NOTE TO USERS

Communities of Practice:
Clinical Teaching in Professional Nursing Education

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Acknowledgements

The genesis of this research was my experience as a novice clinical teacher. I found limited resources and those that were available were prescriptive guides to preparing assignments and evaluation. I turned to experienced clinical teachers for guidance and began to question why so little was known about clinical teaching.

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Abstract

The need to prepare and support clinical teaching faculty is identified as a priority by nurse educators. However, there is no framework for understanding the practice of clinical teaching (Benner, Tanner & Chelsa, 1996; Davis, Dearman, Schwab & Kitchens, 1992; Scanlan, 2001; Siler & Kleiner, 2001; Vollman, 1989). There is little nursing research directed to understanding the practice of clinical teaching. It is widely assumed that nurses who are experts in practice are able to make an easy transition to the role of clinical teacher (Scanlan, 2001; Silar & Kleiner, 2001).

The clinical practicum is the time when students are in the clinical setting as novice nurses under the supervision of both experienced nurses and clinical teachers. The clinical setting may be hospital or community-based and students may be working directly with patients and their families or may be a member of a community-based project team. The purpose of this study was, by asking clinical teachers to describe their practice, to determine whether clinical teaching was a boundary practice bridging nursing and teaching's communities of practice (CoP). The goal of the boundary practice is to sustain a connection between the two communities of practice by dealing with conflicts, seeking common ground and resolving problems. The following research questions were asked: 1) To what extent do clinical teachers describe the characteristics of a boundary practice? 2) What are the participative connections that clinical teachers use in their professional activities? and 3) What boundary objects are transferred from one community of practice to another?

Using a qualitative research design, nine clinical teachers from diverse practice

settings and with a range of years in the profession participated in a focus group interview. The focus group interview was followed by individual interviews with four clinical teachers. The conceptual framework that guided this study combined Wenger's (1998, 2002) community of practice model, and Shulman's (1987) teacher knowledge model. Additional theoretical constructs included reflective practitioner, cognitive apprenticeship and situated cognition (Brown, Collins & Duguid, 1989; Lave & Wenger, 1991; Schön, 1987).

The results suggest that clinical teaching is a boundary practice and that clinical teachers create participative connections between nursing and teaching practices through the building of relationships with fellow nurses, students and classroom teachers using strategies that involve reconciling different practice perspectives with the objective of creating supportive clinical learning environments. Clinical teachers described negotiation strategies to move students from the periphery of nursing into the community of nursing practice and using boundary objects to negotiate meaning from practice.

The results suggest that the practice of clinical teaching includes understanding how to balance relationships and reconcile competing demands. The findings also suggest that connection to the classroom teacher and understanding of the course of study are important to the practice of clinical teaching. Two key outcomes of this study are the development of a model of clinical teaching and a working vocabulary to describe the practice of clinical teaching.

Sommaire

Les éducateurs en sciences infirmières reconnaissent comme prioritaire le besoin de préparer et soutenir les professeurs de clinique. Toutefois, il n'existe pas de cadre de référence pour comprendre la pratique de l'enseignement clinique (Benner, Tanner, & Chelsa, 1996; Davis, Dearman, Schwab, & Kitchens, 1992; Scanlan, 2001; Siler & Kleiner, 2001; Vollman, 1989) et il n'y a que très peu de recherches menées à cet effet. La croyance qui prévaut est que les infirmières expertes soignantes deviennent facilement des professeurs de clinique (Scanlan, 2001; Silar & Kleiner, 2001).

Les stages cliniques représentent les périodes de temps durant lesquelles les étudiant-e-s se retrouvent dans les milieux de pratique sous la supervision d'infirmières chevronnées et de professeurs de clinique. Le milieu de pratique peut être situé dans un hôpital ou dans la communauté et les étudiant-e-s peuvent travailler directement avec les clients et leur famille ou faire partie d'un projet communautaire comme membre d'une équipe. La présente étude avait pour but d'explorer l'enseignement clinique à partir d'une perspective de communautés de pratique et avait comme hypothèse de départ que l'enseignement clinique est une pratique couvrant la prestation des soins infirmiers et l'enseignement. Le but de cette forme de pratique est de maintenir un lien entre les deux communautés de pratique en faisant face aux conflits, en soulignant leurs points communs et en solutionnant les problèmes qui surgissent de cette rencontre.

Neuf professeurs de clinique ont participé à une discussion de groupe et par la suite quatre professeurs ont fait l'objet d'une entrevue individuelle. Le cadre conceptuel ayant servi de guide à l'étude a résulté de la combinaison de trois modèles: les

communautés de pratique de Wenger (1998, 2002), et la connaissance de l'enseignant de Shulman (1987). Le construit éducationnel commun à chacun de ces modèles était que l'apprentissage est un processus actif qui évolue à mesure que les personnes s'engagent dans la réalité du milieu de pratique.

Les résultats obtenus indiquent que l'enseignement clinique est une pratique couvrant deux domaines et que les professeurs concilient la pratique des soins infirmiers et celle de l'enseignement. La conciliation implique le ralliement de chacune des perspectives inhérentes aux soins infirmiers et à l'enseignement dans le but de créer des environnements d'apprentissage clinique soutenants pour les étudiant-e-s. Parmi les stratégies de conciliation décrites par les professeurs de clinique, il y a la création de liens avec les infirmières soignantes, les professeur des cours théoriques et les étudiant-e-s, le développement de moyens pour amener les étudiant-e-s de l'extérieur à l'intérieur de la communauté de pratique et l'utilisation de points de repère pour retirer du sens de la pratique.

Les résultats révèlent que la pratique de l'enseignement clinique inclut la capacité de maintenir un équilibre entre les différents liens et de concilier les demandes concurrentes. Il semble aussi que les liens avec les professeurs des cours théoriques et la compréhension de ces cours sont importants pour la pratique de l'enseignement clinique. Les deux retombées centrales de cette étude sont le développement d'un modèle d'enseignement clinique et l'élaboration d'un vocabulaire pour décrire la pratique de l'enseignement clinique.

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Introduction

Donald Schön (1987) describes a varied topography of professional practice including high ground where problems are managed through application of theory to practice and 'swampy' lowland where there are few easy solutions to 'messy' problems. Professional nurses must be able to effectively problem solve in both situations although increasingly nurses are dealing with complex, uncertain patient scenarios that demand expert clinical judgment (Azevedo, Fleiszer & Lajoie, 1998; Higuchi & Donald, 2002; Maynard, 1996). The challenge for nursing educators is to integrate clinical practicum experiences that provide safe environments for student nurses to learn nursing knowledge embedded in practice.

Nursing education has a long tradition of apprenticeship. Historically, schools of nursing were attached to hospitals and students worked alongside practitioners with the unit's head nurse supervising the student experience (Taylor & Care, 1999). Today's clinical practicum is synchronized to mirror classroom theory teaching providing an opportunity for students to apply theoretical knowledge to practice. The dilemma is that few clinical experiences are of the high ground variety described by Schön; most are of the messier variety and it is in these situations that nursing students struggle to understand clinical decision making of expert nurses. The task of the clinical teacher is to connect the classroom and the practice reality (Morgan & Knox, 1987).

