; Ehrenberg & Häggblom, 2007; Kenny & Andrews; Platzer, Blake & Ashford, 2000; Riley-Doucet and Wilson, 1997; Stoddart, Cope, Inglis, McIntosh, & Hislop, 1996). Glaze (2001) reported behavioural changes “resulting from perspective transformation” (p. 645), as well as increased confidence and assertiveness. An increase in client-centeredness was the most significant effect of debriefing and journaling in the Davies study. Riley-Doucet and Wilson found reflective journal writing enabled 10 second year nursing students to demonstrate critical thinking and analysis skills, and to develop improved ability to recognize their strengths as learners.

A number of researchers have identified qualities, skills, and conditions necessary for effective reflection. Contextual factors, such as preparation and amount of time available for reflection, as well as support from nurse-preceptors and clinical placement coordinators, enhanced reflection for five third year students during a mental health nursing experience (O'Donovan, 2006, 2007). Qualities described as essential for reflection include open-mindedness, curiosity, flexibility, intellectual honesty, motivation, enthusiasm, and respect for multiple

viewpoints (Bailey, 1995; Goodman, 1984; Ross, 1989; Rodgers, 2002). Benefits of a reflective model of instruction include: teacher involvement in the form of one-to-one conferences with students; seminar participation which supports dissent and challenge; modeling of reflective behaviours; and guided practice (Glaze, 2001; Goodman; Harrington, 1995; McCaugherty, 1991; Schön, 1987). However, these benefits are typically described in the discussion section of research reports and are most often suggested--rather than supported--by empirical evidence.

Comparative studies have been undertaken which provide, to some extent, a different perspective on the development of reflective practices. Whipp (2003) was concerned with reflective skills demonstrated in 'on-line' discussions of practice teaching experiences. This researcher explored differences in prospective teachers during consecutive semesters and found that 17 individuals who had the benefit of a number of support measures (positive teacher input during group and one-to-one communication, reading assignments, discussion prompts) designed specifically to encourage reflection, demonstrated higher level reflection than 23 less-supported counterparts completing similar assignments during the previous semester. Sparks-Langer, Simmons, Pasch, Colton and Starko, (1990) found that, upon completion of courses in curriculum and methods, students from a program providing experiences specifically designed to promote reflection during field placements scored significantly higher than a control group on an end-of-semester measure of reflective

thinking. In another study conducted by these researchers, reflective thinking was compared before and after inservice education initiatives which extended over an academic year. Results indicated significant positive change in the reflective thinking of participants following completion of this program which incorporated training and coaching in reflective practices.

While reviewing this literature, several aspects of reflection impressed themselves on the researcher as significant gaps in available knowledge. Aspects of the practice situation on which reflection focuses are identified as important, but not specifically described, in several studies. Despite considerable discussion of progress toward the use of higher levels of reflection, no attempt has yet been made to describe changes noted in the reflective process itself as students progress through practice-based experiences. Although promotion of reflective skills through the introduction of particular courses or coaching methods has been reported, systematic description of factors which facilitate or impede reflection in an existing clinical situation--particularly from the point of view of the learners--has been extremely limited. Questions therefore arise about whether--through the systematic study of reflection on practice by students during early clinical experiences--it might be possible to describe aspects of the practice situation on which student reflections focus, whether changes in reflection as students progress through their experiences might be evident, and

whether practice-based data might reveal some common factors perceived by students as facilitating or impeding their early reflections on practice.

The Research Problem

This study was undertaken to investigate reflection on practice by first year nursing students during early patient care experiences. The importance of reflection on face-to-face experiences in the development of nursing practice skills is widely recognized (Bailey, 1995; Jones, 1995). However, the process of reflection on practice during early learning experiences in clinical settings has not been systematically explored, and there is a need for further research in this area.

Conceptual Framework

This study was undertaken to describe reflection on practice by nursing students during early clinical learning experiences, an underexplored area of knowledge in education for professional practice. According to experts in qualitative methodology, the conceptual background in studies investigating less well-developed areas of knowledge may consist of a particular perspective on the problem under investigation (Merriam & Simpson, 1995). This may include a rudimentary conceptual framework consisting of some knowledge about the phenomenon and parts of the phenomenon that are not fully understood (Miles & Huberman, 1994).

For this study, constructivism—a theoretical position which focuses attention on the creation or construction of knowledge by learners--was identified as an appropriate perspective from which to explore reflection on practice during early clinical learning. Professional practice, in this case nursing, is recognized as a problem-solving process. Reflection, which has been recognized as a process of creating meaning from experience in both education and nursing (Baker, 1996; Boyd & Fales, 1983; Grimmett, 1988; Lim & Chan, 2005; McAlpine & Weston, 2000; Sandholtz, 2002; Yost et al., 2000), is the key concept being investigated.

This discussion of the theoretical framework for the research will begin by providing an overview of constructivism as it applies to education for professional practice. The relationship between reflection and problem-solving in professional practice as viewed for purposes of the study will then be discussed, followed by presentation of a conceptually-based model of reflection on practice.

Constructivism

“In the past few decades, a constructivist discourse has emerged as a very powerful model for explaining how knowledge is produced in the world, as well as how students learn” (Gordon, 2009, p. 39). While “formal discourse that uses the term ‘constructivism’ is a relatively new phenomenon,...constructivist ideas have existed for a long time, perhaps since the ancient Greeks” (p. 56). Indeed, Gordon

describes constructivism as a “worldview associated with close to 20 theorists from different historical periods and different philosophical traditions; theorists including Plato, Locke, Hegel, Kant, Rousseau, Pestalozzi, Piaget, Vygotsky, von Glaserfeld, Dewey, Friere, and Freud” (p. 40). However, during much of the 20th century, writings of influential theorists now considered ‘constructivist,’ theorists such as Dewey (1929), Piaget (1954), and Vygotsky (1978), lack any specific references to the term ‘constructivism’ (Gordon, p. 56; Hyslop-Margison & Strobel, 2008, p. 78).

In the literature of the past few decades, constructivism is variously described as a philosophical orientation (Savery & Duffy, 1995; Schwandt, 1994), a worldview (Gordon, 2009), an inquiry paradigm (Ernest, 1995; Guba & Lincoln, 1994; Schwandt), an epistemology (Bauersfeld, 1995; Ernest; Hanrahan, 1998; von Glaserfeld, 1995), and a theory of learning (Harris & Graham, 1994; Kinnucan-Welsch & Jenlick, 1998; Lim & Chan, 2005; Sandholtz, 2002; Savery & Duffy; Tjeerdsma, 1998; Yost et al., 2000). Common to these conceptualizations is the notion that knowledge is created from experience and derives from an individual’s interaction with essential features of the environment.

Conceptualizations of constructivism also vary in the extent to which individual and social contexts of knowledge construction are emphasized. In this study of reflection on practice by nursing students during early clinical experiences, all elements of the learning situation are

viewed as being “in mutual and continual interaction” (Lincoln & Guba, 1985, p. 155). Knowledge is being created through individual reflection which is occurring in a particular social situation. Consistent with ideas outlined by Dewey (1949, 1958), knowledge construction is occurring as a result of social, as well as individual reflective, processes (Starrat, 2001). Within this context, both the importance of social interaction and the role of individual cognitive manipulations in the construction of knowledge are acknowledged (Crawford & Cornett, 2000; Ernest, 1995; Piaget, 1954; Vygotsky, 1978, 1986).

Constructivism, according to Glasson and Lalik (1993), is a “constructive process...that requires active participation on the part of both the learner (Inhelder & Piaget, 1958; Piaget, 1964) and the teacher (Duckworth, 1986)” (p. 188). Knowledge construction occurs as students identify and test their existing understandings, interpret the meaning of their ongoing experiences and adjust their knowledge frameworks accordingly. This process is facilitated by teachers who find ways of understanding student viewpoints, propose alternate frameworks, stimulate perplexity among students, and provide learning environments supportive to knowledge construction (Glasson & Lalik, 1993).

Constructivism thus focuses attention on the active construction of practice-based knowledge by the prospective practitioner. Learning is defined as a process of meaning construction which occurs as a result of interaction with essential features of the environment. This is

consistent with the positions of major theorists which emphasize direct experience as the key to learning (Dewey, 1929; Hyslop-Margison & Strobel, 2008), and draw attention to the importance of continuous interplay between the individual and the environment (Piaget, 1954; Vygotsky, 1978). Previous knowledge and experience are viewed as the starting point for such learning (Dewey; Harris & Graham, 1994; McAlpine & Weston, 2000, Piaget; Vygotsky). As involvement in practice proceeds, this 'foreknowledge' is refined and modified. New meaning is created through reflection on essential aspects of the learning situation (Conceição & Taylor, 2007; Wood, 1995). Fresh insights and understandings emerge as the learner responds to practice situations, examines this response, and attaches meaning to the experience. Ongoing clinical encounters provide occasions for recreating and redefining reality both on an individual basis and in terms of the shared meanings associated with nursing practice. This provides a new basis for dealing with subsequent clinical encounters. Consequently, a change in behavioural potential, or learning, has occurred.

Problem-Solving and Reflection

As indicated in the literature review, professional resources reveal a variety of ways of viewing relationships between problem-solving and reflection. For purposes of this study, the definition of reflection adopted, combined with recognition of problem-solving as fundamental

to nursing practice, provided the basis for situating problem-solving as a component of the framework.

Reflection, for purposes of this study, is defined as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop new and enriched perspectives. This process of reconsidering previous understandings in the light of insights derived from newly completed experiences is consistent with “reflection-on-action” as described by Schön (1983, 1987). During the field/clinical component of professional education, practice experiences constitute the ‘action’ on which reflective activities are centered.

At the same time, nursing is a problem-solving process, a reality reflected in the models of practice implicitly accepted in most health care settings and explicitly adopted in many programs of nursing education. For nursing education, such models serve as conceptualizations which provide “the foundation from which the total curriculum structure is devised” (Bevis, 1982, p. 34). Problem-solving, as the basic process underlying practice, may therefore be viewed as fundamentally important in clinical learning situations.

However, when discussing nursing students during early clinical experiences, the inability of novices to view practice situations in a comprehensive and integrated fashion (Benner, 1984) must also be considered. Circumstances of concern to these students may well be associated with particular stages—rather than with an integrated

view--of problem-solving, thereby emphasizing the potential importance of the distinct elements included in this multi-step process. Although no unanimously accepted scheme exists for delineating components of problem-solving, three stages--assessment, intervention, and evaluation, variously labeled and subdivided--are widely recognized.

In this study of reflection on practice during early clinical experiences, problem-solving is viewed as basic to practice. Practice experiences constitute the action on which reflective activities center. Attention is thus drawn, once again, to opportunities for reflection on practice as occasions for recreating and redefining reality both on an individual basis and in terms of the shared meanings associated with nursing practice.

Reflection: A Conceptual Model

Constructivism, which focuses attention on the active creation or construction of practice-based knowledge by the learner, was identified--as noted previously--as an appropriate perspective from which to explore reflection on practice during early clinical learning. Reflection, a process of creating meaning from experience, is the key concept being investigated. A conceptual model, consistent with constructivist theory, while also representing essential elements of the reflective process, was therefore required. The Atkins and Murphy (1993) model, emphasizing reflection as a process leading to the emergence of new perspectives, offered a conceptualization which met

these criteria.

Atkins and Murphy (1993), after reviewing the work of various theorists (Boud et al., 1985; Boyd & Fales, 1983; Mezirow, 1981; Schön, 1987, 1991; Van Manen, 1977), identified three key stages of reflection--awareness of uncomfortable feelings, critical analysis of feelings and thoughts, and new perspectives--common to existing models and offered a model outlining and relating these stages (p. 1190). The notion of stages or levels was common to all the works reviewed. However, in developing the stages of their model, Atkins and Murphy placed differing degrees of emphasis on the ideas of the various theorists. The 'awareness of uncomfortable feelings' stage was derived from inability "to explain what was happening" (p. 1189) in a particular situation, a circumstance described as an 'experience of surprise' by Schön (1991), and as a 'sense of discomfort' by Boyd and Fales.

The 'critical analysis of feelings and thoughts' stage was based on the phenomena labeled 'association, integration, validation and appropriation' by Boud et al. (1985), and on processes of analysis referred to by Mezirow (1981) as conceptual, psychic and theoretical reflectivity.

The 'new perspectives' stage rested on the ideas of these same authors, incorporating ideas described by Boud et al. (1985) as "affective and cognitive changes which may or may not lead to behavioural changes" (Atkins & Murphy, p. 1190), and as perspective

change by Mezirow (1981). Once again, knowledge is created which provides a new basis for dealing with the realities of practice and change in behavioural potential, or learning, has occurred.

While the Atkins and Murphy work was not limited to discussion of reflection in a particular professional context, it is interesting to note that these authors are nurse educators employed in a university-level nursing program and that their later publications--written jointly or in collaboration with colleagues (Atkins & Murphy, 1994, 1995; Dearmun, Atkins & Murphy, 1996; Murphy & Atkins, 1994; Snowball, Ross, & Murphy, 1994)--focused specifically on reflection in programs of nursing education. Although not verified by practice, their model provided a starting point for developing the conceptual model which guided the present study.

The Atkins and Murphy model, when published in 1993, represented a significant departure from its predecessors as essential elements--rather than being types of reflection, hierarchically arranged--are components which offer a way of looking inside the actual process of reflecting. The article originally proposing the model, although only four pages in length, has received a disproportionate amount of attention in nursing practice and education. The usefulness of the conceptualization has been evident in the acceptance of the model, both in North America and abroad, as the basis of professional developmental initiatives (Atkins & Murphy, 1995; College of Nurses of Ontario, 1997; Dearmun, Atkins & Murphy, 1996), and in the citation of the work in various nursing

literature. For example, Burnard (1995), after interviewing 12 nurse educators concluded that “respondents defined reflection in much the same way as the definitions found in the literature...(Atkins & Murphy, 1993)” (p. 1170). Smith (1998), in a qualitative study of “learning about reflection” in 25 undergraduate nursing students over a three year period, drew attention to the Atkins and Murphy stages and reported that “there is some evidence...reflection involves...a reassessment of old perspectives so that some views and ideas may be rejected, whilst others are retained” (p. 897).

A number of researchers have made use of ideas outlined by Atkins and Murphy (1993; 1994; 1995; Murphy & Atkins, 1994) in developing projects investigating post-registration students’ experiences of reflection (Formeris & Peden-McAlpine, 2007; Glaze, 2001, 2002), reflective learning during health counselling sessions (Liimatainen, Poskiparta, Karhila & Sjögren, 2001), hindsight bias and its consequence on the reflective process (Jones, 1995), reflective practice as perceived and interpreted by nurse teachers (Nicholl & Higgins, 2004), relative degrees of reflecting skills attained by students in programs emphasizing alternate types of learning experiences (Suhre & Harskamp, 2001), and levels of reflectivity demonstrated in reflective journals (Richardson & Maltby, 1995; Wong, Kember, Chung, & Yan, 1995; Wong et al, 1997). Resources published by Atkins and Murphy, together and in association with colleagues (Dearmun, Atkins & Murphy, 1996; Snowball et al., 1994), are also widely quoted in articles consisting of discussion and

commentary on reflection (Burton, 2000; Button & Davies, 1996; Carr, 1996; Durgahee, 1996, 1997; Heath, 1998; Koskinen & Tossavainen, 2003; Kuiper & Pesut, 2004; Mallik, 1998; Rich & Parker, 1995; Scanlan & Chernomas, 1997; Wellard & Bethune, 1996; Williams, 2001).

Aspects of the Atkins and Murphy (1993) model are, however, somewhat dissatisfying, particularly with regard to the labeling of the various stages. A number of resources are useful in providing complementary insights into these components of the reflective process. For example, awareness is described by Mezirow (1981) as a response to perceptions and actions as well as thoughts, and by Scanlan and Chernomas (1997) as arising in response to thoughts and feelings generally rather than to uncomfortable thoughts and feelings. The suggestion that it is thoughts or feelings about situations that are significant in field/clinical learning experiences is emphasized by Scanlan and Chernomas.

Lack of consistency is noted in the second stage of reflection as discussed in the text of the Atkins and Murphy (1993) article and as outlined in their graphic representation. While the model refers to “critical analysis of thoughts and feelings” only, the text describes this phase of reflection as “examining the components of a situation, identifying existing knowledge, challenging assumptions and...exploring alternatives” (p. 1190), a more inclusive conceptualization. Indeed, with this broader perspective in mind, it seems appropriate to omit any qualifiers and refer to this stage simply as “critical analysis.”

A similar difficulty is evident with the “new perspectives” stage of the model. Synthesis is described in the text as “the integration of new and previous knowledge” (Atkins & Murphy, 1993, p. 1190) resulting in changed conceptual perspectives, and seems a more appropriate term to describe this phase of the process. Furthermore, as noted by Scanlan and Chernomas (1997), the consequences of reflection may include reinforcement of previously-held perspectives as well as the formation of new ones, a notion also consistent with the ‘synthesis’ label.

In this study of reflection on practice by nursing students during early clinical experiences, evolution of a conceptual model began with the work of Atkins and Murphy (1993). Perspectives of other authors, notably Scanlan and Chernomas (1997), have contributed to the formulation of a more inclusive model. It should, however, be noted that these sources are conceptually-based. A graphic representation of this model is offered in Figure 1.

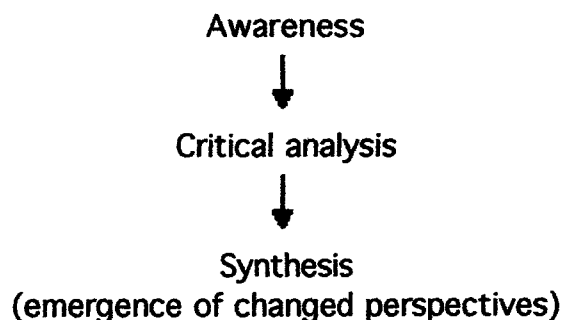


Figure 1: Reflection on Practice: A Model (Adapted from Atkins & Murphy, 1993).

This study offers the opportunity to confirm, refine, and/or extend—on the basis of empirical evidence—this conceptualization of reflection on practice, particularly as it applies to student learning in clinical/field situations.

Research Questions

This study was undertaken to investigate reflection on practice by first year nursing students during early patient care experiences. As indicated previously, significant gaps exist in research-based knowledge related to aspects of the practice situation on which reflection focuses, changes in the reflective process as students progress through practice based experiences, and factors facilitating or impeding the process of reflection in the clinical setting. This research, using an exploratory design, has therefore been undertaken in order to generate knowledge which might prove useful in closing these gaps. To this end, the following research questions are posed.

1. What aspects of the practice situation are the foci of participants' reflections?
2. What changes are noted in reflection as participants progress through early practice-based experiences?
3. What factors are found by participants to facilitate or impede the process of reflection on practice experiences?

CHAPTER III

METHODOLOGY

This study was undertaken to describe reflection on practice by nursing students during early clinical learning experiences. The lack of research-based knowledge relevant to this aspect of nursing education suggested a qualitative approach would be appropriate. In this research, an emergent approach to the problem under investigation was adopted. Findings are based on events actually taking place in the situation under investigation. To this end, data providing as complete a picture as possible of the field situation were collected. This required both observation and participation on the part of the data collector.

In this study of reflection on practice by students during early patient care experiences, the major method of data collection was participant observation of clinical debriefing conferences. This was supplemented by focus groups and individual interviews. To provide a context for more meaningful discussion of these strategies for data collection, this chapter will initially describe the study setting and the individuals who volunteered to participate. Data collection will then be

presented, followed by a section focusing on data analysis.