Communities of practice (CoP) are groups of people who share ideas, insights, understanding of their day to day work, help one another solve problems and in the process develop a common practice or sense of community (McDermott, 1999; Sharp, 1997; Wenger, 1998). There are many different kinds of communities of practice. Some

are more official in the sense that they are created to develop tools and guidelines for practice. For instance, a group of nurses representing all regions of Ontario developed Best Practice Guidelines for specific nursing problems such as caring for the elderly, breastfeeding, and wound and skin care (RNAO, 2003). Another example is a networked community of practice on heart care established by the Order of Nurses of Quebec bringing nurses together to share their expertise by describing their practices with the goal of developing practice guidelines to improve services to heart patients (Messas & Campos, 2003).

Other communities of practice are more informal groups that share information over coffee breaks and at the beginning and end of shifts. The classic example of this type of community of practice is the Xerox repairmen who came together informally to share knowledge of how to solve repair problems that could not be described in a procedure manual (Brown & Duguid, 1991; McDermott, 1999; Nichols, 2000; Sharp, 1997).

Nurses work in practice teams in hospitals and in the community. Nurses share their know-how with each other informally describing difficult patient situations and possible interventions, making suggestions for interventions for the next shift of nurses (Jenny & Logan, 1992). Explicit knowledge can be documented on care plans and in patient charts but tacit knowledge becomes explicit when it is shared informally (Fox, 1997; Jenny & Logan, 1992). Clinical teachers who are practitioners on these teams have the opportunity to share what has previously been tacit knowledge and one would expect that they bring this practice knowledge to their role as clinical teacher.

The clinical teacher guides the selection of clinical experiences for students, prepares the nursing staff in both hospital and public health settings for student experiences, assesses the suitability of the practice environment for student learning,

monitors student progress and marries classroom expectations to clinical expectations (Vollman, 1989). The clinical teacher is in the unique position of being a 'guest' in the hospital or community organization with the responsibility for student assignments including direct patient care. In order to better understand the practice of clinical teaching, this study explored clinical teaching as a boundary practice bridging two different communities that share similar goals.

The concept of a boundary practice acknowledges that two practice communities often share similar perspectives and activities. In certain circumstances, there is a need for a more formal connection to be established between communities resulting in the formation of distinctive boundary practices (Wenger, 1998). This study asked clinical teachers to describe their practice using a priori Wenger's (1998) definition of a boundary practice. Specifically, how do clinical teachers describe their practice; in what ways do the descriptions match, add to, or differ from the definition of a boundary practice?

Conceptual Framework

Overview of Conceptual Framework: Summary and Rationale

The following sections describe the conceptual framework of this study. Understanding how knowledge evolves in practice begins with a discussion of communities of practice that form when people have a common purpose or enterprise that binds them together in a social context building a shared repertoire of routines, approaches and artifacts (McDermott, 1999; Nichols, 2000; Wenger, 1998, 2002). The next sections describe dimensions of nursing knowledge including explicit and tacit knowledge, a description of clinical teaching and the clinical environment. This is followed by an examination of the knowledge embedded in teaching practice.

Communities of Practice

The community of practice model is a lens to see how two communities of practice: nursing and teaching connect with one another and how members of a boundary practice, i.e., clinical teachers learn to negotiate meaning within that practice. Members of a community of practice define themselves by the job they perform and how they learn their practice (McDermott, 1999; Nichols, 2000; Sharp, 1997). It is the knowledge that evolves from their practice that brings members together rather than a particular task. Participation is therefore key to learning in a community of practice.

Because communities of practice tend to be informal, the boundaries of the practice are more flexible than those of a distinct organization unit (Wenger, 1998). The permeable periphery creates, according to Wenger (1998), many opportunities for learning and one might expect a clinical teacher who is a member of a nursing community of practice and perhaps a teaching community of practice, to move smoothly across boundary lines.

The roots of the community of practice model are embedded in the premise that meaningful learning occurs as individuals actively participate in the practices of social communities and that identities are constructed in relation to these communities (Black & Schell, 1995; McDermott, 1999; Wenger, 1998). For instance, new nursing graduates describe a kind of reality shock when they learn what it means to be an autonomous nurse caring for patients (Kramer, 1974). New graduates learn to negotiate the social nuances of working with other health care providers, how the lines of communication work, what the implications are if these lines are broken and how history has shaped practice in the hospital. Membership in the nursing community of practice involves active participation in what nurses' call the 'knowing, being and doing' as a nurse. It is as an active member of the community that nurses learn and build competence (Benner, 1984; Benner et al., 1996).

Learning in a community of practice is a social construction (Brown, Collins & Duguid, 1989). Student nurses on clinical units or as part of project teams learn how to become 'real' nurses functioning on the periphery under the wing of clinical teachers and practicing nurses. The notion of student learning from the periphery in a community of practice is an example of legitimate peripheral participation (Lave & Wenger, 1990). From this perspective, students learn in the workplace to take on the language of the unit, share in the stories and begin to understand the tacit knowledge embedded in nursing practice (Fox, 1997; Kim, 1999; Litchfield, 1999). Each practicum course provides the opportunity for students to negotiate new meanings in the context of a community of practice.

The clinical teacher orchestrates the selection of student assignments partnering students with practice experts. Gradually, as students progress through the practicum

courses, they become accepted as members of the community of practice as evidenced by the pre-graduate practicum where students are preceptored with an expert nurse (Myrick, 1988, Bittner & Anderson, 1998). A preceptorship is the final practicum experience when students are paired with nurses following the work rotation for a three month period with minimal faculty supervision.

Teaching nursing is a practice that evolves as individuals learn how to engage students in understanding the practice of nursing. Members of a teaching community of practice work together in teaching teams to develop curriculum, evaluate student learning and negotiate new teaching strategies. They develop a common language to describe the laboratory and classroom environments, instructional design concepts and evaluation methodologies. Novice teachers learn from participation in the practice taking on smaller teaching assignments, learning to engage in program committees and gradually assuming full membership in an academic community (Siler & Kleiner, 2001). Full time faculty members may be assigned a clinical practicum however it is more common that part time faculty take on the clinical teaching role.

A community of practice has three characteristics: 1) people are engaged in enterprises such as caring for patients and during that engagement nurses negotiate what it means to care for the patient; 2) people are working together to negotiate a joint enterprise; in the case of nurses to provide the best care for patients and families; 3) people develop a shared repertoire such as language, procedures and tools to describe patient care. Communities of practice evolve over time and certainly in the case of the nursing community of practice, there is a long history of mutual engagement in a shared enterprise of caring for individuals or groups of people.

Wenger (1998) describes negotiation of meaning as a process involving

participation and reification. Participation in a community of practice is an active engagement in the social life of that community. Reification can be thought of as the process of making sense of experiences especially those that are more abstract and giving concreteness to these experiences. For example, individual nursing care plans reify what the nurse does at the bedside; the plan becomes the focus of negotiation of meaning with other health care providers; it is the tool for ongoing discussion, re-negotiation and refinement. Participation and reification work in tandem to negotiate meaning in practice. Figure 1 illustrates the interwoven nature of the concepts of participation and reification in nursing practice. The left hand side of the circle represents the 'doing' of nursing: caring for patients, using clinical judgment and evaluating care provided. The right hand side highlights the tools and professional standards that underpin nursing practice. The care plans and care maps that nurses develop and share with others are communication links with other providers and with the patient. There is not a clear separation between participation and reification as depicted by the broken line woven through the circle of nursing practice. Wenger (1998) notes that there are pedagogical implications of the interplay between participation and reification. For instance, nursing practica that have excessive emphasis on 'doing' the care but not understanding the tools of practice such as care planning may result in meaningless experiences.

Figure 1. Participation and reification in nursing practice (adapted from Wenger, 1998).

Competence in practice is defined by members of the community of practice. For instance, on a busy nursing unit competence may be considered the ability to manipulate complex technical equipment such as intravenous pumps, narcotic infusions and ventilators. Students, in collaboration with their clinical teachers, must be seen to be competent participants and learn to negotiate what it means to care for patients with complex technical equipment. It might be anticipated that in order for clinical teachers to gain membership at the periphery of a community of practice they must be recognized as being competent participants in the community. Competence entails, however, more than ability to perform a task (Wenger, 1998). Competent membership as clinical teachers involves a) ability to establish relationships, b) ability to take responsibility for the practice or the outcomes in this case responsibility for student actions and c) ability to make use of a repertoire of practice (Wenger, 1998). Clinical teachers practice at the

periphery of nursing practice seeking student participation in delivery of care. It can be expected that clinical teachers make use of their clinical competencies to establish themselves as legitimate members moving between nursing and teaching.

The two communities of practice that are interwoven with clinical teaching are nursing practice and teaching practice. As mentioned, our understanding of clinical teaching practice is limited and clinical teachers report trial and error as the likely process used to learn to teach in this practice (Davis et al., 1992). This study serves as a starting point in understanding the practice of clinical teaching.

Boundary Practice

Clinical teachers have dual membership as nurses and as teachers who share expertise and knowledge from one community to another. Because communities of practice do not exist in isolation from one another, Wenger (1998) proposes the concept of connections between and among communities of practice that may be informal encounters such as meetings and visits or more formal boundary practices that reveal ongoing relationships across practices.

A connection evolves when people 1) form a close relationship and way of engaging with one another that an outsider cannot experience, 2) have a deep understanding of the practice that outsiders do not share and 3) have a repertoire that others do not share. Over time, the connection may become a distinctive boundary practice identifiable when "sustained mutual engagement builds relationships, maintaining the connections becomes part of the enterprise and the repertoire begins to include boundary elements that articulate the forms of membership involved" (Wenger, 1998, p. 114). The enterprise or direction of the boundary practice is to sustain a connection between the two communities of practice by dealing with conflicts, seeking

common ground and resolving problems. A boundary practice may be regarded as a form of collective brokering.

There are two types of connections associated with a boundary practice: boundary objects and brokering. Boundary objects are forms of reification from which communities of practice organize their interconnections (Wenger, 1998). Clinical teachers use a repertoire of tools to extract meaning from a clinical practicum including nursing care plans, anecdotal notes and reflective journals. Typically, students prepare and share care plans with teachers reviewing the assessments, diagnoses, goals, interventions and evaluation (Reilly & Oermann, 1985). Care plans form the basis for discussion and evaluation by clinical teachers and are vehicles connecting classroom teaching and clinical realities.

Brokering refers to a participative connection when an individual is transferring or drawing from one practice to another. Brokering involves translation, coordination and alignment between communities. Clinical teachers explain practicum expectations, interpret role expectations, negotiate student assignments, and model practice.

The merits of using boundary practice as the frame of reference for understanding clinical teaching include: 1) acknowledgment that there are distinctive processes by which two communities of practice relate to one another, 2) acknowledgement that participation in the practice builds knowledge and competence that is a blend of the two 'parent' communities, and 3) recognition that there are specialized means that reinforce the bridge.

Clinical Teaching

Siler & Kleiner (2001) suggest that there are parallels between how novice nurses learn to negotiate their practice and how novice clinical teachers learn a new practice. The

novice nurse or advanced beginner as Benner (1984) describes the new graduate, regards clinical situations as a set of tasks to be completed and these task requirements are central to his/her practice. Typically, advanced beginners describe the need to finish all the procedures from bed bath to dressing changes and only peripherally consider a family's concerns or a patient's changing status (Benner et al., 1996). This is in contrast to the more experienced nurse who is able to see a broader picture that includes understanding the complexities of patient care and family needs as well as being able to identify the more subtle changes in a patient's condition.

Clinical teachers new to teaching describe their unfamiliarity with the language of teaching, with the expectations of students and their frustration with a lack of preparation. These novice teachers report that their main concern is the patient, illustrating a focus on what is familiar to them (Scanlan, 2001). More experienced clinical teachers had a broader understanding that included the patient outcomes as well as the student's learning. In much the same way that novice nurses rely on more experienced nurses for direction and support, novice clinical teachers sought out other clinical teachers as role models and sounding boards.

Not surprisingly, in much the same way that expert practitioners have difficulty articulating their knowledge to others because it is so embedded in their practice, experienced clinical teachers have difficulty relating what it is they do in practice (Silar & Kleiner, 2001). Understanding practice is facilitated by the sharing of narratives among the practice community and it is from actual practice that we begin to uncover what it means to know in practice. Silar & Kleiner (2001) note that there is a lack of dialogue about what clinical teachers do and this situation reinforces the isolation that novice teachers express and does little to advance the practice.

Two or three days a week nursing students are assigned a clinical placement experience known as a clinical practicum. These experiences vary depending on the focus of the curriculum. Some are observational experiences while others involve providing direct patient care in hospital settings. Practicum experiences are integrated throughout the program to provide an opportunity for students to experience 'first-hand' nursing practice. To learn a practice, students are initiated into the community of practice including the traditions, language, and patterns of knowing-in action (Schön, 1987). Students listen as nurses reflect upon their actions deciding alternate courses of action that may result in generation of new knowledge. Learning at the periphery of practice provides a safe environment for students.