The Setting

A college-based nursing program located in the downtown core of a large metropolitan area expressed an interest in supporting this project by providing access to first-year students. At this college, approximately 240 students pursue nursing courses integrated throughout a three-year program, the completion of which entitles them to write admission-to-practice licensing examinations. The theoretical position underlying the program's model of nursing practice is 'Self-Care Deficit Theory' (Orem, 1995), referred to within the department as the 'Orem Model.' Each year, upon entering the program, approximately 90 students enroll in 'Level 1' nursing courses which introduce them to this theory as it applies to the principles and practice of nursing. Following a prerequisite introductory course which includes eight one-day experiences with less-seriously-ill and convalescent clients, attention focuses on learning to nurse adults with health problems necessitating treatment in acute-care settings. As care of acutely-ill hospitalized clients is recognized as a primary focus of college-educated nurses, considerable importance is attached to the ten consecutive week block of clinical experiences with this client population during the first winter of the program.

As indicated previously, the college in question had expressed an interest in supporting this research. Indeed, before the researcher's first approach to individuals who might be willing to become involved in the

study, the chairperson of the Nursing Program had ascertained that--provided documents indicating approval of the project from the university Ethics Committee were available to the college, and consents were signed by all participants--no further formalities would be required in order to gain access to their students and faculty.

Institutions to which students from the college are assigned for their clinical experiences are university teaching hospitals serving a client population drawn from diverse backgrounds and sectors of society and suffering from a variety of acute and chronic health problems. No single model is designated as the exclusive basis of practice in these settings. However, as nursing is a problem-solving process, it is not surprising to find problem-solving generally acknowledged as the basis of day-to-day practice activities. As indicated previously, no unanimously accepted scheme exists for delineating components of this multi-step process. However, three stages--assessment, intervention, and evaluation, variously labeled and subdivided--are widely recognized. The absence of inherent contradictions between this view and the college model reinforces the suitability of the settings in question as environments for learning Orem-based practice.

Bedside teaching in the program is the responsibility of the college's nursing department and, in each clinical area to which students are assigned, continuous supervision is provided by a faculty member. Teachers are responsible for 'clinical groups' consisting of five to eight students. These groups are constituted at the beginning of each semester with

careful attention to students' previously documented levels of achievement in order to ensure academically and clinically 'balanced' composition.

For students, the major part of any 'clinical day' is spent in direct patient contact and activities (consulting patient records; one-to-one discussions with unit staff, teacher, etc.) related to patient care. A key feature of the experience is the clinical 'debriefing' conference during which the teacher meets with the group of students to consider the activities and learning which have taken place during the day. These occasions are variously referred to as debriefing sessions, post-clinical conferences, clinical conferences or various combinations of these terms. Sessions typically address a wide variety of topics, but some discussion of problem-solving (referred to, in this context, as the Nursing Process), as outlined in the Orem (1995) model, is always included.

As indicated previously, learning—for purposes of this study—is regarded as a process of meaning construction which occurs as a result of interaction with essential features of the environment. Direct patient contacts and activities related to patient care during are occasions for such interaction. The creation of new meaning is continued through reflection on essential aspects of the learning situation in clinical 'debriefing' conferences, during which teachers meet with their students groups to consider the activities and learning which have taken place. Reflection is regarded as the key, although not necessarily the exclusive element of the process of consideration, and is defined for this research as the process of considering newly and previously acquired information

and interrelating, rearranging and extending the information to develop alternate and enriched perspectives. During post-conferences which inevitably focused on activities and learning which had taken place in the course of the clinical day, much--if not most--of the interaction which occurred was consistent with this definition of reflection.

Although health care institutions are not always eager to welcome external researchers to their premises, the investigator's previous professional contacts with nursing administrators at the facilities in question helped enormously in making the necessary arrangements. As no direct observation of patients or staff was contemplated during data collection, few formalities were required. Following submission--to the appropriate hospital authorities--of the documents which had been presented to, and accepted by, the university Ethics Committee, permission to proceed with the hospital-based portion of the project was readily granted.

Participants

This study was undertaken to investigate reflection on practice by first-year nursing students during early patient care experiences. The research sought to describe aspects of the situation on which student reflections focused, changes in reflection as students progressed through practice-based experiences, and factors found by participants to facilitate or impede the process of reflection on practice. For studies seeking to describe particular phenomena, a number of sources indicate the usefulness of 'purposive sampling' (Bogden & Bilken, 1992; Field & Morse, 1985; Miles &

Huberman, 1994; Polit & Beck, 2006; Proctor & Allan, 2006). According to Field and Morse “in this sampling design, informants who will most facilitate the development of the emerging theory are selected (Bogden & Bilken, 1982, p. 67; Diers, 1979, p. 86).” Polit and Beck indicate that participants who possess specific characteristics are selected for the study (p. 264). As might be expected, essential characteristics for participants in this study included registration in an undergraduate nursing program, with current enrollment in a course providing early face-to-face encounters with clients.

Twenty-five students enrolled in first-year nursing courses offered by the college volunteered to participate in this research project. The study had initially been presented by the researcher to an entire class of 65 students, all of whom--as individuals about to embark on early clinical nursing experiences--were theoretically eligible to participate in the study. Virtually all class members indicated verbal willingness to participate and most went to the trouble of listing their names on a preliminary ‘sign sheet.’

Nevertheless, despite the comparatively large number of willing potential participants, it was obvious from the outset that aspects of the program structure and organization would substantially limit sample selection. Indeed, while the broad label of purposive sampling applied to the procedures used, convenience was also a factor. For example, weekly clinical experiences are scheduled over a two day period; and, on each day, learning activities occur for half the student groups simultaneously, and in geographically-spread-out areas. Furthermore, the feasibility of data collection during group activities was essentially

dependent on the willingness of all members of the groups in question to be involved as participants.

In order to collect sufficient data, it had been estimated that the participation of 15-20 individuals would be required. However, as the withdrawal of one individual would, realistically, result in loss of the entire group from the study, the advisability of including more than the minimally required number of participants was recognized. Selection of participants began by reviewing the volunteer sign sheet and the list assigning students to clinical groups. This revealed eight groups in which all students were willing to participate. Five of these groups, consisting of 30 individuals, were assigned to areas in which simultaneous scheduling of conferences would not be a problem. These groups were chosen to be part of the study. In other words, 30 participants from a large group of willing individuals were selected based on their membership in clinical groups in which all students had volunteered and whose scheduled conference times did not overlap. By the time clinical experiences began in the sixth week of the semester, four students had dropped out of the program; and, two weeks later, another individual began a series of absences which culminated in her withdrawal for health reasons. The remaining 25 students, none of whom expressed any hesitation about continued participation in the study, completed the course.

In considering the demographic profiles of participants, it should be noted that access to the school system 'feeding' the college in question is

restricted to the offspring of parents educated in English in Canada (Quebec National Assembly, Bill 101, 1977; Bill 104, 2002). Thus, it could reasonably be expected that other linguistic and ethnic groups (franchophones, allophones, immigrants) might be underrepresented in the sample. Based on actual demographic data, a 'typical' participant profile was that of an English-speaking female, aged 18-20, childless, and working part-time. However, among the 25 participants, only two individuals actually fitted this description. Demographic data are summarized in Table 1. Pseudonyms, along with demographic profiles of individual participants, are listed in Appendix A.

Table 1

Participants: Summary of Demographic Data

Age group		Mother tongue		Part-time Employment		Children	
18-20	15	English	14	Yes	14	Yes	6
21-30	7	French	4	No	11	No	19
Over 30	3	Other	7				

The actual group of 25 participants included 24 females and one male. Students ages ranged from 18 to 41, the majority of participants (15) being less than 21 years old. Although all students spoke fluent English, only 14 listed this as their mother tongue. Among other participants, four were most fluent in French and the remainder claimed

a variety of other European and Asian dialects as their first languages. Fourteen students held part-time employment, working an average of 23 hours per week, and six were the mothers of children under 13 years of age.

It was recognized that--as the individuals responsible for leading clinical conferences--nursing teachers would be incidental participants in the project. These three female volunteers were long-term employees of the institution in question with a minimum of twenty years experience in clinical teaching. All were graduates of Canadian baccalaureate programs in nursing and had additional preparation at the masters level, one in nursing and two in education.

Responsibilities of the researcher to participants were fulfilled by explanation of the proposed project to all first year students enrolled in the program in question. They were also told that, although the investigator was a nursing teacher, she would not be involved in instructional activities or participate, in any way, in evaluation of student progress while data collection was in progress. As incidental participants, teachers were also entitled to appropriate explanations and control over their participation. All participants were made aware that they might withdraw from the project at any time without adverse consequences, that their anonymity would be protected in the research report through the use of pseudonyms, and that results would be made available to them--should they wish--when the project had been completed. After receiving such explanations, students and teachers in

the groups selected for the study were given a period of a week--longer in some cases--to consider and ask questions about their participation. Following this, informed consent (see Appendix B) was obtained from all individuals who would be participating.

Data Collection

Information for this study was gathered during the nursing course in which students were encountering early opportunities to care for acutely ill adults in hospital settings. Field data were collected on the occasion of participants' patient contacts at the outset, mid-point and conclusion of the ten week block of clinical experiences. Participant-observation, the major means of data collection, was supplemented by focus groups and individual interviews. Participant-observation, which took place during clinical debriefing conferences, provided evidence that--during these discussions of client-based experiences--students were reflecting on practice. Data shedding light on student's perceptions of the reflective activities during these conferences, as well as on their individual reflective processes, were collected in focus groups and individual interviews. These were conducted immediately, and within a few days, respectively, following debriefing sessions. All data collection was carried out by the researcher.

For the participant observer, potential roles range along a continuum from complete observer to complete participant. Building on the work of Junker (1960), a number of sources discuss intermediate positions identified as "observer-as-participant" and "participant-as-

observer” (Bogden and Bilken, 1992; Merriam & Simpson, 1995).

Although the exact nature of intermediate positions as conceptualized by these authors varies, there is general agreement that these are roles between which a researcher may vacillate. Research roles also vary in the extent to which the observer is ‘active’ or ‘passive’ (Bogden & Bilken). This differentiation is made on the basis of whether the observer maximizes or limits participation with the observed.

During this study, approaches representing various positions on the active/passive continuum and varying degrees of emphasis on observation/participation were utilized. Data collection, as indicated previously, occurred during clinical conferences, focus groups, and individual interviews--alternate but complementary occasions for reflection. Subsections of this “Data Collection” section, entitled “Clinical Conferences” and “Focus Groups and Interviews,” discuss aspects of the process specific to these types of sessions. The balance between observation and participation varied depending on the occasion for data collection. The researcher was active primarily as a participant during focus groups and individual interviews, and as an observer during conferences--although some oscillation between roles occurred. The researcher’s many years of experience as a nurse educator, accustomed to interacting with and interviewing undergraduates, both individually and in groups, undoubtedly facilitated this process.

Clinical Conferences

Clinical conferences, during which teachers responsible for clinical

learning met with their assigned students to discuss practice experiences, were principal occasions for data collection. The basic pattern of participation during these sessions consisted of student input, alternating with teacher responses which encouraged further consideration of the topic under discussion. This pattern promoted ongoing emergence of fresh participant insights and understandings. Conferences were therefore seen as occasions for the construction of new meaning, and as situations appropriate for relevant data collection.

Research questions for this study focused on three basic areas:

(i) aspects of the practice situation on which participant reflections focused; (ii) changes noted in reflection as participants progressed through their early practice-based experiences; and, (iii) factors found by participants to facilitate or impede reflection. Clinical conferences offered readily available opportunities for collection of data shedding light on aspects of the practice situation on which participant reflections focused, as well as on changes noted in reflection as participants progressed through their early practice-based experiences. Some inference of factors found by participants to facilitate or impede reflection was also possible. As the usual conference activities provided a wealth of relevant data, sessions were allowed to proceed in the usual fashion with the researcher present mainly as a passive observer. On two occasions, brief clarification of points under discussion was requested, and four instances of interaction with participants in response to remarks implicitly or explicitly addressed to the researcher occurred. Data were collected in the form of on-the-spot

audio-tape recordings of these sessions.

In spite of the essentially complete record of verbal interaction during conferences provided by tapes, recognition that aspects of the reflective process would be inaccessible using this method alone dictated the necessity of devising additional strategies for data collection. This was particularly true with respect to the research question directed toward identifying factors found by participants to facilitate or impede reflection. Also, data gathered during these sessions provided minimal access to participant perceptions of reflective activities. Furthermore, the presence of the clinical teacher, the individual ultimately responsible for assigning participants' clinical grades, constituted a constraint which might be expected to limit reflection on negative aspects of participants' experiences. Unwillingness to discuss some facets of their experiences in front of peers was an additional factor adding to the usefulness of one-to-one sessions between the researcher and individual participants.

In planning strategies to promote collection of relevant information in these areas, the most immediately obvious problem was dealing with data gaps caused by the inability of audio tapes to record non-verbal behaviours, in particular those behaviours which might offer clues about the extent to which participants were attending to, and involved in, reflecting activities. A protocol (see Appendix C) was therefore used to guide ongoing observation of such behaviour. Basic format for this protocol was adapted from Creswell (1998). A 'header' provided space for a graphic sketch of, and general information about, the observational

setting. Pages were then divided by a center line into two columns; one for descriptive, the other for reflective, notes. In addition to completing this protocol, a personal field journal was completed as soon as possible after each data collection session. Entries included incidental observations, preliminary interpretations, and reflections on research activities as they were occurring. Questions--arising largely from the decision to allow post-conferences to proceed essentially uninterrupted by researcher participation--became evident during this process. Particular note was then made of points requiring further exploration in focus groups and individual interviews.

Focus Groups and Interviews

Focus groups and interviews provided opportunities to gain additional perspective on foci of reflection and changes in reflection as the semester progressed, as well as to explore participant perceptions of factors facilitating or impeding reflection. The basic pattern of participation during these sessions consisted, once again, of alternating input by the student or students and the group leader or interviewer--on these occasions, the researcher. Although some fresh insights and understandings emerged as sessions progressed, exploration of participants' perceptions was--as indicated above--a more dominant focus.

Focus groups and interviews were conducted in a variety of locations according to the specifically expressed needs of participants. Sessions were conducted by the researcher, and nursing instructors were not present.

Focus groups took place within clinical facilities following debriefing conferences, as this was the only time and place which would permit all students on a particular unit to meet together with the researcher. During these sessions, the usual codes of dress and professional behaviour enforced during clinical experiences—including conferences—were relaxed. Individual interviews were conducted, at the convenience of participants, in areas physically removed from the practice setting, most frequently at the college but occasionally in remote areas of the clinical facility. A few students from each clinical group volunteered to be interviewed individually, while all participants were involved in focus group sessions.

Guides (see Appendix C) in the form of sets of questions were used in focus groups and interviews. These indicated general areas for discussion in the form of broad open-ended questions, as well as providing the format for specific exploration of previously introduced topics of reflection. Construction of items was guided by principles of qualitative data collection emphasizing the usefulness of non-directive probing as a beneficial way to collect maximally useful data and the importance of not putting answers in participants' mouths (Creswell, 1998).

Dealing with such concerns in the construction of broad questions required consideration of how reflection-related data might be elicited without suggesting particular answers to participants. Questions were therefore worded to encourage reflection on experiences which had stimulated participant reflections (clinical assignments) and occasions for reflecting activity which had already occurred (post-conferences). The

fact that much, often most, of the interaction during post conferences was consistent with the definition of reflection adopted for this study meant that these questions, as expected, elicited reflection-related data. When specifically exploring previously introduced topics, concerns were addressed by referring to topics in words actually stated by participants in earlier discussions; the phrase “instance of reflection” was not used by the interviewer.

Although guides as described above were used, emphasis was on following participants’ concerns and viewpoints as they arose, rather than on rigid adherence to the guides. To encourage discussion and the expression of differing points of view, much attention focused—in both individual and focus group sessions—on eliciting student perceptions of practice-based activities which had been discussed during debriefing conferences. As indicated previously, participants were often more willing to discuss negative occurrences when not in the presence of their clinical teacher. Thus, additional instances—not discussed in conferences—were shared by participants at these times. On a number of occasions, the purposes of data collection appeared best served by allowing students to offer information spontaneously, with appropriate follow-up by the interviewer. Once again, data were collected in the form of on-the-spot audio-tape recordings of these sessions.

It is noted that the group sessions should, more properly, be referred to as ‘modified’ focus groups, as participants were members of clinical groups or “natural units” (Chenitz & Swanson, 1986) rather than

“individuals...unfamiliar to one another” (Marshall & Rossman, 1999, p. 84). This is consistent with the position noted by Chenitz and Swanson that “varying sized groups...[or] multiple units may be encountered by nurse-researchers as natural units for interviewing to complete a research project” (p. 71).

Data Analysis

Information collected during clinical conferences, modified focus groups, and individual interviews constituted the raw data to be analyzed. To preserve as much of the total context of behaviour as possible, verbal and nonverbal behaviours during each contact period were recorded. This included on-the-spot audio-tape recording of conference sessions, focus groups, and individual interviews from which transcripts were prepared by the researcher. Observation protocols provided the means for recording non-verbal behaviours and interpretations. Field notes included descriptions of events, and reflective comments on the interaction in conference, focus group, and individual interview sessions.

Analysis of data in this study was conducted using the ‘constant comparative method’ (Merriam & Simpson, 1995; Strauss & Corbin, 1994). The process began during the first week of data collection. Although there was always some gap between the audio-recording of conferences, focus groups, and interviews and the time when transcripts were available for analysis, both field notes and transcripts were

reviewed as soon as possible following actual data collecting sessions. After initially experimenting with handwritten field notes, a decision was made to enter these directly into a 'laptop' computer. Transcripts were prepared using the same word processing program.

In the earliest stages, the goal was to get a 'feel' for the data and to search for emerging themes. As data collection proceeded, crude categories began to emerge. At this point, coding and categorizing was essentially a manual process, although the find/change feature of the computer was also useful. Following completion of data collection, data were reformatted for the FolioVIEWS 3.1 computer program. This software made possible the unitizing and organization of--as well as rapid access to--data, and facilitated the search for similarities and differences within and between entities. Later in the study, when FolioVIEWS became obsolete, selected transcripts were reformatted and the NVivo program was used to assist with some of the remaining mechanical (as opposed to interpretive) phases of data management.

Initially, those categories emerging most forcefully were related to recurring aspects of reflecting sequences, and seemed only peripherally related to the actual research questions. However, as these sequences were described and labeled, a basic pattern of knowledge construction in this particular setting was revealed. After this was recognized, attention was redirected to input from participating students and subsequently focused more readily on coding basic features of reflection: identification of aspects of the practice situation on which reflection

focused; changes in reflection; and factors perceived by students as facilitating or impeding reflection on practice proceeded. Central to this activity was a reordering--in more general terms--of facts and events; a reordering which facilitated the identification of themes and development of categories (Marshall & Rossman, 1999).

As indicated previously, from the earliest phases of analysis, sequences of reflection with similar basic characteristics were identified as regularly occurring features of reflecting sessions. Essential characteristics included both form and content of input from participants and leaders of reflecting sessions, as well as the order in which these individuals offered their contributions. These regularities of sequencing during reflecting activities are referred to as patterns. Initially, such patterns were viewed as important only as they shed light on the process of knowledge construction in the setting in question. However, as analysis proceeded, consideration of changing patterns revealed a more direct relationship to actual research questions.

The most troublesome problem associated with the analysis transpired with data shedding light on changes occurring in reflection as participants progressed through the 10 week experience. As indicated previously, data were collected at the outset, mid-point and conclusion of this block. Identifying emerging changes in the nature of input for single individuals was easily accomplished, and comparing changes over time in specific stages of reflection between students was not difficult. However, finding ways to deal with these two aspects of the process simultaneously

required considerably more effort and was accomplished by focusing on slices of data introducing concerns, and those indicating newly constructed or reinforced perspectives. The concern, as introduced (initial input), and the newly constructed or reinforced perspective (final input) for each student during each session were listed, and placed side-by-side on a single sheet of paper. An example of such a sheet, entitled "Initial and Final Input: Individual Participant: 3 Conferences," is offered in Appendix D. Because changes in patterns of data collected over time seemed to exist, but were not easily identified, graphic representations of the sequences of reflecting activity during group sessions were constructed. Examples of these representations are also provided in Appendix D. These approaches, while still somewhat cumbersome, enabled the search for similarities and differences related to changes in reflection across the group of participants to move forward.