Clinical teachers choose patient assignments with the goal of situating the student in a clinical environment where they can be coached by either the teacher or the nurse. Clinical teachers assess student practicum experiences judging when to intervene in order to ensure patient safety and when to draw back facilitating more independent decision making (Taylor & Care, 1999). The cognitive apprenticeship model is identified as an effective tool for planning, implementing and evaluating clinical learning (Taylor & Care, 1999). This approach mirrors the reflective practicum described by Schön (1987) in the sense that both approaches engage the student in understanding tacit knowledge within a community of practice. Teaching methods used in a cognitive apprenticeship model include modeling, coaching, scaffolding, articulation, reflection and exploration. Schön (1987) contends that students cannot be taught what they need to know in practice; rather they should be coached to recognize the relationships between actions and results. Clinical teachers present guidelines for practice, model therapeutic approaches and select clinical experiences that build on previous learning experiences building on each clinical

opportunity (Taylor & Care, 1999). A well established practice in nursing education is reflective journaling providing both teacher and student the opportunity to reflect, reconsider, debate and plan nursing interventions. As students progress toward graduation and independent practice, clinical teachers negotiate learning experiences for students to explore the community of practice in a more independent fashion.

Nursing program coordinators together with clinical placement coordinators and health care agency staff decide which units and/or public health departments offer the most appropriate environment for student learning. These decisions are based on the extent to which the placements provide the opportunity for students to meet the learning outcomes of the practicum course (Appendix A). In addition, consideration is given to the history of the unit or project team because not all units would be expected to welcome students and their teachers to the same degree. The relationships established between nursing staff, students and clinical teacher could be expected to be a source of clinical teaching knowledge.

Clinical affiliation agreements set out the legal parameters of the relationship (Appendix B) as well as highlight the responsibilities of each institution. These agreements have particular utility since they establish in writing the expectations of each institution. This is important in offering assurance, for example, that students have up to date immunizations and police checks avoiding putting patient populations at risk.

The College of Nurses of Ontario (Appendix C) has prepared accountability standards for nurses working with students. These standards address questions that nurses ask as well as outline the responsibilities of the nurse in sharing a patient assignment with nursing students and their teachers. Sharing responsibilities between practitioners and students creates a tension that clinical teachers must deal with and the strength of the

relationship is an important factor in student learning (Vollman, 1989).

Characteristics of effective clinical teachers include clinical competency, ability to care for patients or to demonstrate that care in real situations, subject knowledge, and strong interpersonal communication skills (Gignac-Caille & Oermann, 2001; Vollman, 1989). In addition, effective clinical teachers are able to diagnose student learning difficulties, explain difficult concepts, provide feedback and evaluate student learning. It is apparent that clinical teaching is a complex role for which there is little preparation (Davis et al., 1992; Knox & Mogan, 1985; Mogan & Knox, 1987; Scanlan, 2001; Silar & Kleiner, 2001).

Krisman-Scott et al. (1998) contend that clinically skilled experts do not have the pedagogical knowledge and skill necessary to teach in higher education and the result is, frequently, that they teach as they were taught. Clinical teachers voice frustration in the lack of preparation and education when taking on clinical teaching and many indicate that learning to teach is largely by trial and error (Davis et al., 1992; Scanlan, 2001; Siler & Kleiner, 2001; Vollman, 1989). Although clinical teachers may lack formal knowledge of teaching, Benner (1984) suggests that they do draw from their practice knowledge to help inform their teaching. She notes that experts are able to present their understanding because they are able to draw from 'global sets' or predispositions to respond in certain ways in particular situations. These are knowledge representations that expert nurses use in practice.

Typically, the nursing literature refers to role competencies when describing the knowledge that teachers need to teach nursing in the classroom and in the clinical area. Choudhry (1992) identifies three nurse teacher role competencies in a survey of full-time university and college faculty in Ontario. These are facilitating student development;

demonstrating a sound knowledge base for curriculum development, implementation and evaluation; and demonstrating comprehensive knowledge of the subject, theories of learning and teaching and appropriate classroom strategies. Students identify the most important characteristic of effective clinical teachers as being able to demonstrate clinical skills and judgment (Gignac-Caille & Oermann, 2001). Other characteristics identified by students are professional competence, positive interpersonal skills, ability to assist students in identifying principles, ability to remain calm and being considerate of students (Davis et al., 1992; Mogan & Knox, 1985, 1987).

Clinical teaching occurs in many health disciplines including for example, respiratory therapy, radiography, medicine, physiotherapy and occupational therapy programs. The professional responsibilities are unique to each discipline, however, disciplines report similar clinical teaching challenges (Baird, 1995; Hesketh, Bagnall, Buckley, Friedman, Goodall, Harden, Laidlaw, Leighton-Beck, McKinlay, Newton & Oughton, 2001). For instance, teachers in diagnostic radiography report a need to change approaches in order that students learn the knowledge 'embedded' in practice rather than focus solely on the treatment aspects (Baird, 1995). Hesketh et al (2001) describe similar competencies as Choudhry (1992) that are required of doctors as clinical teachers. The findings of this study might be expected to be transferable to other clinical learning contexts.

Summary

This study combined the concepts of community of practice, boundary practice, competency in practice, situated learning, reflective practicum, and legitimate peripheral participation as a framework for exploring clinical teaching in nursing. The following sections analyze nursing and teaching within this frame of reference describing, in each

context, practice knowledge or knowing-in-action. These sections highlight the sources of knowledge that nurses and teachers use in everyday practice. The purpose of highlighting these knowledge sources was to begin to develop a conceptual framework of clinical teaching.

Nursing Context

Nurses practice in a variety of settings including but not restricted to acute care institutions, community clinics, workplaces, and patient homes. The focus of public health practice is to improve the overall health and well-being of aggregrates in contrast to the acute care practice environment that focuses on individual well-being (Clarke, 2003; Stanhope & Lancaster, 2002; Stewart, 2000). Student nurses in community practice work with practitioners on community projects such as programs to support low birth weight newborns and high-risk pregnancies. Clinical teachers who participated in this study were representative of both the hospital and community health settings.

Seven different areas of expertise in nursing practice have been identified (Benner, 1983). The areas of expertise are: 1) helping role; 2) teaching-coaching functions; 3) diagnostic and patient monitoring functions; 4) administering and monitoring therapeutic interventions and regimes; 5) effective management of rapidly changing situations; 6) monitoring and ensuring the quality of health care practices and 7) organizational and work-role competencies.

Nursing narratives describe nursing experiences of caring for patients and their families (Benner et. al, 1996). These narratives capture the lived experiences of nurses as they learn in practice and describe how practice knowledge evolves through negotiation of new meanings. The narratives of novice nurses in particular highlight the situated nature of nursing practice. These nurses describe how they move beyond seeing the patient as a disease entity to understanding/knowing the patient as a person.

Practice Knowledge

In the broadest sense the knowledge that nurses use in practice is called practice knowledge (Benner, 1983; Carper, 1978; Johnson & Ratner, 1997; Kidd & Morrison,

1988; Kikuchi, 1992; Liaschenko, 1997). Schultz and Meleis (1988) describe practice knowledge as resulting from engaging in the gestalt of caring. It is personal, subjective and generally not well understood (Benner, 1983; Jenny & Logan, 1992). Practice knowledge is personal in the sense that the process of knowing involves knowing 'something', usually empirical knowledge, knowing how to 'do' something (procedural knowledge) and knowledge of oneself as a nurse (Benner, 1983; Moch, 1990; Schultz & Meleis, 1988). Practice knowledge is characterized by its contextual nature and particularistic knowledge acquired through knowing the patient (Jenny & Logan, 1992).

The sources of nursing practice knowledge are objective knowledge of the science of nursing; subjective knowledge that evolves from one's personal experience of 'knowing the patient'; speculative knowledge of what events may occur; and practical knowledge of how to perform a task or procedure (Johnson & Ratner, 1997). Collectively these sources contribute to the development of practice knowledge that is unique to each nurse. Johnson and Ratner (1997) caution that "knowledge used in nursing practice is multifarious and must be considered from the standpoint of its nature (ontology) and its use" (pg. 19). The sources of practice knowledge are not mutually exclusive, rather, each source of practice knowledge overlaps with another as illustrated below in Figure 2. Practice knowledge is reflected in the intersection of speculative, subjective, practical and objective knowledge sources.

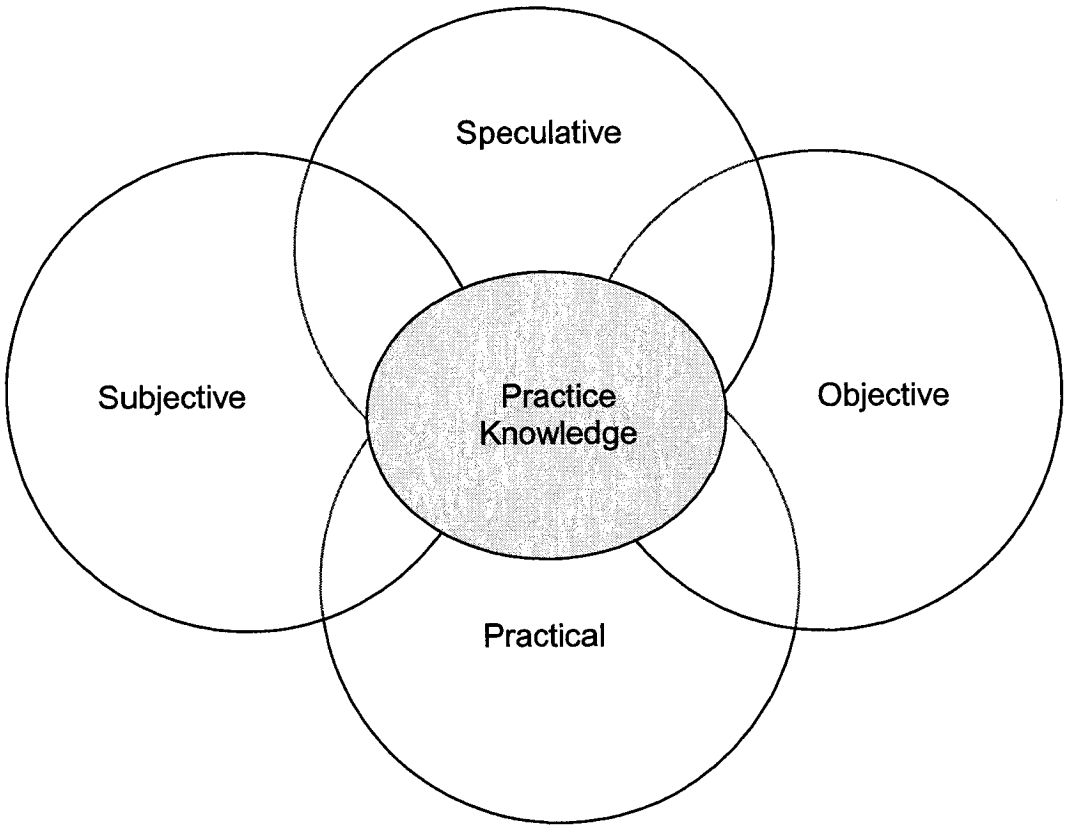

Figure 2. Sources of nursing practice knowledge. (created by author).

'Objective sources of knowledge' refer to knowledge that has been verified using empirical measures (Carper, 1978; Chinn & Kramer, 1995; Silva, Sorrell, & Sorrell, 1995). Carper describes empirical knowledge as

> "knowledge that is systematically organized into general laws and theories for the purpose of describing, explaining, and predicting phenomena of special concern to the discipline of nursing"(pg. 14-15)

Objective sources of practice knowledge come together to create nursing theory such as Roy's theory of adaptation to illness (Carper, 1978; Chinn & Kramer, 1999; Schultz & Meleis, 1988). Nurses access these sources in published research studies and through professional development initiatives they pursue such as attending conferences and formal postgraduate studies.

Another aspect of objective knowledge that overlaps speculative and practical

sources is an understanding of how professionals conduct their practice respecting ethical and moral obligations to the patient, family and institution. Nurses must know the standards of practice, codes of conduct, and values that guide professional life. Ethical knowledge development begins with knowing what is right and what are responsible actions as well as the ethic of care or doing good (Chinn & Kramer, 1999; White, 1995). Chinn and Kramer (1999) state

> "Ethical knowing guides and directs how nurses conduct their practice, what they select as important, where loyalties are placed, and what priorities demand advocacy. Ethical knowing also involves confronting and resolving conflicting values, norms, interests, or principles. There may be no satisfactory answer to an ethical dilemma or moral distress - only alternatives, some of which are more or less satisfactory." (pg. 5)

Knowing the standards of practice and professional codes of conduct is one dimension of ethical knowledge, the other is knowing that evolves through practice; it is expressed in the behaviour of the nurse and his/her moral view of the person in a care relationship.

Subjective knowledge evolves from one's personal experience of 'knowing the patient'. Subjective sources of knowledge are not easily classified, however, nursing scholars recognize the significance of the nurse/patient experience and the knowledge gained as a result (Benner, 1983; Jenny & Logan, 1992; Silva et al., 1995). Indeed, the phenomenon of 'knowing the patient' has gained credibility in the research community as evidenced by inclusion of subjective knowledge sources in discussion of nursing knowledge (Chinn & Kramer, 1999; White, 1995). The relationship that develops between nurse and patient is a personal one. Nurses, through their verbal and nonverbal behaviour, show that they 'care' for the patient and that the patient 'matters' to them. For example, oncology (cancer) nurse specialists working with children and their families develop strong bonds and personal understanding of the particular struggles of that

family, the coping mechanisms, culture, philosophy and beliefs about life and death. Patients build a trust with these nurses. Personal knowing is captured in research studies using qualitative methodologies. For example, Jenny and Logan (1992) studied how expert nurses wean patients from mechanical ventilation. These nurses describe a particular form of practice knowledge that underpins clinical decision-making. Had nurses not had this knowledge, they would revert to standardized care approaches whose probability of success might not be as good.