Due to the researcher's professional obligations, the period during which data analysis was in progress exceeded the time usually allotted to this phase of a research project. As the researcher moved back and forth between research and teaching activities, there were numerous opportunities to discuss aspects of the research with colleagues and to return to the process of considering categories, themes and relationships with a 'fresh' eye. On a number of occasions, this resulted in previously unrecognized discrepancies and contradictions, 'jumping out' at the researcher; leading to new insights and suggesting alternate ways of dealing with emerging findings.

Throughout the study, various problems were recognized in connection with analysis and interpretation of data. The presence of the researcher in the field produces reactive effects on both the researcher and the participant (Chenitz & Swanson, 1986). Behaviours that would otherwise not have appeared are produced and others which might have occurred may be absent. It is recognized, however, that generally—over time—participants lapse into usual routines with occasional reaction only to observation.

Possible distortion of data must also be considered. Preconceived notions of the observer may lead to misunderstandings. In relation to nursing education, incomplete collection of data may occur because there is much that is no longer perceived by an observer who is also an experienced nursing teacher (Davis, 1986). Participants' perspectives must also be considered. Verbal input may not always mirror reality. Difficulties were minimized by focusing on this verbal behaviour in its most literal sense. Since this is, in fact, the participant's behaviour, it is significant regardless of the accuracy or reasons underlying the account.

A further problem is recognized in connection with informed consent requirements. The possibility that the participant's behaviour may be influenced by specific knowledge of what the researcher is interested in must be considered. It is noted that, even with such information, a participant's understanding of the purpose necessarily differs from that of the researcher.

Trustworthiness

Trustworthiness of qualitative research is judged by four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). A variety of procedures were used to address these issues.

A serendipitous factor became most helpful in connection with these procedures. During the period of data analysis, the researcher's responsibilities for clinical supervision of student learning were fulfilled in a major health care institution in the metropolitan area in which data collection had occurred. Following the data collection period, most participants continued in, and eventually completed, the nursing program in question. A considerable number were hired by the institution frequented by the researcher; four individuals actually being assigned to the unit used as the practice area for the researcher's clinical groups. Although occasional reference to the project by a few people might have been anticipated, the continued interest expressed by many of them was not. The researcher's own practice also provided convenient access to a number of experienced nurse educators unconnected with the program from which participants had been selected.

To address the issue of credibility, repeated observation and audio-tape recording of conference sessions during which reflection was a principal activity was undertaken to ensure that the focus of the study would be accurately identified and described. Triangulation

through the use of different methods of data collection (observation, focus groups, interviews, field journal) and participation by individuals in more than one clinical setting contributed to this process. Data were found to be consistent, regardless of the location or method of collection. Credibility was further enhanced through regular reviewing of the researcher's personal reflections as they had been recorded in field notes; reviewing with particular emphasis on checking for preconceived notions, biased researcher responses, and premature conclusions. Also, participants in the study reviewed the data and confirmed the authenticity of categories. For example, observations recorded by the researcher during the data analysis period indicated that former students readily identified changes in input—stating, for example, that “in early sessions, this was something that was ‘noticed’; later there was ‘more stuff,’ like what they did about it” (Feb. 25, 2002; lines 3-4).

Transferability was fostered by recognizing the connections between the emerging study results and the conceptual framework (Marshall & Rossman, 1999, p. 144). As indicated previously, an extensive record of both verbal and nonverbal behaviour during each data-gathering session (conferences, focus groups, interviews), in the form of audio-tapes and field notes respectively, was available. Relevant data, included throughout the “Findings” chapter, provide opportunities for judging applicability to other settings.

Procedures were also carried out to assess dependability and confirmability. These included determining the accuracy of transcripts

prepared from audio-tapes, representativeness of data cited as examples, congruency of categories with data, and soundness of inferences drawn. Addressing the possibility that alternative interpretations of data might exist was particularly important (Bloor, 1990, p. 264).

Several former participants, each from a different clinical group in the study, verified selected transcripts. While noting few discrepancies between the audio-tapes and the material as transcribed, 'verifiers'--perhaps because of their younger ears and their interest in revisiting their earlier experiences--were also able to decipher bits of dialogue previously found by the researcher to be unintelligible.

During data analysis, relationships between raw data and emerging categories for analysis were a major focus of concern. During the data collecting period, feedback was obtained concerning data considered indicative of reflection and reflective behaviours. Colleagues were presented with, and given opportunities to sort, items of data on index cards. While at this stage, there was general agreement concerning allocation of data, reactions had to be regarded as somewhat intuitive, as operationalization of categories was incomplete. Following completion of data collection, excerpts of data were considered by a colleague, as well as two former participants. At this time, little discrepancy was found in allocation of data relating to foci of reflection. Although less complete, general agreement also existed in relation to changes in reflection as participants progressed through their practice-based experiences. While there was no serious disagreement concerning those items of data

considered as factors facilitating or impeding reflection, the possible benefits associated with some refining of categories was evident. Indeed, overall discrepancies seemed largely due to the scope for inference and interpretation allowed by existing operationalizations, confirming the need for more precise category definition.

Subsequently, allocation of data to categories was considered by three additional persons: two nurse educators—one employed by a service institution and one involved with undergraduate students, and one participant—now practising and contemplating further studies. A high degree of agreement continued to be found in relation to items of data related to foci of uncertainty. In the area of changes in reflection as participants moved through their learning experiences, minimal differences were noted. A comparable degree of agreement was found at this time in relation to factors facilitating or impeding reflection. Although all three individuals participating in this stage of the project appreciated research as consumers, only one had actual experience as a researcher. At first glance, this might be considered a potentially limiting factor. However, it can be argued that the involvement of individuals with diverse backgrounds elicits a more comprehensive view of the data, and thereby strengthens the research findings.

CHAPTER IV

FINDINGS

Twenty-five students enrolled in first year courses in a college-based nursing program were the source of data in this study of reflection on practice during early clinical learning experiences. Three questions were asked with the objective of adding to research-based knowledge about (i) aspects of the practice situation on which participants' reflections focus, (ii) changes in reflection as participants progress through practice-based experiences, and (iii) factors found to facilitate or impede the process of reflection.

As indicated in discussing the conceptual framework for the study, constructivism--a theoretical position which focuses attention on the creation or construction of knowledge by learners--was identified as an appropriate perspective from which to explore reflection on practice during early clinical learning. Reflection was recognized as the key concept being investigated. For purposes of the research, reflection was defined as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop alternate and enriched perspectives. A conceptual model

consistent with constructivist theory while representing essential elements of the reflective process--awareness, critical analysis, and synthesis--was outlined in Chapter 2.

From the earliest phases of data analysis, sequences of reflection with similar basic characteristics were identified as regularly occurring features of reflecting sessions. Essential characteristics included both form and content of input from participants and leaders of reflecting sessions, as well as the order in which these individuals offered their contributions. These regularities of sequencing during reflecting activity are referred to as patterns. As indicated previously, such patterns were initially viewed solely as a contextual feature of the study. However, as analysis proceeded, consideration of patterns and changing patterns revealed a more direct relationship to the research questions.

Although none of the research questions addressed constructivism per se, categories related to the process of knowledge construction were suggested, in the very earliest stages of data analysis, by recurring sequences of data with similar characteristics. Indeed, description and labeling of these sequences revealed a basic pattern of knowledge construction through reflecting activities, and provided descriptive terms found useful in the consideration of data more directly related to the actual research questions.

This chapter reporting the research findings will therefore begin by focusing on the basic pattern of knowledge creation through

reflecting activities which occurred during conferences, focus groups, and individual interviews. As indicated previously, conferences are variously referred to as debriefing sessions, post-clinical conferences, clinical conferences, or various combinations of these terms. Interviews and focus groups, conducted by the researcher, occurred on a one-to-one basis with individual students and in groups consisting of five to eight students, respectively.

Discussion of findings specifically related to areas addressed by the research questions will follow description of the basic pattern of reflecting activity. Two major foci of participant reflections, caregiving activities at the bedside and the ongoing process of learning a professional role, will be considered. Another area, technical aspects of problem solving unconnected to specific clinical episodes, is included as a focus, albeit comparatively minor, of occasional reflecting activity.

Subsequently, basic changes occurring in two areas of the reflecting process as participants progressed through early practice-based experiences will be outlined; namely, differences identified in participant input, and variations in patterns of interaction during group sessions. Description then follows of factors found to facilitate or impede the process of reflection on practice either directly, by influencing reflecting activities while conferences, focus groups, and individual interviews were in progress, or indirectly, by affecting the quality and quantity of practice-related information brought by participants to these sessions. The basic

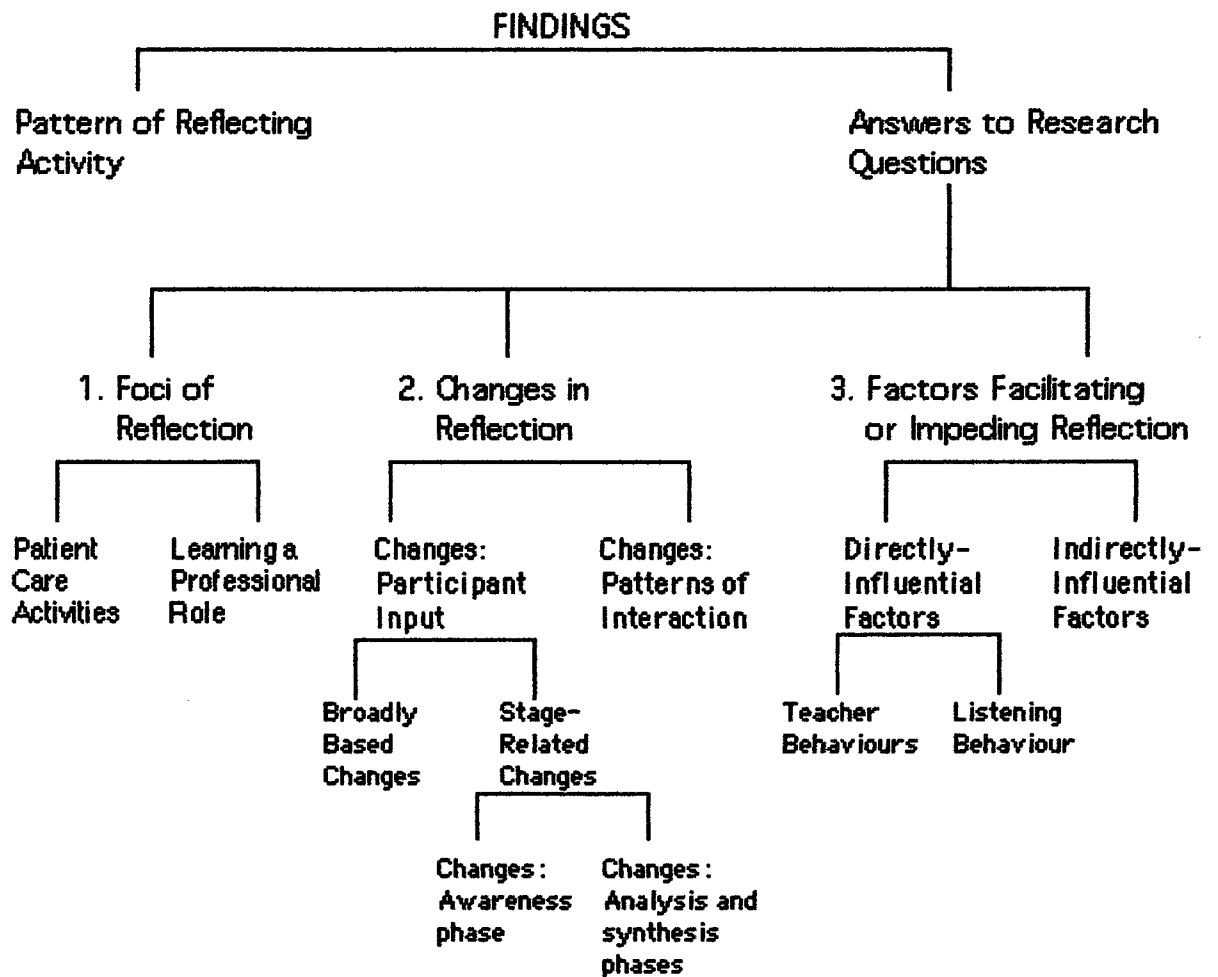


Figure 2. Research Findings: Organizational Chart

organization of the research results is illustrated in Figure 2. The chapter closes with a summary of the findings.

Pattern of Reflecting Activity

From the earliest weeks of the study, a pattern of knowledge creation through reflection was evident and description of the process in question was identified as a task of some importance.

Episodes of Reflecting Activity: Input-Prompt Cycles

Evidence that reflection was occurring became apparent as students participated--usually verbally, occasionally non-verbally--in conferences, focus groups, and individual interviews. Participant contributions to these interactions typically occurred in the form of 'snatches' of verbal input. An episode of reflection usually began with introduction of a particular item of concern into the session in progress. Although broad parameters of discussion were implicit in the debriefing and research purposes of the sessions, specific topics were almost always raised by participants themselves. Examples of introductory snatches included:

When we walked in the room, she was having a hard time getting out of bed, standing by herself.

Bonnie, Conference 1, Line 631.

My patient was just, basically, our age [19]. She had an ectopic [tubal] pregnancy. She had to have a salpingectomy [removal of tube], also there was a tumour.

Carol, Conference 2, Line 13.

My patient said she had [a bath] yesterday [and didn't want one today] and that was a big complication.

Dana, Conference 3, Line 665.

Input as noted above also indicates participant awareness of the topics in question, providing a link to the first stage of the conceptual model adopted for the study.

Introductory snatches thus initiated a process of interaction which included discussion of a concern by a participant ('input'),

responses to these remarks in the form of questions or comments ('prompts'), followed by reconsideration of the particular concern in the light of insights suggested by this 'prompting.' A snatch of input, along with the response to this remark formed an 'input-prompt cycle.' The following example of a single input-prompt cycle consisted of introduction of a concern by the student Zamie, followed by prompting from the teacher, Hailey:

[I thought that, like, after surgery, most of the patients,... they'd want to go home.]...But [my patient] really likes it here, and she say that.

OK. So, what [need] is she meeting here at the hospital?

Conference 1, Lines 705-708.

A pattern of input-prompt cycles typically continued with additional insights being suggested and considered until the participant seemed satisfied with the new or reinforced perspective of the situation which was emerging. These sequences included snatches in which participants engaged in examining the situation in question, identifying relevant knowledge, challenging assumptions and exploring alternatives--components of the critical analysis stage of the conceptual model. In each case, synthesis is revealed in the changed perspective which results. For example, the following participant input--considering components of the situation and identifying relevant knowledge--consists of excerpts from an episode discussing a patient who had stated he didn't want a bath, didn't need a bath, and who was refusing to cooperate with this aspect of care.

Maybe he was uncomfortable, it was a gentleman, maybe? I wouldn't be comfortable with a, if it was...a trainee or something, a, a male nurse come up and said you have maybe, you have to take a bath....I would refuse.

[The patient might be thinking] you're telling me I smell....Because we think, we think differently, because we have different concept and some of them, it depends, from which background they come.

[The reasons for bathing a patient--besides cleanliness, are] to reduce the inflammation....To improve the circulation, for infection, we would look, to assess the client....

Um hum [maybe the patient didn't understand the reasons bathing was necessary].

Ursula, Conference 3, Lines 750-937.

Another example, challenging an assumption and exploring alternatives, occurred during an episode in which students were discussing Mary's assumption of powerlessness when faced with an incident of unsafe behaviour by the nurse at her patient's bedside. Excerpts from this dialogue included:

Mary: ...the nurse she had, y'know, the mask, it wasn't on her nose, and I looked at her, [gesturing], "Isn't that supposed to be up here," she said..."It keeps falling off." That's all she said to me....I mean...I said something to her.

Norma: Maybe you could tell her that maybe that, well, before, in the classroom, when we learned about isolation, we learned that it's supposed to be like this...'cause then it's not like you're telling her what to do, you're telling her what you've learned.

Lynne: Maybe, you could ask her to, to tie it more---

Mary: Pinch the wire....It seems like a lot of things are not,
um---....Yeah [I could].

Conference 1, Lines 523-578.

With the emergence of the new or reinforced perspective, an episode of reflection appeared complete and a new sequence of reflecting activity began. This process as demonstrated in a single episode of reflecting activity is graphically represented in Figure 3.

During conferences and focus groups, the new sequence of reflecting activity was, once again, initiated by a participant--a different participant. Each person present had the opportunity to initiate an episode of reflection during each session and was the 'primary reflector' during the episode in question. From time to time, particular contributions likely to initiate episodes of reflection were solicited from specific students by the individual leading the session. For example:

I want to just make sure you're OK about the nursing
process...Ellen has a lady...there's quite a few things about
her. [To Ellen] You could pick either one of a few things.
What, what might you pick?

Frances, Conference 1, Lines 685, 798.

OK, Gail...if you had to improve one thing...

Hailey, Conference 3, Line 144.

More often, however, the responsibility for initiating episodes seemed to progress in order around the table according to where participants were seated by common--although unspoken--consent of group members. During a particular session, as more individual reflections were completed, reliance on teacher prompting decreased

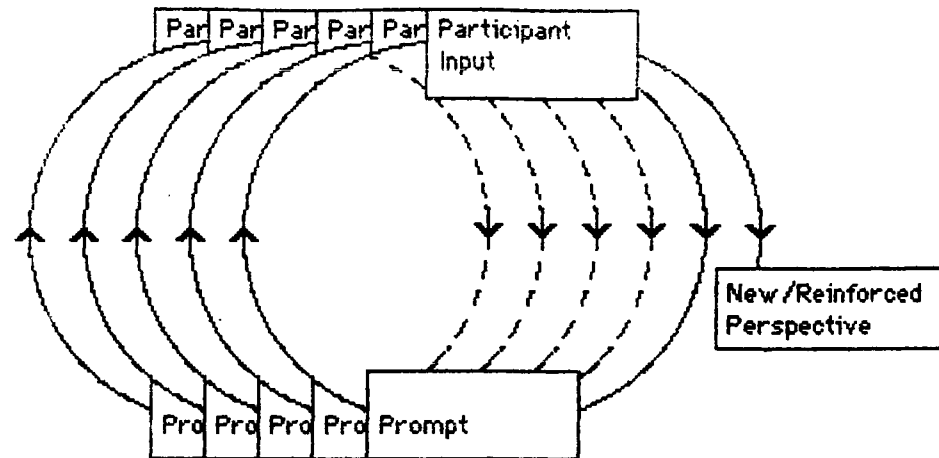


Figure 3. Episode of Reflection

and fewer input-prompt cycles were required to reach the stage of 'new or reinforced perspectives.' This was always most apparent for the last few participants in the conference/focus group session.

On a few occasions, input-prompt cycles were very limited due to time constraints and—under the influence of the teacher—episodes remained essentially incomplete. These 'aborted' episodes were always accompanied, implicitly or explicitly, by encouragement for the participant to complete the reflection in question independently. For example, as the end of one conference approached, the teacher indicated that she would devote "two and a half minutes" to each student who had not had a turn as primary reflector. After an episode involving one of these participants, which had consisted of seven input-prompts cycles, she remarked:

I'm sorry, you guys [Issie and Jessica] are getting the, the poor end of the stick, but...it's a start, eh?...It should be done in depth....You've got a good place to start from.

Frances, Conference 1, Line 2135.

Patterns of Prompting

Both input and prompting were significant components of reflecting activities. Although the content of prompts was likely to shed light only indirectly on answers to the research questions, characteristic patterns of prompting emerged as potentially more significant. In considering these patterns, the most obvious was a sequence of reflecting events during conferences in which the teacher, by asking appropriate questions and encouraging group input in response to participant statements, prompted consideration of the situation using steps of the Nursing Process as described by Orem (1995). The following series of prompts occurred during discussion of a patient whose fluid intake was inadequate.

Orem...makes you think 'What can the patient do?' and 'Can they [do] it or not?' So, what did you think about this?

What's the general---, what should be done and why can't the patient do it?

So, can that patient take...drink, um 12---, 1600 milliliters a day or something. If the reason that the patient isn't drinking is because they need to be encouraged...or maybe they just lack the knowledge about the importance of drinking it. That's why you look at the 'power components.' You don't 'encourage,' if that's not a power component that's missing. So, what was the reason for that person not being able to drink fluids?

Frances, Conference 2, Lines 501, 516, 540.

Student perspectives of the circumstances in question were thus examined and reformulated specifically in accordance with Self-Care Deficit Theory. As the theoretical position underlying the college's Nursing Process model was the principal factor influencing these reflections, this prompting may be regarded as 'model-driven.'

The second pattern of prompting depended less on prompts derived from a single theoretical construct and proceeded on a more 'ad hoc' basis. A broad range of resources available to both students and teachers provided multiple sources to be drawn upon in responding to participant concerns; in other words, 'multi-source' prompting. One such resource was the body of knowledge underlying principles of practice as outlined in standard nursing text books (Kozier, Erb & Olivieri, 1991; Lewis, Collier, & Heitkemper, 1996; Smeltzer, Bare, Brunner & Suddarth, 1992), a body of knowledge including material unrelated—as well as related—to the Orem model. Other resources included material from other courses (physical sciences, psychology, sociology), and insights gained from previous practice and personal life experiences (previous patient contacts, family life, hospitalization of friends and relatives, familiarity with local community agencies). The following series of prompts illustrating multi-source prompting occurred during discussion of a patient who did not want to be discharged from the hospital following foot surgery.

So, her self-care agency is kind of interesting, eh? Because... she might be trying to convince you that she has to stay here.

And the other part is that it's also, uh, y'know, remember that 'positive self-talk' that we talked about in the thing [lecture]. And so she'll say, y'know, "I don't know what I'll do if I have to go home this evening, because, uh...I already know that I won't be able to manage"....D'ya think that's affecting her ability to move?

But...do you think it was partly 'cause she was trying to say that "I, I'm too scared to go home alone"? Because before this surgery, she was pretty mobile.

Kate, Conference 2, Lines 126, 134, 149, 176.

A single reflective episode was generally characterized by a consistent pattern of either model-driven or multi-source prompting. This was largely determined by cues received as the session began from the individual leading the group. However, occasional digressions from the dominant pattern did occur. These were typically in the form of a single question or comment with reversion to the original pattern as interaction continued. For example, in the conference from which the slice of data illustrating multi-source prompting was taken, there was one instance, during discussion of a patient with a urinary tract infection, in which prompting took the following form:

Yeah, but what is it? Say a sentence with it, some general methods....I think you have to go back to your 'particularized self-care requisite.'

Kate, Conference 2, Lines 298, 308.

As indicated in the preceding paragraphs, a pattern of reflective activity was identified during analysis of data; a pattern which provided the backdrop against which answers to the research questions emerged. Reflection occurred in sessions incorporating a number of reflecting

episodes, which were--in turn--composed of multiple input-prompt cycles. Participant contributions to reflecting episodes occurred in snatches of verbal input. Responses to these remarks in the form of questions or comments promoted reconsideration of the particular topic under discussion in the light of insights suggested by this prompting. Input was basically important in identifying participant perspectives, and provided links to the model of reflection adopted for the study. Prompting was the impetus which moved reflection toward synthesis or the emergence of changed perspectives, as described in the final stage of this model. Two patterns of prompting were identified. Model-driven prompting encouraged examination and reformulation of the situation under discussion specifically in accordance with the college's Nursing Process model. Multi-source prompting drew on a broad range of academic, professional and personal resources in moving the reflective process forward.

Foci of Reflection

Aspects of the practice situation on which student reflections focus, although identified as important, have not--as indicated previously--been systematically described in professional literature. In order to address this gap in empirically-based knowledge, the first research question of this study "What aspects of the practice situation are the foci of participants' reflections?" was posed. An 'aspect' of the practice situation is any feature or characteristic of the situation which may be noticed by a participant.

Two major foci of participant reflections, patient care activities and the ongoing process of learning a professional role, were identified. Problem-solving was also recognized, within certain parameters, as another--albeit comparatively minor--focus of occasional reflecting activity. Description of a feature or characteristic of a practice situation may be considered indicative of awareness of the aspect in question. Thus, data supporting answers to the 'foci of reflection' research question also indicate participant awareness, once again linking findings to the first stage of the conceptual model adopted for the study.

Patient Care Activities

Participants reflected on their patient-clients, particularly in the light of specific care-giving activities carried out at the bedside. Aspects of these experiences which were most frequently considered included patients' personal characteristics, factors related to health and changes in health status, to medical and surgical treatments and nursing care received, as well as to client responses to these activities. Statements indicating foci included:

My patient...told me he doesn't care about his diabetes, he wants to have sugar.

Lynne, Conference 1, Line 1856.

I was surprised with my patient. Her whole nose is gone and she's in really good spirits.

Ellen, Conference 3, Line 798.

My patient was very demanding and wanted everything right away, then leave him alone.

Mary, Focus Group 3, Line 752.

Episodes most often evolved against the backdrop of a single phase of the problem-solving process. As indicated previously, in discussing problem solving in nursing practice, three stages--assessment, intervention, and evaluation, variously labeled and subdivided--are widely recognized.

Assessment begins with collection of raw data and culminates in problem identification and planning for care which will be delivered. Intervention occurs as the care in question is implemented at the bedside. Although accepted as an ongoing phenomenon, the term evaluation is most often used to refer to the effectiveness of measures carried out during the intervention phase. In this study, introductory snippets as outlined above were orientated within a particular stage of the process, thus establishing the context of the entire episode which was about to follow.

Episodes of reflection focusing on patient-related concerns revealed both model-driven and multi-source prompting during debriefing conferences. In focus groups and interviews, prompting was almost exclusively multi-source. During debriefing conferences, the frequency with which alternate sorts of prompting occurred varied. As indicated previously, teacher comments as discussions began typically signaled the preferred pattern for the session in progress.

Learning a Professional Role

Another major focus of attention was the ongoing process of

learning a professional role. This included discussion of participants' own personal characteristics, preconceived notions, previously acquired clinical knowledge, learning presently in progress, and role activities being performed in the situation in question. These reflections often arose from perceived discrepancies between participants' developing professional ideals and their practice experiences and from their perceived successes and failures in assuming the role of undergraduate nurse, and were usually expressed with a considerable degree of feeling. These episodes also developed against a backdrop of a particular phase of problem-solving. On occasion, however, some expansion of context beyond a single stage of the process did occur. Role-related reflection was always facilitated by multi-source prompting. Concerns included:

The wrong pills were at my patient's bedside. I gave them to the nurse. She snatched them out of my hand. Her look and manner made me feel guilty. Yet I did her a favour.

Norma, Focus Group 3, Line 1184.

When [my patient's visitor] was leaving, he went to leave the rail [bedside] down....So she [another student] said "We have to always keep it up"....He just kinda was rude to her, rude to me....[The nurse] said to him "We have to keep the rails up because she's at risk of falling."...Then he also said "Are you married?"...It kinda threw me. [When there's a potential conflict, patient and family concerns have to be identified, but] the patient must be safe.

Olivia, Conference 2, Lines 501, 651.

Some guy came in [to isolation] to change the garbage. He didn't have [a gown] on and he said "It doesn't matter, I'm not touching the patient."...There's a big red sign....It's MRSA

[superbug]....But we're students, they won't be interested [in what we say].

Mary, Conference 1, Line 34.

As indicated above, both patient-related and role-related reflections were framed within stages of the problem-solving process. Thus, in addition to dealing with particular topics encountered in practice, reflecting episodes also enabled participants to consider their problem-solving skills. Problem-solving was therefore identified--within certain parameters--as a focus of reflection. As the context of reflection during conferences, focus groups, and individual interviews, problem-solving was an implied--rather than specifically articulated--focus of reflection. There were, however, occasions when the process itself--definition of steps, terminology, correct usage--became a primary topic of discussion. These episodes revealed problem-solving as an explicit, as well as implicit, focus of reflection. The essence of one sequence of interaction focusing explicitly on the process, during a conference led by the teacher, Frances, is offered as an example. A complete verbatim transcript of this conference segment may be found in Appendix E.

Teacher: You've seen the patient, you've saw, you went down there and looked at him, what would you...say to yourself?

Student: [I would say] what would, [what should]...be done?

Teacher: ---be done. And that is the---

Student: TSCD.

Teacher: ---which is 'therapeutic self-care demand.' Which includes, it involves two things...there are two parts to this....In English, it's the goal. In Orem, it's the---

Student: PSCR.

Teacher: Which means---?

Student: Particularized---

Teacher: In particular. Only this man,...right now,...
'Particularized self-care deficit.'

Conference 1, Lines 174-224.

In this study of reflection on practice by first year nursing students during early patient care experiences, two major foci of participant reflections, patient care activities and the ongoing process of learning a professional role, were identified. Problem-solving, primarily a contextual feature in discussing reflection, was also recognized--within certain parameters--as an additional, comparatively minor, focus of reflecting activity.

Episodes of reflection focusing on patient-related concerns revealed both model-driven and multi-source prompting. Role-related reflection was always associated with multi-source prompting. In other words, a reflecting episode, regardless of its particular focus, might be facilitated by prompts derived from a broad range of professional and personal resources. Instances considering situations specifically in accordance with the college's Nursing Process model, dealt exclusively with patient-related foci.

Changes in Reflection

The second research question asked in this study was concerned with describing changes in the reflective process as participants

progressed through their practice-based experiences. Reflection changed in a variety of ways as individuals progressed through the semester of experiences caring for acutely ill clients. As analysis proceeded, data suggested basic change in two major aspects of the reflecting process. Fundamental differences were identified in participant input to reflecting episodes, while variations in patterns of interaction during group sessions also emerged.

Reflection, for purposes of this study, is considered a multi-step process consisting of three phases: awareness, critical analysis, and synthesis (emergence of changed perspectives). Some differences in participant input were noted specifically in relation to one of these stages ('stage related'), while others were more broadly evident ('broadly based') and occurred throughout reflecting episodes. As synthesis flowed directly from analysis sequences and there was considerable movement back and forth between these two stages during reflecting episodes, relevant changes will be discussed together, in a single subsection. Stage-related changes are, therefore, considered under two subheadings: 'changes related to awareness' and 'changes related to analysis and synthesis.'

While differences in participant input represented the larger of the two 'changes in reflection' categories, variations in patterns of interaction were also widely prevalent. These will be described in a single subsection following the discussion of input changes.

Changes in Participant Input

Snatches of input were a rich source of data shedding light on changes in reflection. As indicated previously, some differences in participant input were noted specifically in relation to particular stages of reflection (awareness, critical analysis, and synthesis) as outlined in the conceptual model, while others were more broadly evident and occurred throughout reflecting episodes. This distinction provided a useful basis for reducing the large quantity of input data to more manageable proportions. Thus, description of results--after initially dealing with broadly based changes--will continue by outlining differences apparent during particular stages of reflection.

Broadly Based Changes

Participant contributions to reflecting sessions occurred in snatches of input--primarily verbal input. As the semester began, snatches typically took the form of a simple phrase or sentence expressing a single thought. Input consisted of care-related observations or general impressions of the learning experience. As participants offering impressions were immediately assisted to identify specific factors underlying their statements, raw practice-related data were centrally important in all early reflections. Early comments included:

He still feels his leg...and it's not there anymore.

Lynne, Individual interview 1, Line 147.

He had a...duoderm [dressing] on his coccyx from a bedsore.
Mary, Conference 1, Line 1430

She didn't void through the whole morning and she had to.
Susan, Conference 1, Line 1812.

As the experience progressed, snatches of input became increasingly complex and comprehensive--discussing multiple aspects of practice situations and providing more details when describing particular concerns. Comments began to include patient data not immediately evident at the bedside, implying deliberate and active intervention by students to 'surface' this 'buried' information. In addition to improved information collection skills, input snatches also revealed occasional statements focusing on more than one stage of problem-solving, as well as changes in participant ability to deal with interconnections occurring both within and between situations. Relevant comments included:

Maybe he's thinking [that removal of his prostate means] the tumour is worse than he thought....[He could also be worried about] it being the prostate and him being a man, his manliness being affected....The doctor just said "99 percent is still there," and went on to something else.
Anita, Conference 3, Lines 673, 717, 817.

He was waiting on amputation, I did a dressing change on the other foot. [The amputation has been] canceled four or five times. They promised him and they don't do it. He's sick of waiting. The tendons are showing. He was sleepy, he didn't care.

Valerie, Focus group 3, Line 529.

My patient--he just didn't want to be bothered. There was an odour. It was the first time I checked a colostomy. It was hard for me not to show [my negative reaction].

Stool was coming out of it. Any time I would touch anything, it was "Ow! Ow! Ow!" and yet he said "Oh no, I'm not having any pain." Maybe he has a body image problem.
Ellen, Focus Group 3, Line 828.

As mentioned previously, patient care and the process of learning a professional role were major foci of participant reflections. Later in the semester, these topics were sometimes intertwined in single reflecting episodes. This was particularly noted as discussion of role-related concerns began to arise more frequently from participants' caregiving activities, and less often from passive observations of staff behaviours. Thus, broadly based changes suggested that participants might be abandoning the view of themselves as inexperienced intruders carrying out isolated tasks at the bedside, and beginning to embrace the role of undergraduate members of a professional team.

Stage-Related Changes

In contrast to broadly-based changes, some differences in participant input were noted in relation to specific stages of reflection (awareness, critical analysis, and synthesis). As indicated earlier in this chapter, stage-related changes will be considered under two subheadings; changes related to awareness, and changes related to analysis and synthesis.

Changes during the awareness phase.

Awareness, for purposes of data analysis, was defined as a

participant response to the practice setting as revealed in introductory input snatches of a reflecting episode. As the semester began, awareness centered on specific, distinct, easily observable, concrete characteristics of the practice situation. Raw data were, thus, the starting point of all early reflections. Examples included:

He had dry feet.

Paddy, Conference 1, Line 55.

The catheter...it [the urine] was dark coloured.

Ellen, Conference 1, Line 854.

It [the patient's throat] looks very irritated.

Wendy, Conference 1, Line 1739.

At mid-term, initial contributions typically described wholly or partially formulated clinical problems. Indeed, some reflections began at the exact point where the process had been considered complete in previous conferences. Previously described changes in participant information-collection skills and ability to deal with interconnections were becoming increasingly significant. This was particularly seen in growing evidence indicating that participants were considering the significance of clinical data and recognizing situational relationships prior to entering conference, focus group, and interview sessions. At this time, a few episodes began with consideration of intervention (implementation of nursing care measures) and one reference to evaluation (effectiveness of measures implemented at the bedside) was noted. However, assessments (collection of raw data, problem identification, planning for care delivery) of practice problems were the usual starting points of reflection as participants moved through

the middle phase of their clinical rotations. Relevant comments included:

[The problem is] inability to prevent...urinary tract infection in a 36 year old quadriplegic male.

Terri, Conference 2, Line 21.

[The problem is] inability to eliminate a urinary tract infection in a 40 year old woman who had severe hematuria with a J-tube and an indwelling catheter.

Susan, Conference 2, Line 210.

I was trying to do my communications. I knew that my patient--his wife died. She was buried yesterday. [He missed the funeral.]... No emotions. Maybe because I'm a stranger. Also he was focusing on his legs [after surgery on the legs]. He didn't seem to have the need to verbalize his emotions.

Gail, Conference 2, Line 2080.

In end-of-semester sessions, initial input was more varied. Continuing concern with raw data was occasionally indicated and evaluation received some attention. Assessments were increasingly likely to be completed prior to, and implied rather than specifically stated during, conferences, focus groups, and interviews. Thus, as the academic year drew to a close, a majority of episodes began with input centered predominately on interventions being performed by participants. Examples included:

Like today you [the teacher] told my patient that if he took empracet [analgesic], he might get constipated; so, after you left I was telling him, like he wanted water, so I was like giving him water and I go "You should be drinking a lot of water for [avoiding the side effect of] constipation."

Yvonne, Conference 3, Line 1122.

Today my patient was saying he don't wanna have a bath...and he keeps saying "OK, later" and...time keeps going by, but he still doesn't wanna do it.

Zamie, Conference 3, Line 614.

I was doing the catheterization and people kept coming in. We had two chairs blocking the door and it happened three times.

Lynne, Conference 3, Line 719.

Changes during analysis and synthesis phases.

Critical analysis is defined as the phase of reflection examining the components of a situation, identifying relevant knowledge, challenging assumptions and exploring alternatives. Synthesis or emergence of changed perspectives was revealed at the conclusion of episodes and flowed directly from analysis sequences. Differences noted in synthesis-related input will therefore be discussed immediately following analysis-based changes.

Reflecting episodes, as previously indicated, evolved against the backdrop of one or more phases of problem-solving. As introductory input was largely responsible for orientating the reflection in question within a particular stage of the process, changes during the awareness phase substantially influenced subsequent analysis and synthesis related input. In early semester sessions, raw data were the starting point and principal focus of reflecting activity. During analysis sequences, this information was processed through steps of assessment. The changed perspectives which emerged revealed clinical problems formulated

partially, occasionally completely, within the context of nursing practice.

Pertinent comments included:

The [goal for my patient] was to improve her mobility and...to properly teach her how to use crutches...and give her something for her pain which would also increase her chance of mobility.

Quita, Conference 1, Lines 781, 787.

[The goal will be to] prevent it [urinary tract infection]...by drinking 1500 [milliliters] a day.

Ellen, Conference 1, Lines 974, 990.

My [goal] is prevent blood clots in a 61 year old man... because it'll stop the urine coming out.

Anita, Conference 1, Lines 766, 781.

At mid semester, analysis consisted of more complete clinical problem identification and anticipation of subsequent phases of problem-solving began to occur. The final stage of assessment according to Orem (1995) is outlining the criteria to be used as the basis for evaluating the yet-to-be-performed intervention. Emerging perspectives consisted of finalized assessments, often expressed in the form of outcome criteria, as well as insights into intervention and occasional references to evaluation. Comments included:

[Her respirations are 9 per minute because of morphine. Morphine] slows down the respiratory system.... [She'd have] hypoxia.... [Related observations would be] colour of lips and skin and oxygen saturation.

Anita, Conference 2, Lines 137, 1210, 1290.

Outcome criteria, that I remember it was, like, that his urine was pale and yellow, like, and it was that way, keep it that way 'til discharge.

Terri, Conference 2, Line 1263.

[Outcome criterion would be] the skin is dry and intact, good turgor,...no infection.

Lynne, Conference 2, Line 878.

End-of-semester sessions centered largely on nursing care which had or might have been carried out at the bedside. At some times 'backtracking' to previous stages of problem-solving was necessary to move forward with analysis and at others, tentative evaluation of practice activities was included. However, in spite of continuing concern with assessments and occasional forays into evaluation, changed perspectives at this stage of the experience were typically concerned with interventions being performed by participants. Expression of concerns included:

I was supposed to mobilize, he didn't want....I spent a lot of time talking to him. He was more agreeable after that.

Norma, Focus group 3, Line 11.

When [she understood] that we didn't want her getting any, uh, lack of circulation in the back, and that she could go ahead and get up...right away she was up off her back. It wasn't until she was informed that, it was for her just another, like, thing to do, and she didn't want to and she was tired, and she had a, like, lousy time doing it last time.

Dana, Conference 3, Lines 935, 943.