'Speculative knowledge sources' are knowledge of potentials: for example, what might happen if certain interventions are followed. Speculative knowledge emerges from practice; the intensive care nurse anticipates a sequence of events based on objective and subjective knowledge sources. There is an aspect of moral knowing embedded in speculative knowledge sources. For instance, nurses anticipate the consequence of taking action or neglecting to take action and make decisions based upon reflection. Moral actions are informed by personal values and understanding professional ethos (Carper, 1978).

Practical knowledge refers to knowledge of how to perform specific tasks or procedures. Practical knowledge sources include 'know-how' of operations such as sterile technique, procedures to follow for tasks and specialized intervention strategies that nurses use such as preparation for surgery (Benner, 1983). Practical knowledge extends beyond knowledge of specialized procedures to include understanding of how a hospital functions from an economic, social and political perspective (White, 1995). Each context is somewhat different and nurses caring for patients gather knowledge of internal processes and bureaucracy that they can use to benefit patients. Practical knowledge is informed by objective, subjective and speculative sources.

Teaching Practice in Nursing Education

The changing face of nursing practice has precipitated a reexamination of how nurses are educated. Indeed, some authors note that nursing education is experiencing a 'curriculum revolution' in order to prepare the nurse of the future (Marcinek, 1993; Peters, 2000; Spence, 1994; Tanner, 1993). Implicit in the choice of the phrase 'curriculum revolution', is an acknowledgment of the degree of change that is required in order to meet the expectations of practice.

A key practice expectation today is that graduates are able to think critically and intervene in increasingly complex clinical situations (Angel, Duffey & Belyea, 2000; Higuchi & Donald, 2002; Kinnick, 1990; Malek, 1986; Nehring, Durham, & Macek, 1986). Graduates need to possess more than superficial learning acquired through memorization. They must be able to reflect upon their clinical decision making and revise interventions (Abegglen & Conger, 1997; Daly, 1998; Marcinek, 1993).

In response to the criticism of traditional nursing education, new curricula are being designed that focus on the process of learning rather than the content of the learning (Peters, 2000). Greater emphasis is given to communication, understanding and synthesis of knowledge than to its measurement and control (Spence, 1994). Curricular designs following this direction have been termed 'process or transformative' curricula (Marcinek, 1993; Spence, 1994). Students learn to build their own knowledge structures and representations that make use of their prior knowledge (Peters, 2000). Learning takes on personal meaning since it is negotiated within a social context of discussion and debate. Students also learn what it means to practice within a community of nurses under the guidance and coaching of their clinical teachers. Learning is personal in the sense that it occurs when existing knowledge representations are challenged and reworked to

incorporate new knowledge (Savery & Duffy, 1995).

Problem-based learning (PBL) is an example of an instructional approach used in process-oriented curricula. With the goal of fostering development of the knowledge structures and thinking processes that nurses use in practice, students are introduced to problem situations. The problem or case is situated within practice contexts providing the opportunity for students to problem solve at the periphery of practice. Students are asked to research a number of knowledge sources, generate hypotheses, argue the merit of each and share solutions with peers within a small group study environment (Barrow, 1996; Gijselaers, 1996). The problem becomes the context for new learning when students link theoretical knowledge with practical applications (Angel et al, 2000; Marcinek, 1993; Millar & Malcolm, 1987; O'Sullivan, Belvins-Stephen, Smith & Vaughan-Wrobel, 1997). Marcinek (1993) notes that attention to the process of learning fosters a more collegial relationship between teacher and student in addition to providing more emphasis on individual student goals and objectives.

Clinical Environment

Clinical environments might be expected to reflect the community of practice. Vollman (1989) discovered that clinical environments include personal, physical, political, social, curricular, economic, and contextual dimensions. Student nurses and clinical teachers are invited to participate in nursing practice with the goal of understanding how knowledge evolves in practice and how to become members of the community of practice as novice practitioners.

In recent years due, in part, to the constraints placed on the availability of traditional acute care placements and the changes in nursing curricula, educators have expanded the clinical placement environment to include, for example, public health

departments, community clinics, detention centers, daycare centres, half-way houses, and patient homes. Therefore, it was important that clinical teachers who participated in this study be representative of both traditional and expanded clinical environments.

The personal dimension is the filter through which one views and engages in the environment. It is during this engagement that students and teachers develop personal satisfaction and a sense of achievement (Vollman, 1989). Vollman (1989) chose to focus on students' personal understanding of the clinical environment while this study focused on clinical teachers' perspectives as they described what it is like to engage in the practice of clinical teaching. Closely tied to the personal dimension is the social dimension. The social dimension includes the interpersonal relationships and patterns of communication established in clinical environments. Characteristics of the social dimension include cooperation, morale, reputation, presence of cliques and demographics of the professional staff (Vollman, 1989).

Interwoven with the personal and social dimensions are political and economic aspects. In a world that faces constant change and economic uncertainty, the clinical environment is a reflection of these realities. Vollman (1989) notes that student-patient assignments may create professional powerplays between different members of the health care team. Hospital policies dictate the level of professional staff responsible for patient care and the addition of a student assignment to the mix can be a trigger for conflict.

The physical reality of busy hospital units or health departments is another dimension of the clinical environment. Examples of particular physical spaces are the detention center with locked doors and confined spaces in comparison with an Intensive Care Unit with patient beds lining the periphery or a psychiatric unit with controlled access. Each environment presents its own set of challenges that teachers negotiate with

the common goal of creating a supportive environment for learning.

The operating examples of the curricular dimension are the practicum course outline, clinical objectives and the nursing theoretical model. The clinical environment is the place where students have the opportunity to put into practice the models introduced in the classroom (Vollman, 1989). Clinical teachers ask students to submit nursing care plans, health assessment profiles and environmental scans to determine if the students are making the connections between theory and practice. The curricular dimension is perhaps the most obvious bridge between clinical and classroom teaching and could be expected to be a source of 'brokering connections' in a boundary practice. This study sought to identify boundary objects that serve as bridges between the two practice environments and that are unique to clinical teaching.

The seventh dimension is contextual. As mentioned each clinical environment has its own organizational culture or community of practice and in some instances its own unique language (Vollman, 1989). Public health units, for example, have their own acronyms to describe the practice that other professionals do not share. Hospitals that specialize in care of children, for instance, have a climate and language unique to the care of children and their families. The organizational culture in a clinical environment sets the tone for all professionals. The reporting structure from one professional to another is an aspect of the community of practice that both students and teachers must respect.

Clinical environments are complex and the practice of clinical teaching is shaped in part by the receptivity of the environment to student learning. Clinical teachers strive to create a climate that supports the goals of nursing education. It can be expected that the clinical environment plays an important role in the practice of clinical teaching.