I was afraid of doing something wrong, 'cause he couldn't move [due to paralysis], and when I asked if he could...by knowing that he was not---, that we could be hurting him. All he said was "I can't feel anything."

Paddy, Conference 3, Lines 1422, 1438.

Thus, fundamental differences were identified in participant input

during reflecting sessions as students progressed through this semester of early practice-based experiences. Input shifted from simple, single-thought phrases to comprehensive statements discussing multiple aspects of practice situations. Input consisting solely of raw data was replaced, as the experience progressed, by awareness focusing on formulated clinical problems, and later still, on interventions. Analysis and synthesis, characterized earlier in the experience by concerns with assessment (data collection, problem identification, planning) and intervention respectively, later began to indicate perspectives concerned sometimes with assessment, frequently with intervention, and occasionally with evaluation (effectiveness of nursing interventions). Thus, during these early experiences in acute-care settings, participant input to reflecting episodes revealed changes within each component (awareness, critical analysis, synthesis) of the conceptual model adopted for the study.

Changes in Patterns of Interaction

Reflection during group sessions was characterized by changing patterns of interaction as the semester progressed. In early conferences and focus groups, simply phrased, single-focus input was offered by the primary reflector in a particular episode, following which this participant stopped speaking and waited for a response. The momentarily suspended reflection was reactivated--occasionally redirected--by a prompt, usually from the individual leading the session.

As the semester progressed, a growing tendency was noted for participant contributions to be offered in response to broad remarks from other group members, even--on occasion--spontaneously. Prompts had previously consisted mainly of teacher-initiated questions, directions, instructions and reviewing of theoretical knowledge. Later prompting was more likely to take the form of encouragement with the exploration and development of emerging ideas. At the same time, expression of several ideas in a single participant contribution was increasingly prevalent, providing a broader base from which to explore the concern in question. In contrast to the somewhat fragmented progression of ideas evident in earlier sessions, consecutive snatches of input now moved the reflection forward in integrated and smoothly flowing sequences.

During reflecting episodes, as indicated previously, input-prompt cycles centering on the concern introduced by the primary reflector followed one after another until the participant in question appeared satisfied with the perspective which was emerging. This sequence was repeated until each member of the group in question had assumed the role of primary reflector during one reflecting episode. During data analysis, changes in the way this basic pattern flowed seemed to exist but were not easily identified. Therefore, the flow of interaction for each session was plotted and, based on the resulting analysis, Figures 4-8 were constructed.

Reflecting activity during early group sessions occurred almost

exclusively within the basic framework outlined above; individual reflecting episodes occurring in sequence until each member of the group in question had assumed the role of primary reflector. This pattern is illustrated in Figure 4.

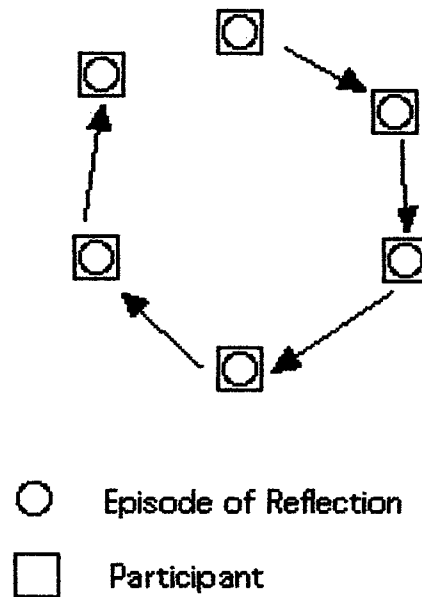
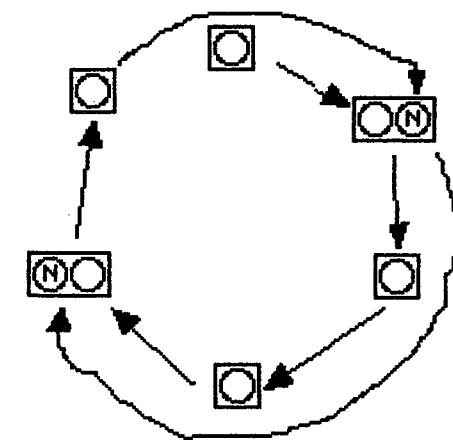


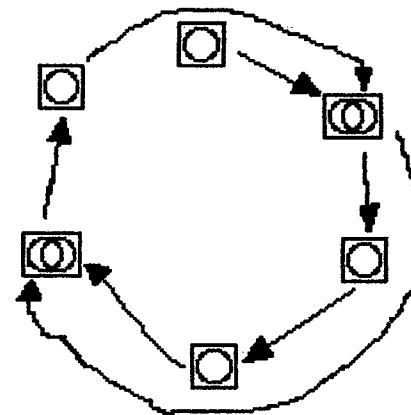
Figure 4. Pattern of Interaction: Early Group Sessions

As the semester progressed, changes in this relatively consistent format were noted. To allow for comparison of different patterns, these variations, graphically represented, are portrayed in Figures 5-8 on page 104. The simplest variation was seen when, having already completed one reflecting episode, a participant refocused on another aspect of practice deemed worthy of consideration in the group setting. This usually became evident when, as conference adjournment approached, the participant in question introduced the previously undiscussed topic of concern, stimulating a new episode of reflection and



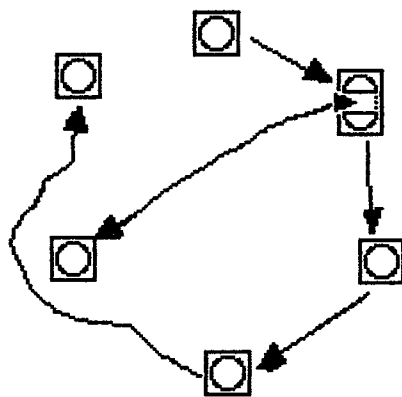
- Episode of Reflection
- Ⓝ New Episode of Reflection
- Participant

Figure 5. Pattern of Interaction:
Double Topic Reflection



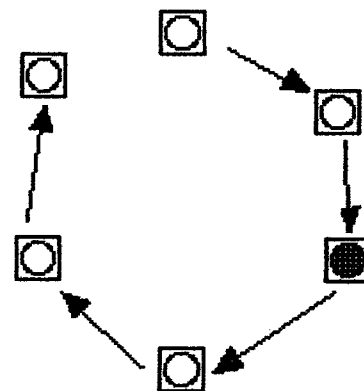
- Episode of Reflection
- ⊖ Compound Episode of Reflection
- Participant

Figure 6. Pattern of Interaction:
Compound Reflection



- Episode of Reflection
- ⊢ Interrupted Episode of Reflection
- Participant

Figure 7. Pattern of Interaction:
Interrupted Reflection



- Episode of Reflection
- Reintroduced Reflection
- Participant

Figure 8. Pattern of Interaction:
Reintroduced Reflection

assuming, for a second time, the role of primary reflector. This pattern, including 'double topic' reflection, is represented in Figure 5.

Evidence of another change emerged from conferences, underway for some time, which seemed to be developing in the usual way. Once again, participants, whose reflecting activities had previously appeared complete were reentering the discussion as primary reflectors. Rather than dealing with new topics, these instances reintroduced previously discussed material. Participant perspectives emerging from earlier reflection had apparently continued to evolve as the conference continued, thereby stimulating a need for further consideration of the concern in question. The reflecting activity previously considered complete and the newly instigated sequence thus emerge as the first and second segments respectively of a 'compound' reflecting episode. This type of sequence is graphically represented in Figure 6.

As the semester progressed, episodes of 'interrupted' reflection began to occur. The usual pattern of input-prompt cycles as reflecting activity began remained basically unchanged. However, as episodes developed, instances were noted in which another participant cut into the reflection in progress by introducing a concern related to, but not identical with, the topic under discussion. The reflection in progress was most often temporarily abandoned, remaining essentially 'on hold' while all or part of a second sequence developed. Interrupted reflections were subsequently resumed, as indicated in Figure 7, refocusing—with little or no difficulty—on the original concern.

Another variation occurred which shared some characteristics of compound reflection. Once again, participant perspectives emerging from earlier reflecting activities had apparently continued to evolve, stimulating a need for further consideration of the concern in question. However, in these instances, the previous reflecting activity had occurred in a different debriefing conference, with as much as six weeks separating the two sessions. This pattern of 'reintroduced' reflection is represented in Figure 8.

Factors Facilitating or Impeding Reflection

The third research question asked in this study was concerned with identifying factors perceived by participants as facilitating or impeding their reflections on practice during this semester of early practice experiences with acutely ill clients. Factors facilitating or inhibiting reflection are those aspects of the clinical situation which were described by participants as helpful or not helpful, respectively, during their involvement in reflecting episodes.

Factors identified as facilitating or inhibiting reflection exerted their impact either directly, by influencing reflecting activity while conferences were in progress or, alternately, by affecting the quantity and quality of practice-related information brought by participants to reflecting sessions. Almost all data indicating a direct influence on reflection described teacher behaviours perceived by participants as helpful or not helpful. Such behaviours fell into two categories:

prompting activities and definition of conference parameters. Student listening behaviour was also cited as a factor directly influencing reflection. Indirectly influential factors supporting participants' practice, such as preparation for the experience and encounters with professional staff, were aspects of the learning situation which supported participants' practice; thereby affecting the practice-based information being brought to reflecting sessions.

Before specifically discussing these individual factors which facilitated or impeded reflection, several general observations about the factors in question should be noted. Participant comments focusing on factors considered helpful or not helpful were most often made during focus group sessions. Statements referred mainly to factors encountered during debriefing conferences, but were, in some cases, also applicable to interviews. Although the influence of a factor might be articulated by only one or two students, other individuals present were quick to indicate, verbally or non-verbally, their opinions on the subject. As focus groups are a research context conducive to the expression of dissenting views, it was interesting to note that agreement or disagreement with statements describing helpful or not helpful factors was almost always unanimous among members of a particular group.

Although the same factors facilitated or impeded reflection for all five student groups participating in the study, the nature of the influence exerted by a specific factor was not always the same. Factors perceived in some instances as helpful were seen as not helpful in others.

Thus, while the nature of the influence exerted by a particular factor might vary, similar factors were influential in all cases.

Directly-Influential Factors

Factors identified by participants as directly facilitating or impeding reflection exerted their impact on reflecting activity while conferences were actually in progress. As indicated previously, almost all data indicating a direct influence on reflection described teacher behaviours perceived by participants as helpful or not helpful. Such behaviours fell into two categories: prompting activities and definition of conference parameters. Although much less frequently discussed, student listening behaviour was also recognized as a factor directly influencing reflection.

Teacher Behaviours

The teacher behaviour most conducive to reflection was prompting. Participants referred to the teacher's usual way of prompting rather than to specific prompts, and comments suggested the usefulness of an 'open' form of teacher input which encouraged further consideration of the topic in question. Prompting described by participants was always reported as helpful. Examples included:

I like how she makes us think, like we always have to answer our own questions...she'll not exactly answer us.

Bonnie, Focus group 1, Line 64.

Whenever we say something and we're not, like, very very clear, or maybe Hailey thought the idea wasn't clear to

everybody, she tries to encourage us and make it understandable to everyone.

Dana, Focus group 1, Line 181.

When...she thinks there's more that you can say...she urges it.

Zamie, Focus group 1, Line 216.

Several teacher behaviours perceived as fundamentally important in defining conference parameters were identified by participants as factors facilitating or inhibiting reflection. These behaviours were considered specifically in connection with teacher input during conference sessions. Once again, these conferences may be referred to as debriefing sessions, post-clinical conferences, clinical conferences, or by using various combinations of these terms.

Teacher behaviours seen as important in defining conference parameters were discussed in relation to the teacher's ability to determine the number of students participating as primary reflectors during particular sessions, the amount of time allotted to individual episodes of reflecting activity, and topics accepted—implicitly or explicitly—as legitimate foci of reflection. These factors frequently overlapped: time available and topics for discussion depended on, and affected, the number of students participating as primary reflectors. In spite of overlapping, participants' stated perceptions of what was helpful or not helpful focused on one factor as the particular influence in the instance being described, and it was on this basis that the analysis proceeded.

The importance of every student at a conference having a 'turn' as primary reflector was strongly expressed by some participants.

Others expressed the view that more was gained when a few individuals had the opportunity to reflect in depth. Relevant statements included:

[It was good] the way she paid attention to each of us individually...she guided us.

Paddy, Focus group 2, Line 48.

The way she chose that not everybody had to speak about theirs, say pick a few and really get in depth about it... instead of having everybody doing it, because having three in depth instead of six or seven, it sinks in more.

Quita, Focus group 1, Line 681.

Some participants felt that, after a certain amount of time, reflecting episodes should be stopped, regardless of whether or not changed perspectives had emerged. Others indicated the importance of having enough time to complete episodes. Pertinent comments included:

It was good until we got to Susan, cause then, cause time, [she] kind of...got left out.

Bonnie, Focus group 1, Line 16.

But what's there, time wise, should it give everybody, OK, seven minutes each...just so like the others are not, like, deprived, because, like, some matters maybe take longer than others.

Terri, Focus group 1, Lines 26, 34.

[It's good that] she never rushes us. [We should arrive at] a consensus.

Ursula, Focus group 2, Line 512.

In discussing factors facilitating or impeding reflection, participants clearly perceived a substantial degree of teacher control over foci of reflection. This finding, based on information communicated by students

during focus groups, was somewhat at odds with data collected during debriefing sessions. These data, other than confirming that input should be experience-related, gave little indication of specific agenda-setting by teachers. Debriefing session data also tended to confirm that, in fact, most specific topics of discussion were introduced by students themselves. Teacher control over foci of reflection is therefore seen as a participant perception, apparently linked to their impressions of teacher expectations. Expectations were, in some cases, assimilated from teacher remarks; and, in others, were inferred on the basis of the teacher's use of a model-driven pattern of prompting. Statements included:

Frances [the teacher] was giving [us a] detail of each client that we could focus on. We could learn from that.

Lynne, Focus group 2, Line 208.

[It was good] because of the Nursing Process...she goes over it all in the conference.

Valerie, Focus group 2, Lines 150, 160.

[Other possible topics were not raised because they were] too hard to fit into Orem. There was lots more about my patient than just some dumb rings.

Terri, Experience 1, Field notes, March 9, Line 77.

Participants expressed reservations about instances in which teachers permitted discussion of topics not applicable to all group members or allowed interactions to continue 'off-topic.'

Comments included:

One of the things...was y'know, people talking about their personal life when we're in post-conference....We don't

want them to do it...[unless it would] strengthen the point.
Susan, Focus group 2, Lines 529, 652.

That one's me. (referring to written comment "All issues raised [in conferences] should be beneficial to the group in total," noted during first lab session of the current semester).

Norma, Experience 2, Field notes, March 24, Line 11.

Listening Behaviour

Student listening behaviour was the other directly influential factor described by participants as facilitating or impeding reflection. This factor was specifically discussed in some cases, and implicit in the non-verbal behaviour demonstrated in others. While the temptation to use the label 'attending,' rather than 'listening,' was strong, 'listening' and 'hearing' were the words used by participants when referring to the behaviour in question. Furthermore, in field notes, the expression 'paying attention' was used by the researcher to indicate attention to auditory stimuli.

Students usually found that listening to their group-mates was helpful. However, a particular pattern of non-listening to ongoing group interaction was also discussed. Although the participants who described non-listening implied that the behaviour served a useful purpose, they did not definitively state whether the overall impact on reflection was positive or negative. Relevant examples included:

Hearing other people talk about their day and their situations,
I find it helps me a lot.

Roberta, Focus group 3, Line 741.

Students didn't look terribly interested [during conference] except when addressed specifically, or when information was being given about the [homework] assignment.

Conference 1, Observation protocol, March 9, Line 3.

I came down with some of the students in the elevator.... They spoke about the fact that while [the teacher] Frances was addressing herself to other group members, each one of them was concentrating on what they would say when their turn came. They were only sporadically paying attention to the interaction between Frances and whatever student happened to be the focus of her attention at that point in time. After they had their turn, they were concentrating on what had been said so they could get it written down for their assignment to be handed in on Friday.

Experience 1, Field notes, March 10, Line 44.

As indicated in the preceding paragraphs, factors found to facilitate or impede reflection on practice included teacher behaviours-- mainly prompting activities and definition of conference parameters. Helpful prompts encouraged students to draw on their growing knowledge base to answer their own questions and to expand their view of nursing situations. Teacher behaviour which involved controlling time management and topics of discussion was perceived as helpful in some instances and not helpful in others. Student listening behaviour was also recognized as a factor directly influencing reflecting activities.

Indirectly-Influential Factors

Factors within the clinical learning situation facilitated or inhibited reflection indirectly through their impact on information collected by participants during practice experiences. The quality and quantity of

information brought by participants to conference, focus group, and interview sessions was largely determined by extent to which the factors in question supported student practice. This information was important not only as the starting point for all reflecting episodes, but also as the source of practice-based contributions which moved the process forward. Support for information collection by participants within the practice environment derived from two major sources: the extent to which they were prepared for their client assignments, and the nature of their encounters with professional staff.

Preparation for Clinical Experience

Patient care experiences were always preceded by preparation for the experience. Orientation to the physical environment, indication of appropriate theoretical material to be reviewed, and access to progress-to-date summaries of the assigned clients were provided. Provision of preparatory information was largely under the control of the clinical teacher, although a degree of independent responsibility for making use of information and suggestions provided was acknowledged by participants. When discussing familiarity with various aspects of practice, data often referred to the benefits and difficulties associated with 'knowing and 'not knowing' respectively. Pertinent comments included:

[I was frustrated because] we didn't know where anything was....We didn't have a chance to get organized.

Lynne, Focus group 1, Line 12.

The only good thing about the [clinical assignment] sheets is before that, before you meet your patient, you know what it's about.

Susan, Focus group 1, line 331.

[Knowing more theory], it gives you a sense of orientation, it gives you a sense of confidence when you know what this patient has, y'know what's going on.

Norma, Focus group 2, Line 438.

Encounters with Professional Staff

Encounters with professional staff--mainly registered nurses--in the clinical area, influenced participant experiences positively at some times and negatively at others. These encounters were described as helpful or not helpful based on staff interactions with, and perceived attitudes towards, students as prospective practitioners, as well as on their availability for consultation on issues related to patient care. Participants were also present at the bedside during interventions by other professionals which allowed them to observe staff interactions with, and attitudes towards, patients. Descriptions of such interventions were limited to instances in which there was a negative effect on participant learning. Relevant data included:

Today it was just...everything I said it was like "Yeah, well, who cares?" y'know, "Your patient's just a whiner" and that. And I'm, like, ah, y'know, like, there's...when an IV's not working, there's something wrong...I would be telling her and she would say "Well, it's just positioning."...Like I tried, y'know, like, keeping her hand in one spot...but still, it would stop and it would go....It did that throughout the day....The nurse did not help me out at all.

Bonnie, Focus group 2, Lines 185, 358, 512.

[The nurses] understand that, sometimes, you maybe know it,...but you just, like, freeze, and like, don't know how to explain it, but in the end, they understand that.

Terri, Focus group 1, Line 235.

I thought it was almost overwhelming when I walked in...[My patient] kept saying "It's dripping" and I'm thinking, and I checked everything, y'know, and what's going on?... I better go and get my nurse...and the nurse wasn't there.

Valerie, Conference 1, Line 259.

Thus, factors within the clinical learning situation, mainly the extent to which participants were prepared for clinical assignments and the nature of their encounters with professional staff, facilitated or impeded reflecting activities. These factors influenced reflection indirectly by affecting the quantity and quality of practice-related information brought by participants to reflecting sessions.

Summary

As an integral part of this research studying reflection on practice during early patient care experiences, data collected in conferences, focus groups and individual interviews with first year nursing students were analyzed. The possibility of describing aspects of the practice situation on which reflection focused was confirmed, changes in reflection as the experience progressed were evident, and data revealed common factors found by participants to facilitate or impede reflection on practice.

Participants reflected on their patient-clients, particularly in the light of specific care-giving activities carried out at the bedside. The other major

focus of attention was the ongoing process of learning a professional role. Basic changes were also identified in two areas of the reflecting process. Fundamental differences were found in participant input, while variations in patterns of interaction during group sessions also emerged.

Factors which were found to facilitate or impede reflection exerted their influence either directly, by influencing reflecting activities while conferences, focus groups, and interviews were in progress, or indirectly, by affecting the quality and quantity of practice-related information brought by participants to these sessions. Directly-influential factors consisted of teacher behaviours--specifically, prompting activities and definition of conference parameters, and student patterns of listening during debriefing sessions. Indirect impact was exerted by factors which supported student practice in the clinical setting--principally, participant preparation for client assignments and the nature of their encounters with professional staff.

CHAPTER V

DISCUSSION

This research was undertaken to investigate reflection on practice by first year nursing students during early patient care experiences. The project specifically sought to describe: (i) aspects of the practice situation on which student reflections focused, (ii) changes in reflection as students progressed through early practice-based experiences, and (iii) factors perceived by students as facilitating or impeding their ongoing reflections on practice.

Reflection, for purposes of the study, was defined as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop new and enriched perspectives. Constructivism, which focuses attention on the active creation of practice-based knowledge by the learner, was identified as an appropriate perspective from which to explore reflection on practice during early clinical learning. A conceptually-based model, consistent with constructivist theory, while also representing essential elements of the reflective process--awareness, critical analysis, and synthesis (emergence of changed perspectives)--was articulated in

Chapter 2. In addition to answering the three research questions, the project was considered an opportunity to confirm, refine and/or extend--on the basis of empirical evidence--this conceptualization of reflection on practice.

Concern with reflection as a matter of importance for professional education has generated a growing body of literature in recent years. However, practice-based attempts to explore aspects of reflection specifically investigated in the present study have been surprisingly limited. Nevertheless, findings from a variety of sources related, sometimes directly, more often indirectly, to the current project were found to be a substantial source of additional perspective in considering the results of this research. In considering such perspectives, discussion will focus initially on the relationship between study findings and the conceptual model of reflection outlined in Chapter 2 and subsequently, on answers to individual research questions.

Research Findings and the Conceptual Model

As indicated previously, a conceptual model, consistent with constructivist theory, while also representing essential elements of the reflective process--awareness, critical analysis, and synthesis (emergence of changed perspectives) was considered appropriate in this study of reflection on practice during early clinical learning. During the ongoing process of data analysis, interrelationships between

emerging categories, and stages of reflection as outlined in the model were readily apparent, as noted in slices of data used as to illustrate research findings in Chapter 4.

Reflecting activity was inevitably initiated by participant input focusing on a concern about some feature of the practice experience of which they had become aware. Analysis of this input led to identification of aspects of practice on which participant reflections focused; that is, the information sought by the first research question. Changes in initial input provided information which was useful in responding to the second research question. This question was designed to inquire into changes in participant reflection during the semester of bedside experiences. The third research question asked about factors perceived by participants as facilitating or impeding their reflections on practice. Aspects of the setting which supported collection of clinically-based information was one such factor identified. This information subsequently served as input to reflecting episodes.

The basic pattern of reflective activity identified in the study and described in the section of the “Findings” chapter entitled “Pattern of Reflective Activity”, consisted of participant input, followed by responses or prompts which led, in turn, to reconsideration of the participant concern in the light of insights suggested by the prompting. This consideration included both analysis (examination of components of situations, identifying relevant knowledge, exploring alternatives) and

synthesis (emergence of changed perspectives). Changes, both in participant input and in the sequences of interaction through which the input was offered as the semester progressed, provided additional insight into the question of changes in reflection posed by the second research question. Teacher prompting, a factor discussed in the 'Pattern of Reflective Activity' section of chapter 4 and identified as a facilitator of reflection in answering the third research question, was the factor which moved participant reflections towards the stage in which new and reinforced perspectives were evident.

The model adopted for this research provided a graphic representation of essential elements of the reflective process--awareness, critical analysis, and synthesis (emergence of changed perspectives). Interrelationships between the model and research results were apparent in the answers to all three research questions. The most direct connections were, as noted above, in the areas of participant input to reflecting episodes, changes in patterns of reflection as the semester progressed, and in descriptions of helpful teacher prompting during reflecting sessions.

Thus, in the early stages of this research, a model of reflection on practice was articulated. Evolution of the model began with the work of Atkins and Murphy (1993). Perspectives of other authors, notably Scanlan and Chernomas (1997) and Mezirow (1981), contributed to the formulation of a more inclusive model. However, at the outset of the study, the model was, as indicated previously, based

solely on theory-based conceptualizations. Results of the present research were found to be consistent, based on empirical evidence, with this model of reflection on practice.

Discussion of Findings: The Research Questions

In this study of reflection on practice by nursing students during early clinical experiences, three research questions were asked. These questions were designed to yield information about: (i) aspects of the practice situation on which student reflections focused; (ii) changes in reflection as students progressed through early practice-based experiences; and (iii) factors perceived by students as facilitating or impeding their ongoing reflections on practice.

Foci of Reflection

Reflection was found to be a frequently occurring activity, basic to the development of new clinical perspectives, among nursing students during their early practice experiences with adult clients in acute care settings. Reflection, for purposes of this research, has been defined as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop new and enriched perspectives. As indicated previously, knowledge is constructed as a consequence of reflection on salient aspects of the practice situation. Describing aspects of such situations on which student reflections were focusing was, therefore, a primary purpose of this study.

Foci of reflection were among the earliest findings to emerge from the data. As indicated previously, participants were enrolled in a college-based program recognizing a primary responsibility for preparing prospective practitioners to nurse acutely ill, hospitalized clients. Thus, research evidence identifying reflection on care-giving activities at the bedside and on the process of learning a professional role as primary foci of participant reflections was consistent with the goals of the program in question.

All participants focused, on numerous occasions, on concerns related to the patient for whose care they were responsible. Role-related reflections were less frequent but occurred in every student group. Such episodes were characterized by spontaneous and eager involvement, not only by the primary reflector, but also by other individuals present. Thus, given the opportunity in post-clinical interviews and conferences, participants reflected on both patient- and role-related concerns. Attempts to link this finding with current practice literature met with limited success. The single piece of research specifically discussing 'foci of reflection' dealt with the reflective processes of university professors (McAlpine, Weston, Beauchamp, Wiseman & Beauchamp, 1999), and the practical, strategic and epistemic categories identified had little relevance to the current project.

Two studies have reported 'preoccupations' (Smith, 1998) or 'themes' (Minghella & Benson, 1995) used as the basis of reflections by pre-registration nursing students. However, as these projects were

conducted over 18 months and three years respectively, the question of foci of reflection during early clinical experiences--the question posed in this research--was not specifically addressed. Nevertheless, both the preoccupation labeled 'nursing actions' (Smith) and the theme of 'communication with clients' (Minghella & Benson) clearly refer to patient-related concerns. Similarly, issues of 'acting professionally' and 'relations with medical staff' (Smith), as well as 'role conflict' and 'student status' (Minghella & Benson), describe significant aspects of role-related concerns. Another study (Maclean & White, 2007) found that joint reflection on videotapes of practice activities by pre-service and experienced teachers contributed to the shaping of students' teacher identities. While not specifically supporting broader acceptance of patient and role-related concerns as the foci of student reflection during early clinical experiences, these studies do suggest the general relevance of these categories to undergraduate student reflections.

As indicated previously, given the opportunity in post-clinical interviews and conferences, participants in this study reflected on both patient- and role-related concerns. This invites consideration of ways to ensure that every student is provided with support which encourages reflection in both these areas. The current study suggests a particular factor which might be useful in this connection, a relationship between foci of reflection and patterns of prompting.

Episodes of reflection focusing on patient-related concerns revealed both model-driven and multi-source prompting. Role-related

reflection was always associated with multi-source prompting. Thus, a reflecting episode regardless of its particular focus, might be facilitated by prompts derived from a broad range of professional and personal resources. Instances considering circumstances specifically in accordance with the Self-Care Deficit theory, the college's nursing model, dealt only with patient-related foci. Clearly, if reflection in both areas is to be facilitated, multi-source prompting is an essential tool for individuals leading reflecting sessions.

Resource material provides little insight into this aspect of the project. Discussions of 'tailored' and 'general' questioning (Whipp, 2003) and of 'generic' and 'directed' prompts (Davis, 2003) offer some additional perspective. Each of these reports describes alternate forms of more-or-less 'open' prompting, suggesting a parallel with the multi-source and model-driven categories identified in this research. Although the question of what types of prompting might lead to consideration of particular foci of reflection was not specifically addressed, support for the idea that open forms might be more generally useful is suggested.

As an episode of reflection in this study might, regardless of its particular focus, be facilitated by multi-source prompting, the desirability of using one pattern to the exclusion of the other during reflecting sessions must be considered. Multi-source prompting tended to promote a broader view of the circumstance in question and to support spontaneous contributions by participants. Model-driven episodes, on the other hand, required participants to use the

terminology and steps of the Self-Care Deficit model in examining and reformulating their concerns. As a result, their ability to understand and make connections between clinical experiences, steps of the problem-solving process, and the college's nursing model was substantially enhanced. Each type of prompting thus has the potential to facilitate construction of new knowledge. Similar potential is implied by Whipp (2003) in connection with her 'tailored' and 'general' categories of questioning. The importance of using more than one form, and of selecting the most appropriate type of prompt to use in a particular situation, is therefore emphasized.

Changes in Reflection

Principal changes in reflection, as student experiences in acute-care settings progressed, were in participant input and in patterns of interaction during group sessions. Differences in input represented the larger of the two categories. However, interaction is a basic feature of the "Patterns of Reflecting Activity" section of the "Findings" chapter, a section dedicated to describing the process of knowledge construction which became evident during the analysis of study data. This association with the process of knowledge construction emphasized the particular importance of variations in interaction patterns.

Changes in Participant Input

As students moved farther into their semester, some input

changes were noted in relation to particular stages (awareness, analysis, synthesis) of reflection, while others were more broadly evident and occurred throughout reflecting episodes.

Broadly based changes.

As the semester progressed, broadly based changes were evident as the form of input snatches shifted from simple, single-thought phrases, to comprehensive statements discussing multiple aspects of practice situations. Parallel findings are noted in the Minghella and Benson (1995) study which describes content brought by students to reflecting sessions as initially “one-dimensional and specific” (p. 210), later becoming more complex, multidimensional and integrated. Nevertheless, although changes occurred, only rarely did a single snatch deal with more than one stage of the nursing process. This is consistent with a view of novices practitioners as individuals who deal with nursing situations in less integrated ways than experienced nurses, as described in the novice-to-expert model articulated by Benner (1984).

The increasing complexity of input as the semester progressed suggested a number of underlying changes in the participants offering these contributions. During each experience, learners were attending to aspects of patient care situations which had meaning for them, which they were able to interpret and which they could articulate with some degree of confidence. Fundamental differences in the learners as their experience progressed, as outlined below, contributed both directly and

indirectly to the process of learning to reflect.

Beginning with the first 'clinical day' of the semester, opportunities for participants to reflect in debriefing conferences were an integral part of the experience. Individuals were also involved concurrently in reflection during focus groups and individual interviews. In each session, students had opportunities to raise and reconsider, in response to prompts, care-related concerns. In later episodes, participants appeared to gain confidence in their ability to raise appropriate concerns. They became willing, as indicated in the 'Changes in Participant Input' subsection of the "Findings" chapter, to raise more complex issues and to suggest possible connections between aspects of situations. Repeated experiences with individuals leading conferences, focus groups, and interviews seemed to raise both their understanding of expectations and their level of comfort during reflecting sessions. Consequently, engagement in a process of guided reflection promoted learning; which, as the semester progressed, appeared to enhance participants' ability to offer increasingly sophisticated input during reflecting episodes.

The importance of idea-sharing and interpersonal support to the development of reflective skills has been acknowledged in a number of sources (Dinkelman, 2000; Henderson et al., 2002; Lasater & Nielsen, 2009; Maclean & White, 2007; O'Donovan, 2006, 2007; Pierson, 1998; Rich & Parker, 1995; Rodgers, 2002; Rogers, 2001; Ruland & Ahern, 2007; Teekman, 2000). Pierson's notion of reflecting episodes as opportunities for students "to explore ideas and understandings of

situations...[and] to discover their own voice” (p. 168) adds further perspective to this discussion.

A number of factors, while less directly influential, also contributed to broadly based changes in participant input in this study. A heavy schedule of classes added to the repertoire of knowledge potentially useful to them in clinical situations. Weekly assignments in the practice area increased their familiarity both with the physical environment and with the sorts of clinical problems likely to be encountered. Successfully completed experiences at the bedside, as well as during opportunities to reflect, appeared—once again—to enhance confidence, thereby promoting increasingly complex participant input. These findings are essentially consistent with research-based evidence reported in two previously-discussed studies. Smith (1998) and Glaze (2002) explored the process of learning to reflect in 25 undergraduate nursing students over a three year period and 14 post-registration students during a masters-level program respectively. Both these researchers noted the impact on student reflections of improved ability to use information being acquired, as well as to integrate previous practice-based experiences and academic knowledge, in the latter stages of the programs in question.

Stage-related changes.

Reflection, for purposes of this study, was considered a multi-step process consisting of three phases: awareness, critical analysis and synthesis. Input changes noted in relation to these stages of

reflection were closely connected with participants' use of the problem solving process at different points in the semester. Input consisting solely of raw data was replaced, as the experience progressed, by awareness focusing on formulated clinical problems and, later still, on interventions. Analysis and synthesis, characterized early in the experience by concerns with assessment (data collection, problem identification, planning) and intervention respectively, later indicated changing perspectives concerned sometimes with assessment, frequently with intervention, and occasionally with evaluation (effectiveness of nursing interventions).

These findings are generally consistent with results reported by Minghella and Benson (1995) who describe student input during beginning, middle, and end phases of their study as centering respectively on unsolved, partially-solved and fully processed instances of problem-solving. Although a number of other sources report changes in reflection as participants progress through specific learning experiences, changes in input are usually implied rather than specifically elaborated.

Development over time is typically described in terms of outcomes rather than process or in relation to levels of reflection proposed by particular theorists (Andrews et al., 1996; Chirema, 2007; Dinkelman, 2000; Duke & Appleton, 2000; Galvez-Martin, Bowman & Morrison, 1998; Glaze, 2002; Liimatainen et al., 2001; Whipp, 2003). Smith (1998), in spite of a research question specifically formulated to shed light on changes in 'levels of analysis,' recognized that, while her results indicated

growing student ability to incorporate previous, practice-based experiences into solving problems, her original purpose had remained essentially unfulfilled.

An additional factor must be considered noteworthy in considering the relationship between student input and phases of reflection. In any reflecting episode, input focusing on later stages of problem-solving seems to imply that earlier phases of the process have been incorporated into participants' consideration of the situation. This assumption, however, has remained essentially unexplored both in the present study and in relevant resource material.

In the early weeks of data collection and during each stage of the reflecting process, participants indicated similar understandings and applications of problem solving. However, as the semester drew to a close, substantial variation was noted. Awareness, analysis, or synthesis centering on intervention or evaluation, rather than on raw data or assessment, suggested greater student progress in the use of the problem-solving process and differences in the rate at which learning occurred. Such differences may be associated with the varying rates at which individual students learn, with the nature of available learning experiences, with the ways in which learning is facilitated, or with a combination of these factors.

Resource material which might shed light on this aspect of the project is virtually nonexistent. A few researchers have differentiated between students using labels such as 'nonreflectors,' 'reflectors,' and

'critical reflectors' (Liimatainen et al., 2001), individuals reflecting at 'higher' and 'lower' levels (Jensen & Joy, 2005), or 'poor reflectors' and 'better reflectors' (Davis, 2003). These terms were applied, in the first two studies mentioned above, according to the levels of reflection outlined by Mezirow (1981) and, in the third, according to degree of perceived responsibility for students' own learning. In each of these studies, categorization was based on predetermined criteria rather than on differing rates of progress over time.

Differences in the rate at which students' problem-solving skills develop may be associated with the nature and availability of learning experiences, varying levels of autonomy as learners, ways in which learning is facilitated, or with a combination of these factors. In the present study, repeated opportunities for participants to engage in guided use of the reflective process resulted in awareness focusing on formulated problems, as well as analysis and synthesis concerned with resolution of problems. However, the questionable value of attempting to force this process by encouraging the use of later steps of problem solving without solid mastery of earlier stages is well recognized. Indeed, there was lack of attention, during reflecting episodes, to evaluation, a basic step of the problem-solving process. The question therefore arises of whether learning the nursing process might have been further enhanced, possibly including more discussion of the evaluation phase, if input-prompt cycles had continued past the point when the participants appeared satisfied with emerging perspectives.

Changes in Patterns of Interaction

Changes in patterns of interaction were, as indicated previously, the second major category of changes noted in reflection as participants progressed through their semester of practice-based learning experiences with acutely-ill clients. As the process of interacting during data collecting sessions was a primary means through which knowledge was being constructed, the importance of such changes is emphasized.

Patterns of interaction initially consisted of sequential self-contained episodes alternating single-participant, single-focus input and teacher prompts. As the semester progressed, 'double-topic,' 'compound,' 'interrupted,' and 'reintroduced' reflections occurred. Participants were no longer restricting their contributions to a single, prescribed 'turn' as primary reflector. They were now spontaneously introducing both new and previously discussed topics; sometimes even interrupting episodes in progress when concerns related to their own experiences had been raised by group-mates. These increasingly complex patterns, once again, suggest underlying changes in the participants.

The introduction of new or previously discussed topics would seem to indicate that perspectives emerging from a previous reflecting episode had become foci of continuing reflection for the participant in question. In other words, following termination of the verbal input-prompt sequences of the earlier episode, the reflecting process, once again, appeared to become active. Re-entering the session as a

primary reflector suggests growing ability to continue reflecting in a meaningful way in the absence of verbal prompts, as well as increasing confidence in interpreting clinical data and in making and articulating connections among practice situations.

The question of 'changing patterns of group interaction over time' has not been a focus of inquiry in research dealing with reflection and reflective processes. However, some information related to changes in participants which might be responsible for alternate patterns is available. Reflecting in a meaningful way in the absence of prompts is described in several sources which refer to this activity as "self-reflection" (Riley-Doucet & Wilson, 1997, p. 966), "self-talk" (Freese, 1999, p. 905), "discourse with self" (Teekman, 2000, p. 1131) and "reflection in which students...are responsible for directing their own reflection" (Davis, 2003, p. 102). The possibility that such behaviour may be an integral part of learning in progress during reflecting sessions is implied in the Davis statement indicating that "not all students are able to reflect in this way without generic guidance" (p. 102). Kuiper and Pesut (2004) indicate that developing "the ability to reflect through self-dialogue...takes time" (p. 386). Increased ability to self-reflect might well result in more instances of continuing participant reflection following termination of input-prompt sequences and in altered patterns of participation in later debriefings and focus groups.

Increasingly complex input during reflecting sessions implies underlying changes in participants over the course of this study. In

considering these variations, ongoing development of both reflective and care-related skills is suggested as a contributing factor. A relationship between increased participant confidence and improved processing of practice-based information is particularly noted. It occurs in connection with both categories of 'changes in reflection'; that is, in relation to student input in reflecting episodes, as well as to patterns of interaction during reflecting sessions.

Changes in Reflection and Behaviourist Theory

All the research questions being asked in this study sought answers which would contribute to describing aspects of student learning during a semester of early experiences with acutely ill hospitalized clients. However, from the earliest stages of the study, it was recognized that the question focusing on changes in reflection as participants progress through early practice-based experiences would be exploring changes at the heart of the actual learning process; namely, changes in reflection actually observed as the semester progressed. Therefore, the possibility that changes described in answering this key question might be explained by theories of learning other than constructivism is worth considering.