Teaching Context

In order to understand the knowledge teachers use when they teach, it is practical to begin with the essential knowledge structures that frame teacher thinking and action (Borko & Putnum, 1995; Shulman, 1987; Leinhardt & Greeno, 1986). Shulman (1987) organizes knowledge structures into sources. The sources are general pedagogical knowledge, subject matter knowledge, pedagogical content knowledge, knowledge of curriculum, knowledge of aims and educational context, knowledge of students and their backgrounds. Each source of teacher knowledge does not stand alone nor does one source assume greater significance than another, rather as Rahilly and Saroyan (1997) note, each source informs the other creating a web of teacher knowledge that guides teacher thinking and action. Identification of the sources of knowledge that make up a knowledge base for teaching provides researchers with common language that can be translated to other educational contexts, in this case, professional nursing education.

General Pedagogical Knowledge. Most teachers would fail if they relied on their knowledge of subject matter alone to teach without consideration of how individuals learn, the environment that best supports learning, the prior knowledge that informs learning, and strategies that promote self-regulated learning. General pedagogical knowledge includes knowledge of instructional approaches and theories of learning. For example, nurse teachers teaching in a problem-based learning environment draw from knowledge of how to scaffold instruction, model problem solving strategies and coach students to take on greater responsibility for their own learning thereby building personal knowledge structures (Edwards, Hugo, Cragg & Peterson, 1999).

Knowledge of how to structure a lesson and organize a classroom are components of general pedagogical knowledge. By following established routines that have become

automatic, experienced teachers are able to introduce a greater variety of instructional approaches (Borko & Putman, 1995; Grossman et al., 1989; Leinhardt & Greeno, 1986; Shulman, 1987). In contrast, novice teachers report that they spend considerable time coping with management difficulties. The extent of these difficulties is apparent when novice teachers revert to instructional approaches that are teacher-centered and limit student engagement (Fuller, 1996; Gee et al., 1996).

Subject Matter Knowledge. Perhaps the most obvious source of teacher knowledge is knowledge of the subject: facts, concepts and procedures of a discipline as well as the relationship among them (Borko & Putman, 1995). The depth and breadth of understanding of a subject plays a significant role in how teachers approach their teaching (Grossman et al. 1989; Wilson, Shulman & Richert, 1989). McDiarmid et al. (1989) note that teachers' capacity to pose questions, select tasks, evaluate their pupils' understanding, and make curricular choices depend on how they themselves understand the subject matter. A deeper understanding of subject matter is evidenced by an emphasis given to conceptual explanations in the classroom. Teachers whose knowledge of mathematics, for instance, is superficial tend to concentrate on drill whereas teachers with a deeper understanding of mathematical thinking allow students to generate their own strategies thus promoting the development of a conceptual understanding of mathematics (Grossman et al., 1989; Shulman, 1987).

Teachers' understanding of a subject and how knowledge is developed within a discipline form the basis for the kinds of instructional representations that are used in classrooms (McDiarmid et al, 1989). Choices that teachers make in selecting textbooks, analyzing software and designing lessons are framed according to how they have developed their own knowledge structures. For example, the social science teacher whose

understanding of a particular subject area is poor may decide to stick to textbook information thereby limiting the kind of instructional representations he or she uses in the classroom (Grossman et al., 1989; Gudmundsdottir, 1990).

Teacher assumptions about subject matter appear to play a significant role in how teachers approach their subject. Beliefs, according to Grossman et al. (1989), rely on the affective and subjective interpretations. The extent to which teachers have learned themselves, their conceptions of what is important to know, and how they express their assumptions can have a profound influence in classrooms. If teachers are not challenged to consider their assumptions about subject matter and the impact on their teaching, misinterpretations and misunderstandings of subject matter may be perpetuated.

In postsecondary education, faculty are hired for their subject matter expertise. Few have any formal teaching knowledge (Lenze & Dinham, 1994). The assumption has been that once knowledge is acquired, it is an easy task to teach. It is now apparent that teachers need to understand subject matter in different ways in order to teach effectively. Certainly this is where one sees the overlap among sources of teacher knowledge. Part of the process of developing the instructional representations used in teaching is knowing who the students are, their backgrounds, the curriculum design and the learning environment.

In nursing education, nurse teachers possess subject matter expertise in specialized areas such as pediatric nursing, cancer nursing or community nursing. They generally teach their area of specialization. Given what is now known about understanding subject matter for teaching, this tradition can be challenged arguing that nurse teachers need to have the time and support to rethink their understanding in new ways that better promote learning. A part of the task of understanding subject matter

knowledge for teaching is understanding how to present that knowledge in ways that students can learn.

Pedagogical Content Knowledge. Pedagogical content knowledge is the knowledge that enables a teacher to modify, adapt and transform subject matter knowledge into forms that students can understand (Shulman, 1987). To illustrate, a nurse teacher may possess extensive knowledge of childhood cancer and treatment. Faced with the task of translating that knowledge for teaching, the nurse teacher must engage in a process of thinking about content in new ways that will promote learning. A repertoire of representations develops that is known as pedagogical content knowledge. Pedagogical content knowledge includes knowledge of what content is most important to know, of students' prior knowledge and misunderstandings, of the order in which subject matter should be presented and of instructional strategies that are most useful for teaching a specific subject (Grossman, 1991; Gudmundsdottir & Shulman, 1987).

Pedagogical content knowledge, therefore, evolves from an understanding of subject matter and pedagogy. Does pedagogical content knowledge develop through experience? Although one might expect that as teachers acquire more experience, they become more adept at reasoning and thinking about teaching, this may not be the case. A comparison study of novice and experienced elementary teachers' pedagogical and pedagogical content knowledge of whole number operations, fractions, and geometry reveals that teachers who have only a procedural knowledge of content themselves are not inclined to investigate new ways of connecting their subject matter knowledge and pedagogy (Fuller, 1996). Hutchison (1997) extends this notion further by suggesting that there is instrumental and relational pedagogical content knowledge. Instrumental pedagogical content knowledge implies rule-based knowledge of teaching a particular

subject while relational pedagogical content knowledge includes a deeper understanding of subject matter including why and how certain strategies are more useful for teaching. This has implications for professional development plans that ask teachers who have an instrumental understanding of subject matter to teach using tools and approaches that require a relational understanding.

Knowledge of Curriculum. Knowledge of curriculum is knowledge of a larger whole; knowing the history of curriculum development and revision; knowledge of the sequencing of learning outcomes across courses and years and the interconnections among major curricular concepts. Curricular knowledge is broader than knowing what materials and resources are appropriate.

Although curriculum knowledge is reported to hold less significance when compared with other sources of teacher knowledge in higher education, an explanation for this finding may be that experienced college and university teachers have developed the curricular knowledge representations to the extent that considering curricula is automatic (Rahilly & Saroyan, 1997). In much the same fashion that expert chess players develop the knowledge structures and representations for chess, experienced teachers have acquired a specific understanding of curriculum and the interconnection among major curricular concepts (Shulman, 1987).

Generally, beginning teachers and part time teachers have limited knowledge of curriculum and this knowledge gap is apparent when beginning or part time teachers choose to focus on or elaborate certain aspects of the curriculum to the detriment of other areas (Borko & Putman, 1995; Princeton, 1992; Shulman, 1987).