As described in the first two chapters of this paper, two major traditions have dominated virtually all discussion of theories of learning as applied to nursing education. These traditions are described as "schools of thought" by Bevis (1982, p. 79), who emphasizes the wide

applicability of this categorization to the entire field of education. Such schools of thought include theories with an essentially behaviourist orientation, and those in which learning is considered an ongoing process of construction (pp. 79-81). At present, as indicated previously, behaviourist influence remains disproportionately powerful in programs offering preparation for nursing practice (Bevis & Watson, 2000).

The findings of this research identified basic changes were in two areas of the reflecting process. Fundamental differences were found in participant input, and variations in patterns of interaction during group sessions also emerged. Thus, it seems reasonable to ask whether the changes are noted in reflection as participants progress through early practice-based experiences might be alternatively explained from a behaviourist perspective. After considering principles of learning common to a number of theorists as articulated by Bigge (1976), notions of motivation and reinforcement were identified the most useful concepts in considering this question.

At the time when data collection for the study was in progress, faculty-formulated objectives—carefully crafted in the tradition of Tyler (1950) to describe only specific, objective, measurable behaviours—dictated the selection of learning content and experiences in the program in question. For the semester in which participants were studying, each student was required to purchase a ‘workbook,’ containing outlines of class content, program requirements, and the course evaluation tool—all stated specifically in terms of these objectives.

Careful reading of this material revealed some objectives related to the research questions, although such relationships were somewhat indirect. Examples included statements indicating that students would “collect relevant information [about the client], identify significant pieces of data, use scientific knowledge to further explore and make inferences, cluster data, interpret data” (College Workbook, Nursing 210, Winter 1999). As ‘meeting’ the objectives was a requirement for success in the course, such statements represented substantial extrinsic motivation for students. Input offered in post-clinical conferences was one way in which participants were able to demonstrate ability to perform the activities in a way that might be judged satisfactory by the session leader, the individual also responsible for evaluation of student progress and performance.

At post-clinical conference sessions, participant input--an area of major change--was followed by a prompt, usually from the teacher leading the session. Prompts perceived as having been well-received, likely provided positive external reinforcement for the student, encouraging subsequent, similar input. During group sessions, exposure to positively-received input offered by other individuals--on occasion, including more complex ideas and relationships, provided opportunities for participants to gain awareness of, and possibly become able to incorporate into their own repertoires, new and potentially more sophisticated ways of reflecting on clinical situations, problems, and possibilities. As a result, participant reflections as the semester

progressed might have indicated changed input; the focus shifting from simple to comprehensive ideas, from raw data to formulated problems, and from assessment to intervention and evaluation.

Factors Facilitating or Impeding Reflection

Throughout this project, participants spoke easily about factors they were experiencing as helpful or not helpful as they reflected on practice experiences. Description by students of the factors in question--the particular focus of this research--was emphasized. However, in discussing these findings, relevant factors as articulated by researchers, as well as those specifically identified by students, will be compared and contrasted.

Factors which were found to facilitate or impede reflection exerted their influence in one of two ways: (i) by influencing reflecting activity while conferences, focus groups, and individual interviews were in progress; or (ii) by affecting the quantity and quality of practice-related information brought by participants to reflecting sessions.

Directly-Influential Factors

Teacher prompting was the dominant directly-influential factor. Helpful prompts encouraged these students to draw on their growing knowledge base to answer their own questions and to expand their view of nursing situations. This 'open' form of dialogue was always identified as significant and beneficial to participant learning. This view is

consistent with the position articulated by Davis (2003) which suggests that less-directive, generic prompts “help students reflect more broadly” (p. 138). Thus, while other sorts of prompting may also be useful, using an open format whenever feasible seems to offer maximum opportunity for participants to benefit from reflecting sessions.

The teacher’s role in defining conference parameters was always significant, but might be seen as either a facilitator of, or impediment to, reflection. Different points of view were expressed concerning the desirability of every student present participating as a primary reflector in every session, and of each reflecting episode in a particular session being limited to exactly the same number of minutes. In fact, both these concerns are related, not only to aspects of the experience under the control of the teacher, but also to the time constraints inevitably present when groups of nursing students meet. Nevertheless, some participants valued ‘depth,’ generally associated with completed reflections, while for others completing episodes was less important than giving everyone an equal chance to speak.

Professional literature includes some discussion of in-depth concentration on a few, versus superficial attention to many, topics during reflecting sessions. Branch and Paranjape (2002) contend that “a good general rule of facilitation [is] to encourage discussion that elaborates on a topic, pushing it to a deeper or more complex level as opposed to discussion that raises many different topics, thereby... remaining on the surface” (p. 1187). Similarly, Pierson (1998) suggests

the advantage of “dealing with one issue thoroughly and completely before moving on to another [rather than] covering a variety of topics quickly and without sufficient depth” (p. 168).

Pierson (1998) also specifically recognized the need for sufficient time to allow adequately consideration of meaning during reflecting episodes. Other sources refer to the relationship between time and reflection (Ehrenberg & Häggblom, 2007; Glaze, 2002; Heath, 1998; Rogers, 2001; Scanlan & Chernomas, 1997; Teekman, 2000), but add little to the discussion other than to reinforce the desirability of having enough time for reflective activities.

The literature offers no support for the questionable position that each episode in a reflecting session should be limited to exactly the same number of minutes. The possibility must be considered of addressing this issue by providing sufficient time for each student, as primary reflector, to continue input-prompt sequences until genuinely satisfied with emerging perspectives. Ensuring a long enough period to implement this type of approach would almost certainly require setting aside additional time for debriefing sessions. The likelihood that such a solution would pose a dilemma for nursing teachers is, however, acknowledged; a situation perhaps best described by Pierson (1998).

Time...during the course of a clinical day is another problematic issue. Nursing teachers often feel torn. Students are supernumerary on clinical units;...yet educators are often hesitant to withdraw students from

time with clients. The assumption supporting this decision is based on the notion that students need the clinical experience, and the best clinical experience is at the bedside. (p. 168)

This author continues, however, by expressing the very tenable view that “spending some [additional] time reflecting on experience may be of equal or greater value than time spent at the bedside” (p. 168). Subscribing to the desirability of ‘equal opportunity’ participation in terms of minutes of time spent reflecting must also be seen as implying a lack of understanding, by some students, of the potential value of these learning activities. The question of whether students simply feel entitled to equal attention from the teacher, or whether these statements imply resentment deriving from unequal access to learning experiences as primary reflectors, remained essentially unanswered. Nevertheless, this finding strongly suggests a need for additional interpretation by teachers of the purposes underlying reflecting sessions.

Participants’ perceptions of the teacher’s role in defining conference parameters included the notion that, as group leaders, teachers exert substantial control over foci of reflection. This control was usually, but not always, seen as helpful. Perceptions appeared closely linked to teacher expectations as understood by participants after listening to a variety of her remarks or as inferred from her use of model-driven prompts. As a rule, flexibility in the use of alternate styles of prompting would almost certainly have eliminated instances in which model-driven

prompting was perceived, by participants, as an impediment to reflection.

This finding of perceived teacher control over topics of discussion appeared somewhat curious when considered in the light of data indicating that agenda-setting by teachers occurred only in a broad, general sense during actual debriefing sessions. In attempting to understand this seeming paradox, attention is drawn to the students' previous experiences. Although data for the study were collected during participants' first contacts with acutely ill medical-surgical patients, the students had completed a pre-requisite introductory course which included eight one-day experiences with less-seriously-ill clients.

Therefore, the possibility that expectations carried over from previous semester conferences might have been, at least partially, responsible for student perceptions during the present study must be considered.

Student perceptions of teacher control over topics of reflection may also be influenced by the fact that post-conferences--while not specifically designed as occasions for evaluation--were led by the individuals ultimately responsible for judging participant success or failure in the clinical component of the course. Topics may well have been selected by students with some idea of maximizing their opportunities for positive assessment or minimizing the risks of negative judgments by teachers.

Several studies comment on the ways in which student input may be influenced, albeit indirectly, by evaluator presence at, or participation in, reflecting sessions. Smith (1998) indicates that student input to

reflecting sessions may be influenced by “the wish to impress teaching staff” (p. 898). Burton (2000) draws attention to the possibility that such input might be “‘tailored’...to accommodate what he/she thinks the assessor would like” (p. 1014). Judgment is implicit in any evaluation process and student anxiety related to judgment and evaluation by teachers is described in a variety of resource material (Kuiper & Pesut, 2004; Platzer et al., 2000; Richardson & Maltby, 1995). As the desirability of students being able to reflect on their experiences “without fear of judgment or reprisal” (Riley-Doucet & Wilson, 1997, p. 964) is also recognized, a potential conflict is implicit in reflecting sessions led by teachers who are also evaluators.

The professional literature, while permitting some insight into the apparent contradiction between actual and student-perceived control over topics of reflection, offers few specific suggestions for dealing with potentially negative effects associated with the presence of an evaluator. Smith (1998) concluded that “the closeness and mutual support of a cohesive [student] group may have affected their willingness to share experiences and articulate individual feelings of vulnerability” (p. 898). Riley-Doucet and Wilson (1997) indicate the importance of a safe and supportive environment if maximum benefit is to be derived from reflecting activities, a position also emphasized in a number of other sources (Burton, 2000; Glaze, 2001, 2002; Pierson, 1998; Rogers, 2001; Saylor, 1990; Teekman, 2000; Williams, 2001). Thus, the importance of support, both interpersonal and

environmental, in promoting reflection on practice is, once again, reinforced.

Students expressed further reservations about situations in which teachers permitted the discussion of topics not applicable to all group members. Although the question of exactly what participants considered applicable to all group members remained largely unanswered, this suggested a degree of self-centeredness, as well as a somewhat narrow view of what might actually have relevance beyond the immediate situation under discussion. Clearly articulated teacher expectations at the semester's outset, along with interpretation of the wider significance of topics being discussed throughout the experience, would seem to offer the best potential not only for reducing negative effects in this particular area, but also for minimizing impediments relevant to the broader range of factors associated with perceived teacher control over the parameters of reflecting sessions.

A pattern of non-listening student behaviour was another factor seen as facilitating or impeding participant reflections during group sessions. The lack of data indicating whether the overall impact on reflection was positive or negative was somewhat curious, as students certainly implied that the behaviour served a purpose.

Once again, the wish to make a positive impression on individuals leading conference sessions may have been an influential factor. 'Tuning out' ongoing interaction may be found useful by students preoccupied with mentally rehearsing soon-to-be-offered snatches of verbal input.

Also likely to influence the behaviour was the idea that success in written clinical assignments might depend on retaining and then reproducing, on paper, perspectives emerging from reflecting episodes. A student, concentrating on trying to remember, as precisely as possible, the content of a just-completed episode, is unlikely to be listening attentively to input from other group members.

The question also arises of whether non-listening behaviour might be attributed, at least in part, to a factor previously described in connection with changing patterns of reflection. During group sessions, a student who had introduced a particular episode might continue to reflect on the topic in question following completion of verbal input-prompt sequences. Continuing concern with a participant's own topic seems likely to be associated with inattention to ongoing episodes in which other students are primary reflectors.

This pattern of non-listening student behaviour, once again, suggests a degree of self-centeredness and single-minded concern focusing on a participant's own learning. The importance of clearly articulated teacher expectations at the semester's outset, including information about the appropriate relationship between reflecting sessions and other course requirements, is therefore emphasized.

Learning Situation Factors

Factors within the clinical learning situation facilitated or inhibited reflection through their impact on information collection by participants

during practice experiences. The extent of student preparation for clinical assignments and the nature of their encounters with professional staff were major sources of support for this information collection. Professional literature, while dealing with such factors as important aspects of practice-based nursing education, has not considered these topics in connection with learning to reflect on practice. Results of the present study will therefore be discussed in relation to previous research in this broader area of inquiry, although attention will also be drawn to the specific relevance of these factors in promoting information collection potentially useful in reflecting sessions.

The importance of a comprehensive orientation to the clinical environment, as well as to specific patient assignments was emphasized and participants generally acknowledged that they had been well served in these areas during their current experiences. This finding is consistent with a number of reports emphasizing clinical orientation and patient selection as major responsibilities of nursing teachers (Carr, 1983; Oermann, 1998; Paterson, 1997; Vollman, 1990). The present study particularly noted the teacher's role in pointing out the relative importance of various aspects of orientation information, in de-emphasizing the need for complete familiarity with new clinical situations, and in the selection of patient experiences appropriate for the level of the individual learner.

The nature of encounters with professional staff--mainly registered nurses--also facilitated or impeded reflection through their

impact on information collection by participants. Perceived attitudes towards patients and towards students as prospective practitioners, as well as availability for consultation on patient-care issues determined whether or not a particular encounter was helpful. Data implied that such encounters were situations in which student expectations about how learning experiences ought to develop were met, and which supported a positive self-evaluation of their contributions to patient care and of themselves as prospective practitioners. This is consistent with the results of a Karns and Schwab (1982) investigation indicating that positive reinforcement in the clinical area enabled students to view themselves more favourably. For the present study, which has accepted--from its earliest stages--a link between reflection and critical thinking, these researchers' finding of a relationship between a more favourable view of self and improved critical thinking by students has particular relevance.

Throughout the current project, staff members who demonstrated understanding of the stressors inherent in the student role and who supported them through episodes of uncertainty contributed to participants' ability to gather useful information. Vollman (1990) also found that "empathetic nurses who recall their own student days can assist students by their warm and caring behaviours" (p. 132). This finding would seem to indicate that fostering supportive qualities in all registered nurses encountering students in the course of their practice would eliminate any related impediments. Such skills are

certainly promoted as part of professional preparation in pre-service courses immediately before, as well as during orientation to professional responsibilities in health care institutions after, graduation. However, as nurses' professional obligations extend well beyond responsibilities for the preparation of aspiring practitioners, these efforts may not always be optimally effective.

A variety of potential input from teachers offers the possibility of alleviating problems in this area. Indeed, in addition to their role in improving information collecting skills relative to reflection, such strategies have long been recognized as generally useful in relation to a wide range of problems associated with clinical teaching. Nursing instructors, despite their primary responsibility for teaching, are best able to facilitate clinical learning when thoroughly familiar with the clients assigned to their students. Such familiarity allows them to anticipate both the nature and timing of problems which are likely to arise. While recognizing their simultaneous responsibility to each member of a student group, this teacher availability is likely to mitigate the negative consequences associated with lack of availability of individual nurses responsible for patient care.

Results of previous clinically-based research appear to indicate that, for teachers, thorough familiarity with clients assigned to students is more easily acquired in some settings than in others. Paterson (1997) found that "much about the patients...is not communicated to the teacher" (p. 203), and drew attention to the probable occurrence

of difficulties arising from the fact that “effective care of patients assigned to students depends upon...current, relevant data concerning the patient’s health status” (p. 203). Vollman (1990), on the other hand, described a situation in which--while selecting clients to be assigned to students--instructors became acquainted with relevant information and subsequently received “ongoing feedback from students and co-assigned staff [which] assisted them in monitoring changes in patient condition” (p. 112). Both these studies emphasize the importance for the teacher of understanding the social dimensions of the situation in question and acting on the basis of this understanding to minimize potential problems.

A teacher, who is also an experienced nurse, has further potential to be helpful by assisting students and practitioners to understand each other’s roles and responsibilities, as well as by interpreting one group’s problems to the other. Students may require coaching in order to maximize the possibility of obtaining a useful response when approaching a nurse already preoccupied with other concerns. Practitioners, often compelled to deal with several different student groups in a relatively short time span, certainly require appropriate information, reinforced as necessary, about the level of, and expectations for, the learner as well as about the goals of the course and the program.

A number of researchers have explored essential dimensions of clinical learning. One particularly comprehensive description of the learning environment (Vollman, 1990) included material relevant to

various aspects of students' experiences as outlined above. Doing the groundwork necessary to ensure that nursing students and staff permanently assigned to the practice area will be able to interact smoothly is generally recognized as a major responsibility of the clinical teacher. 'Coaching' of students by teachers in the form of verbal input and modeling was identified as one of several major roles enacted by the clinical instructor (p. 114). "Preparation of the ward to receive students" (p. 81) was also described as a principal function of the instructor in the clinical setting. In this connection, communication to staff of "objectives of the...experience" (p. 84), as well as "norms and expectations for student behaviours" (p. 88), was considered particularly important. Once again, while these roles and functions are portrayed as important to clinical experiences generally, their significance for the present study is their potential for influencing the collection of information which will serve as input in individual reflecting episodes.

In discussing the results of this research, several factors are noted which are related to more than one facet of the project. Answers to all three research questions contribute to describing reflection on practice by students during early clinically-based experiences. The individuals involved are inevitably considered novices. Results, therefore, provide a description of novice-level reflection on practice in this particular situation. The usefulness of this is emphasized by the fact that existing resource material tends to focus on reflection-related processes primarily at the expert level (Benner, 1984; Nielsen, Stragnell &

Jester, 2007; Stranieri & Yearwood, 2008). Also, reference to reflection as an essential dimension of professional nursing has been implied—rather than specifically described—in Benner’s definitive novice-to-expert model for nursing practice. Findings of the current study, in addition to their usefulness in facilitating the process of learning to reflect during early clinical nursing courses, are seen as a potential contribution to refining and/or expanding the concept of novice-level practice.

Several implications for improving student reflection were applicable to more than one of the research questions being asked. The desirability of employing both model-driven and multi-source prompting and of selecting the most appropriate form for use in particular situations was evident in relation to all three areas being explored. Recognizing and responding to fundamental learner differences as the semester progressed and interpretation of expectations for both reflecting sessions and clinical experiences in general, were seen as useful in promoting changes in reflecting activity. As students learn to reflect on practice during early practice-based experiences, these areas are thus emphasized as offering particularly strong potential for facilitating the process.

CHAPTER VI

CONCLUSION

Reflection was found to be a frequently occurring activity, basic to the development of new clinical perspectives, among 25 college-level nursing students during a semester of early practice experiences with adult clients in acute care settings. Reflection, for purposes of the study, was defined as a process of considering newly and previously acquired information and interrelating, rearranging and extending the information to develop new and enriched perspectives.

In the early stages of the project, a conceptually-based model was adopted which represented reflection as a multi-step process consisting of three phases: awareness, critical analysis, and synthesis (emergence of changed perspectives). Results of the research were found, based on empirical evidence, to be consistent with this model of reflection on practice.

Research questions in this study of reflection on practice by prospective nurses during clinically-based experiences were designed to yield information about: (i) aspects of the practice situation on which student reflections focused, (ii) changes in reflection as students

progressed through early practice-based experiences, and (iii) factors perceived by students as facilitating or impeding their ongoing reflections on practice. Principal foci of participant reflections during debriefing conferences, focus groups and individual interviews were care-giving activities at the bedside and the process of learning a professional role.

Basic change was noted in two major aspects of the reflecting process as data collection proceeded: changes in participant input; and variations in patterns of interaction during group sessions. Input shifted from simple, single-thought phrases to comprehensive statements discussing multiple aspects of practice situations. Input consisting solely of raw data--specific, distinct, easily observable, concrete characteristics of the practice situation--was replaced, as the experience progressed, by awareness focusing on formulated clinical problems and, later still, on interventions. Analysis and synthesis, characterized early in the experience by concerns with assessment (data collection, problem identification) and intervention respectively, later began to indicate changing perspectives concerned sometimes with assessment, frequently with intervention, and occasionally with evaluation (i.e., effectiveness of nursing interventions).

Patterns of interaction during group sessions initially consisted of sequential self-contained episodes consisting of alternating single-participant, single-focus input and teacher prompts. As the semester progressed, spontaneous introduction of new and previously described

topics began to occur, with participants interrupting episodes in progress when concerns related to their own experiences had been raised by group-mates.

Several factors were found to facilitate or impede reflection on practice. Helpful prompts by teachers encouraged students to draw on their growing knowledge base to answer their own questions and to expand their view of nursing situations. Teacher controls over time management and topics of discussion were perceived as helpful in some instances and not helpful in others. The extent to which participants were prepared for clinical assignments and the nature of their encounters with professional staff impacted on information collection during practice experiences. Together, all these factors exerted their impact either by influencing reflecting activity while conferences, focus groups, and individual interviews were in progress, or by affecting the quantity and quality of practice-related information brought by participants to reflecting sessions.

Contributions and Limitations

This study describes essential aspects of reflection on practice, by nursing students during early clinical experiences. Findings, based on empirical evidence, offer contributions to available knowledge, not only through description of the process, but also by suggesting effective ways of facilitating such reflection.

The study setting was a three-year college-level nursing program

and practice experiences were situated in two university teaching hospitals. Participants were involved in early learning experiences centered on the care of adult clients with health problems which necessitated treatment in acute-care institutions. As indicated previously, particular attention centered on describing aspects of the practice situation on which reflections focused, how the reflection process changed over time, and ways of facilitating related learning.

Reflection on care-giving activities at the bedside and on the process of learning a professional role were identified as the primary foci of participant reflections. The use of more than one type of teacher prompting was identified as potentially beneficial in encouraging student attention to these principal foci of reflection. Prompting which promoted consideration of the situation in question, specifically in terms of the college's Nursing Process model (model-driven), and prompting which drew on a wide range of professional and personal resources (multi-source) in responding to individual concerns, were both shown to be significant in contributing to participant learning.

Changes in two basic aspects of the reflecting process, participant input and patterns of interaction during group sessions, became evident as students progressed through their semester of practice-based experiences. In considering these variations, ongoing development of care-related and reflective skills, improved processing of practice-based information, and increased participant confidence are indicated as likely contributing factors.

Description of factors facilitating or impeding reflection was particularly useful in suggesting measures which might be implemented in order to enhance related learning experiences for prospective professionals. Prompting which encourages students to draw on growing knowledge to answer their own questions and to expand their view of practice, thoughtful intervention by teachers in the form of behaviours controlling time management and topics of discussion, and comprehensive preparation of both students and personnel in clinical areas for practice experiences were identified by participants as significant factors contributing to learning.

From the outset, a lack of research-based knowledge relevant to the reflection on practice by nursing students during early practice experiences suggested a qualitative approach to this project. As in any research, some features of this methodology have positive implications, while others are potentially limiting, in considering the study findings.

A primary concern in qualitative methodology is ensuring that the focus of the research is accurately identified and described. To this end, repeated observation and tape-recording of reflecting sessions, as well as triangulation of methods, were utilized. Extensive records of verbal and nonverbal behavior during data gathering sessions were available for analysis, their accuracy confirmed by participating students. Both former participants and experienced practitioners were involved in the confirmation of category authenticity, representativeness of data cited as examples, congruency of categories with data, and soundness of

inferences drawn.

For this study, data collection and analysis were carried out by the researcher, an experienced nurse educator. This facilitated the process of interacting with and interviewing undergraduate participants. However, ongoing vigilance was required to guarding against potential bias and preconceived notions. Furthermore, incomplete collection of data may occur because some aspects of the situation are no longer perceived by such an individual. The availability of extensive records--their accuracy confirmed--of verbal and nonverbal behaviour, and the involvement of former participants and experienced practitioners in the confirmation of category authenticity, representativeness of data cited as examples, congruency of categories with data, and soundness of inferences drawn were, once again, important in addressing this issue.

In considering the applicability of findings to other groups of learners in other settings, connections between the emerging study results and the conceptual framework adopted for the study are recognized as important. Relevant data cited throughout the "Findings" chapter, provide opportunities for judging such applicability. However, in considering the transferability of findings, a number of limitations are easily identified.

Participants in this study were involved in clinical learning experiences taking place on three acute-care units located in two university teaching hospitals located in a large urban area. The extent to which characteristics of the client populations, types of clinical

problems encountered, and the large and complex nature of the institutions in question influenced study findings remains essentially unanswered.

As indicated previously, participants were enrolled in the first year of a three year college-level nursing program. Therefore, it cannot be assumed that the ideas generated will necessarily be applicable to students in the later stages of such programs or to individuals enrolled in other programs offering preparation for professional practice.

In the early stages of data analysis, an audit procedure, whereby a person not involved in the study would select a particular theme and follow an 'audit trail' related to that theme to assure the accuracy of transcripts, the existence of linkages between raw and synthesized data, the congruency of categories and the plausibility of data interpretation was contemplated (Halpern, 1985; Koch, 1994; Lincoln & Guba, 1985; Vollman, 1990). However, as indicated previously, the period during which data analysis was in progress exceeded the time usually allotted to this phase of a research project, and the problems associated with recruiting a suitable auditor at an appropriate time to implement this procedure proved too difficult to overcome. This, then, can be considered an additional, potentially limiting factor in considering the usefulness of the research findings.

Suggestions for Future Research

At the outset of this project, it was noted that practice-based

attempts to systematically describe essential aspects of the process of reflection as it occurs in nursing students during early experiences with clients were virtually nonexistent. This research has attempted to shed light on aspects of the practice situation on which reflection focuses, changes in reflection as students progress through early patient care experiences, and common factors identified by students as facilitating or impeding practice-based reflection. Nevertheless, considerable scope remains for further investigation of the process and ways in which related learning may be facilitated.

Two areas stood out as offering the most readily apparent potential for further inquiry. These were related to a variety of factors dealing with participant input, and to the question of data gaps resulting from less-than-complete access to participant thoughts and ideas in the course of the present research. Thus, potential for further inquiry was derived from findings which--on one hand did, and on the other hand, might have, but did not--emerge from the study.

During the course of the research, participant input was the aspect of the research shedding light most directly on the learning in progress. For this group of first year students from a college-based nursing program, engaging in a process of guided reflection in conferences, focus groups, and individual interviews promoted learning which, as their semester caring for acutely-ill hospitalized clients progressed, allowed them to offer increasingly sophisticated input during reflecting episodes. Increased sophistication was apparent as input

shifted from simple, single-thought phrases focusing on specific, distinct, easily observable, concrete data to comprehensive statements discussing complex, multiple aspects of practice situations.

Several aspects of participants' ongoing experiences were suggested as factors which might be contributing to this learning. These were derived from students' growing repertoire of clinical skills and theoretical knowledge, and exerted their influence either directly on reflecting activity or more subtly, through their impact on participants' confidence levels. Interrelationships between ongoing learning, increased confidence, and changes in reflecting behaviour certainly appear to exist. However, such links have received little attention in professional literature, nor were they illuminated in this project. These gaps in available knowledge invite further study directed at describing such relationships.

Factors which appeared potentially significant in enhancing participants' ability to offer increasingly sophisticated input during reflecting episodes include: a growing ability to attend to, attach meaning to, interpret and verbally describe essential aspects of patient-care situations; ongoing opportunities to reflect and receive pertinent feedback; increased understanding of clinical expectations; and concurrent attendance at classes presenting relevant theoretical material. Determining whether these factors are responsible for the changes noted, the extent of their relative importance, and the possible presence of other significant influences in the situation is beyond the scope of this research. These would, however, appear to be areas rich

with potential for further inquiry.

Participant input, which in early reflecting episodes had indicated similar understanding and application of problem solving, showed substantial variation as the semester drew to a close. While this would appear to indicate differences in the rate at which learning was occurring, there is little indication of exactly what might be responsible for the differences. Is this attributable to the varying rate at which individual students learn? Does the nature of the bedside experiences available in a specific setting make a difference? What about the effects of alternate styles or particular methods used by individual teachers to facilitate learning?

The comparative lack of indication, during the synthesis phase of reflection, of changed perspectives concerned with evaluation, is troubling. Students, in most cases, were satisfied with new or reinforced perspectives which failed to incorporate this essential aspect of problem-solving. The question therefore arises of whether this might indicate reflective processes not yet developed to the point at which such perspectives could reasonably be expected to emerge. Such limitations invite further study directed at determining whether reflection during more advanced courses in college-based programs might reveal emerging perspectives consistent with a more comprehensive view of nursing practice.

One area which seems to offer opportunities for expanding the knowledge base related to reflection and learning has become

particularly apparent in the later stages of the project. Indeed, the potential significance of this factor has been less than fully apparent until viewed against a background of the study as a whole. In research relying on verbal accounts of practice activities, the extent to which participants' spoken words allow the researcher access to their actual thought processes is necessarily a matter of concern. Despite the hope that focus group and individual interview sessions would allow the researcher to 'get at' ideas not articulated in the teacher-led debriefing sessions, a sense of significant material that remained unspoken persisted throughout the period of data collection.

The question arises of whether some sort of 'think aloud' protocol (Ericsson & Simon, 1980; Klemballa, 1990) might be useful in gaining access to material not verbalized in non-directive interviews. As verbalization of thought processes is easier for beginners than for experts (Lichtenstein, 1982), this type of protocol might be considered a suitable method for additional study of reflection in nursing students during early experiences with patients.

Reflection has, in recent years, become firmly established as a valued component of education for professional practice. In this study, consideration of foci of reflection, changes in reflection, and factors facilitating or impeding the process was limited to first-year students enrolled in a college-based nursing program during early experiences with acutely-ill hospitalized clients. Research designed to explore the continued development of reflective skills as such students are faced

with more advanced clinical challenges, as well as exploration of this process in other types of nursing programs, are possibly fruitful areas of further inquiry. Similar studies of reflection in students during pre-service preparation for practice in other professional disciplines offer the opportunity for expansion of related knowledge in a somewhat different direction, and suggests the scope which exists in this area for contributing to the overall development of a body of knowledge on which the planning and facilitation of learning to reflect on practice may be securely based.

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Appendix A

PARTICIPANTS: DEMOGRAPHIC DATA

<u>Participant</u>	<u>Age group</u>	<u>Mother tongue</u>	<u>Employment</u>	<u>Children</u>
Anita	21-30	English	Part time	
Bonnie	21-30	English	Part time	
Carol	18-20	French	Part time	
Dana	18-20	English		1
Ellen	21-30	French		2
Frances	TEACHER			
Gail	18-20	Other	Part time	
Hailey	TEACHER			
Issie	18-20	English		
Jessica	18-20	English	Part time	
Kate	TEACHER			
Lily	18-20	English		
Lynne	21-30	French	Part time	
Mary	21-30	English		1
Margo	18-20	Other	Part time	
Norma	21-30	Other	Part time	
Olivia	Over 30	English		1
Paddy	18-20	English	Part time	
Quita	18-20	Other	Part time	
Roberta	18-20	English	Part time	
Sandra	18-20	French		
Susan	18-20	Other	Part time	
Terri	18-20	Other	Part time	
Ursula	21-30	Other		
Valerie	Over 30	English		4
Wendy	18-20	English	Part time	
Yvonne	18-20	English		
Zamie	Over 30	English		2

Appendix B

CONSENT FORMS

Consent Form: Nursing Student

Principal Investigator: Patricia Brown.Affiliation: Faculty of Education, University of Ottawa.

Investigator's telephone no: Patricia Brown

Whenever a research project is undertaken with human participants, the written consent of the participants must be obtained. This does not imply, of course, that the project in question necessarily involves a risk. In view of the respect owed the participants, the University of Ottawa has made this type of agreement mandatory. This project is undertaken to fulfil the Ph.D. thesis requirement.

The purpose of the study is: To describe reflection on practice by students during early clinical nursing experiences.

If I agree to participate, my participation will consist of attending the usual post-conferences following my clinical experiences during the Winter 1999 semester; at three sessions the investigator will be present as a participant-observer. I will also be asked to participate in three focus group interviews and may be asked to volunteer for three individual interviews. Interviews will last approximately one hour. Post-conferences and interviews will be audio-tape recorded. I understand that the information collected will be used only for the researcher's Ph.D. thesis and for possible publication in a scholarly journal, and that the researcher will not participate in any way in evaluation of my progress or performance in the Nursing Program.

I understand that since these activities will deal with information related to me personally and to my experiences, it may induce emotional reactions which may, at times, be somewhat negative. I have received assurance from the researcher that every effort will be made to minimize these occurrences.

I am free to withdraw from the project at any time--before or during any session, to refuse to participate, and to refuse to answer questions without penalty.

I understand that my identity will not be revealed in any way in the report. I have received assurance from the researcher that the information I will share will remain strictly confidential. I, in turn, assure other participants that I will treat in the same confidential manner any information I may obtain in the context of this project.

Any information requests or complaints about the ethical conduct of the project may be addressed to the Secretariat of the Ethics Committee, University of Ottawa (613-562-5800, ext. 4057). If I have any questions, I may contact Professor B. W. Andrews or the investigator.

There are two copies of the consent form, one of which I may keep.

Participant's Signature_____
Date_____
Researchers's Signature_____
Date_____
Thesis Director's Signature_____
Date

Consent Form: Nursing Teacher

Principal Investigator: Patricia Brown.

Affiliation: Faculty of Education, University of Ottawa.
Investigator's telephone no: Patricia Brown

Whenever a research project is undertaken with human participants, the written consent of the participants must be obtained. This does not imply, of course, that the project in question necessarily involves a risk. In view of the respect owed the participants, the University of Ottawa has made this type of agreement mandatory. This project is undertaken to fulfil the Ph.D. thesis requirement.

The purpose of the study is: To describe reflection on practice by students during early clinical nursing experiences.

If I agree to participate, my participation will consist of conducting the usual post-conferences following clinical experiences during the Winter 1999 semester. Sessions will be audio-tape recorded and the investigator will be present as a participant-observer. I understand that the information collected will be used only for the researcher's Ph.D. thesis and for possible publication in a scholarly journal.

I understand that since the researcher would not normally attend these sessions, the possibility exists that her presence might influence the interaction in a way which might be somewhat negative. I have received assurance from the researcher that every effort will be made to minimize such occurrences.

I am free to withdraw from the project at any time--before or during any session, and to refuse to participate without penalty.

I understand that my identity will not be revealed in any way in the report. I have received assurance from the researcher that any information I share will remain strictly confidential. I, in turn, assure other participants that I will treat in the same confidential manner any information I may obtain in the context of this project.

Any information requests or complaints about the ethical conduct of the project may be addressed to the Secretariat of the Ethics Committee, University of Ottawa (613-562-5800, ext. 4057). If I have any questions, I may contact Professor B. W. Andrews or the investigator.

There are two copies of the consent form, one of which I may keep.

Participant's Signature

Date

Researcher's Signature

Date

Thesis Director's Signature

Date

Appendix C

DATA COLLECTON PROTOCOLS

Observation Protocol: Clinical Debriefing Conference

Date:

Time:

Place:

Diagram of Setting:

Descriptive NotesReflective Notes

May include:

attitudes

expressions

posture

volunteering information?

spontaneous contributions versus

responses to teacher

questioning

Focus Groups: Guide

Date:

Time:

Place:

Diagram of setting:

Questions

1. What general comments do you have about your clinical experiences this week?
2. How would you describe what went on in post-conference?
3. Would you say it was a good conference?
4. What made the post-conference 'good'/'not-so-good'?
5. What aspects of the post-conference did you find most useful?
6. What aspects of the post-conference did you find least useful?
7. Is there anything that you feel should have been discussed in post-conference that didn't come up?
8. Could you talk a bit more about _____ (instance of reflection which came up in clinical conference)?
9. What suggestions do you have for improving post-conferences?

Individual Interview Guide

Participant:

Date:

Time:

Place:

Questions

1. Could we begin by talking a bit about _____ (patient's name), to 'set the scene' and give us a place to start from.
2. If you were making a list of what happened during your day with him/her, what would be on it?
3. What would you say was the most important thing that happened during your experience? What reasons do you have for saying this?
4. Talk a little more about the _____ episode. Was there some reason you mentioned/didn't mention this during the conference?
5. In conference/focus group, you mentioned/said/asked/suggested _____. Could you talk a little more about that.
6. Could you talk a bit more about _____ (instance of reflection which came up in clinical conference/focus group interview)?
7. What contributed most to your learning during the experience with _____ (patient's name)?
8. In what ways did conference contribute to your understanding of the experience?
9. What did you learn this week that you see as potentially useful when you think about your next patient assignments?
10. Is there anything else about your experience that might be worth talking about?

Appendix D

CHANGES IN REFLECTION: ANALYSIS

INITIAL AND FINAL INPUT: INDIVIDUAL PARTICIPANT: 3 CONFERENCES

	Conference 1	Conference 2	Conference 3
Initial input (introducing concern)	[My patient] wants to stay in the hospital, but...she's being released today.	[My patient] had difficulty of urinating and hematuria [bloody urine]...to do with his [prostate]surgery.	My patient had a knee replacement [two years ago] and he's got a knee infection... MRSA [superbug]. The knee was opened and some of the prosthesis was replaced.
	- - - - -	- - - - -	- - - - -
Final input (new or reinforced perspective)	She's afraid, she feels weak, she's in pain. She doesn't want to go in a walker. She used to be a social worker here at this hospital] and thinks she should be able to stay.	So [the USCR] would be be 'elimination,' and clots and [urinary] obstruction.	[The goal is] to prevent wound infection. GM's [general methods for intervention] are aseptic [germ free] technique and not touching it.

Appendix D (con'd)

REFLECTING ACTIVITY DURING GROUP SESSIONS
GRAPHIC REPRESENTATIONS OF SEQUENCING

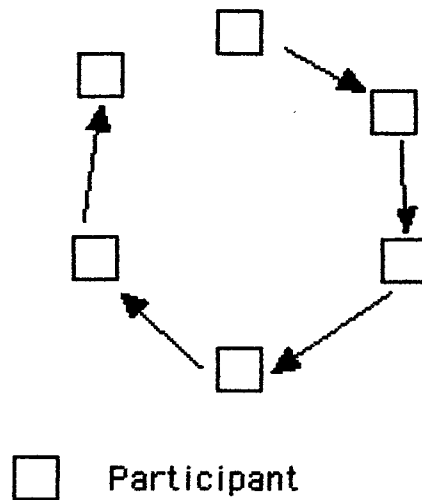


Figure D1. Sequencing: Early Session

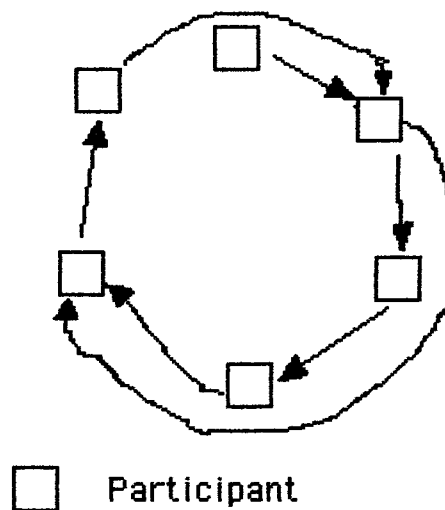


Figure D2. Sequencing: Later Session

Appendix E

EXCERPT FROM CONFERENCE DATA

VERBATIM TRANSCRIPT

Teacher: You've seen the patient, you've saw, you went down there and looked at him, what would you---

Susan: You would need---

Teacher: ---say to yourself?

Paddy: [I would say] What would, what should---

Teacher: What should---

Bonnie: ---be done?

Teacher: ---be done? And that is the---

Paddy: TSCD.

Susan: TSCD.

Terri: Therapeutic self-care---

Teacher: ---which is 'therapeutic self-care demand.' Which includes, it involves two things.

Jessica: What they can, uh---

Teacher: No, uh---

Bonnie: Oh, what they're able to do.

Teacher: Well, no, um, this is what they should do, as we just said. So there are two parts to this, the---

Bonnie: Oh---

Issie: The---

Bonnie: Oh, um---

Teacher: In English, it's the goal. In Orem, it's the---

Terri: it's the---connect it---oh, no---

Jessica: PSCR.

Teacher: Which means---?

Issie: Particularized---

Teacher: In particular. Only this man,...right now,... 'Particularized self-care deficit.'