Curricula reflect the underlying learning philosophy that guides decisions and choices in how concepts are introduced and threaded through the course of study. Much is

revealed about the learning philosophy of a program from its curricular design. For instance, it can be inferred that a nursing program organized around the medical model of illness care reflects a more traditional behavioural approach to learning in contrast to a process curriculum that reflects social learning theory.

Curriculum developers have specific goals and objectives in mind when designing programs of study. For example, as mentioned, changes in the nursing practice environment and scope of practice exert considerable influence in shaping nursing curricula. Practicing nurses and nursing practice educators are consulted during the curriculum development process and implementation. Given the close relationship between academe and practice in this field, identification of essential learning outcomes is a shared responsibility.

Knowledge of the Aims and Educational Context. To some extent, understanding the foundational educational goals and directions fits with knowledge of curriculum. Embedded in curricular design is a goal to graduate nurses who are able to assume the roles and responsibilities of professional practice. The curricular design and the instructional approaches used are vehicles to accomplish this goal. Knowledge of the aims and educational context is an example of a knowledge source that is somewhat difficult to pick apart from the more distinctive sources such as subject matter knowledge and pedagogical content knowledge. As a consequence, these knowledge sources may be reflected in general pedagogical knowledge (Rahilly & Saroyan, 1997).

From a nursing perspective, knowledge of educational context includes knowledge of the clinical practice environment (Vollman, 1989). This is potentially another interface between practice knowledge and teacher knowledge. Understanding the practice environment from a teaching view is multidimensional. For instance, predicting

the kinds of anxiety and stress that students experience and understanding the social and political structures of the clinical environment are components of understanding the clinical context. Presumably this understanding has its roots in the generic practice knowledge that nurse teachers bring to teaching. Vollman (1989) identifies four properties that characterize the clinical learning environment. They are complexity, structure, stability and opportunity. Complexity refers to the range of activities and degree of variety that the environment presents. Structure relates to the organization and regulation of students in the clinical setting which is different from the classroom. Stability is reflected in how well established the work practices, roles and relationships are and opportunity refers to the choices that present themselves as learning experiences.

Nurse teachers often teach in the classroom and in the clinical field. The contextual differences between classroom and clinical area underscore the importance of nurse teachers' attention to the complexities of the educational environment.

Knowledge of Students and Their Backgrounds. Students arrive at college and university with diverse educational backgrounds. In nursing, students may come directly from high school, other undergraduate programs or from the workplace. Each student brings different understandings of prerequisite subject matter knowledge including biology, mathematics and social studies. In addition, some students are familiar with a self-directed, active role for themselves while others have been in educational settings that were teacher-centered and the student was passive. In order to promote self-regulated learning, it is important that teachers understand student backgrounds. Students' expectations about the tasks that they confront in classrooms and their general goal orientation impact their engagement in learning, their performance and their motivation (Garcia & Pintrich, 1995; Schunk & Zimmerman, 1997).

Self-regulated learning has two dimensions: 1) skill that refers to students' use of different cognitive and metacognitive strategies to plan, monitor, and modify their cognition and 2) will that refers to students' motivation reflected in goal setting, values and expectations (Garcia & Pintrich, 1995; Pintrich & De Groot, 1990). Student learning is influenced by students' prior knowledge and use of self-regulatory strategies.

In nursing education, students come with specific expectations about nursing and nursing roles. Some of these expectations are influenced by multimedia portrayals of nursing. Others are influenced by students' expectations that certain content areas such as anatomy and physiology are more difficult than others. Nurse teachers need to understand what motivates students, what expectations influence student performance, what prior knowledge students bring and how to foster the development of self-regulated learners.

Teachers' knowledge of the difficulties students face in classrooms is influenced by the difficulties they experienced as students themselves (Lenze & Dinham, 1994). Teachers report that they had a better appreciation for student difficulty and were able to intervene more effectively because they had similar student experiences. Other teachers indicate that they learn to appreciate the student problems from colleagues who are able to highlight content areas that students typically find challenging.

Pedagogical Reasoning and Action

The sources of teacher knowledge collectively inform teacher thinking and action. Shulman (1987) describes a model of pedagogical reasoning and action that has at its roots an understanding of the sources of teacher knowledge. Shulman (1987) suggests that the act of pedagogical reasoning begins with comprehension of some aspect of content, or text or skill. Comprehension connects knowledge of subject matter with

pedagogy. For example, teaching a practical skill requires that the nurse teacher know the underlying physiology and rationale for performance as well as how to sequence the skill acquisition for student learning generally beginning with simpler skills and moving to more complex skills.

From comprehension to transformation, teachers think about how they can reshape knowledge into forms that students can understand. This begins with preparation of materials, analyzing the merit of each for the specific context, then thinking about how to best represent a concept like asepsis (sterility) using different analogies, explanations and examples from practice. Teachers select the instructional strategies that best suit the context adapting them to fit a specific curricular outcome. Transforming personal comprehension into forms that someone else can understand is, according to Shulman (1987), the essence of the act of pedagogical reasoning.

The combined processes of transformation result in a plan or approach to teaching. These processes do not stop at the plan. There is a continuous revisiting, often not in sequence, of comprehension, preparation, representation, selection and adaptation throughout and beyond the actual delivery of instruction.

The act of pedagogical reasoning continues with reflection and new comprehension. For instance, nurse teachers who have just completed a section on asepsis consider what aspects of their teaching worked well and what aspects were problematic in their view and from the student's perspective. This reflection leads to new understanding of how to approach the topic differently another time and how to incorporate new understandings of student learning.

Summary

Clinical teachers have a repertoire of knowledge sources that inform their day-to-day practice. They incorporate knowledge of subject matter, curriculum, students, aims and context, specialized and general pedagogical content knowledge to devise strategies that engage students. Nurses integrate practical, objective, subjective and speculative knowledge sources in their practice. It can be expected that clinical teachers use a combination of these knowledge sources and construct clinical teaching knowledge of how to broker the connection between the two parent communities of practice.

Figure 3 is designed to reflect the expectation that clinical teachers draw from two knowledge sources; nursing and teaching. Using Wenger's (1998) proposition that a boundary practice serves as a participative connection, clinical teaching is situated between the two communities of practice permitting two way dialogue across otherwise separate communities of practice. Nursing knowledge is represented in one circle; teacher knowledge in another and an overlapping circle was positioned in the middle suggesting that there is a connection between nursing and teaching's communities of practice.

Dotted boundary lines denote permeability and two-way arrows highlight the dialogue. Within the centre circle are the teaching/learning constructs of legitimate peripheral participation, reflective practicum and cognitive apprenticeship. The framework suggests an ongoing relationship between nursing and teaching that occurs through clinical teaching.

Using this conceptual framework as a guide, clinical teachers were asked to describe their practice with the goal of understanding how clinical teaching bridged two otherwise separate communities of practice.

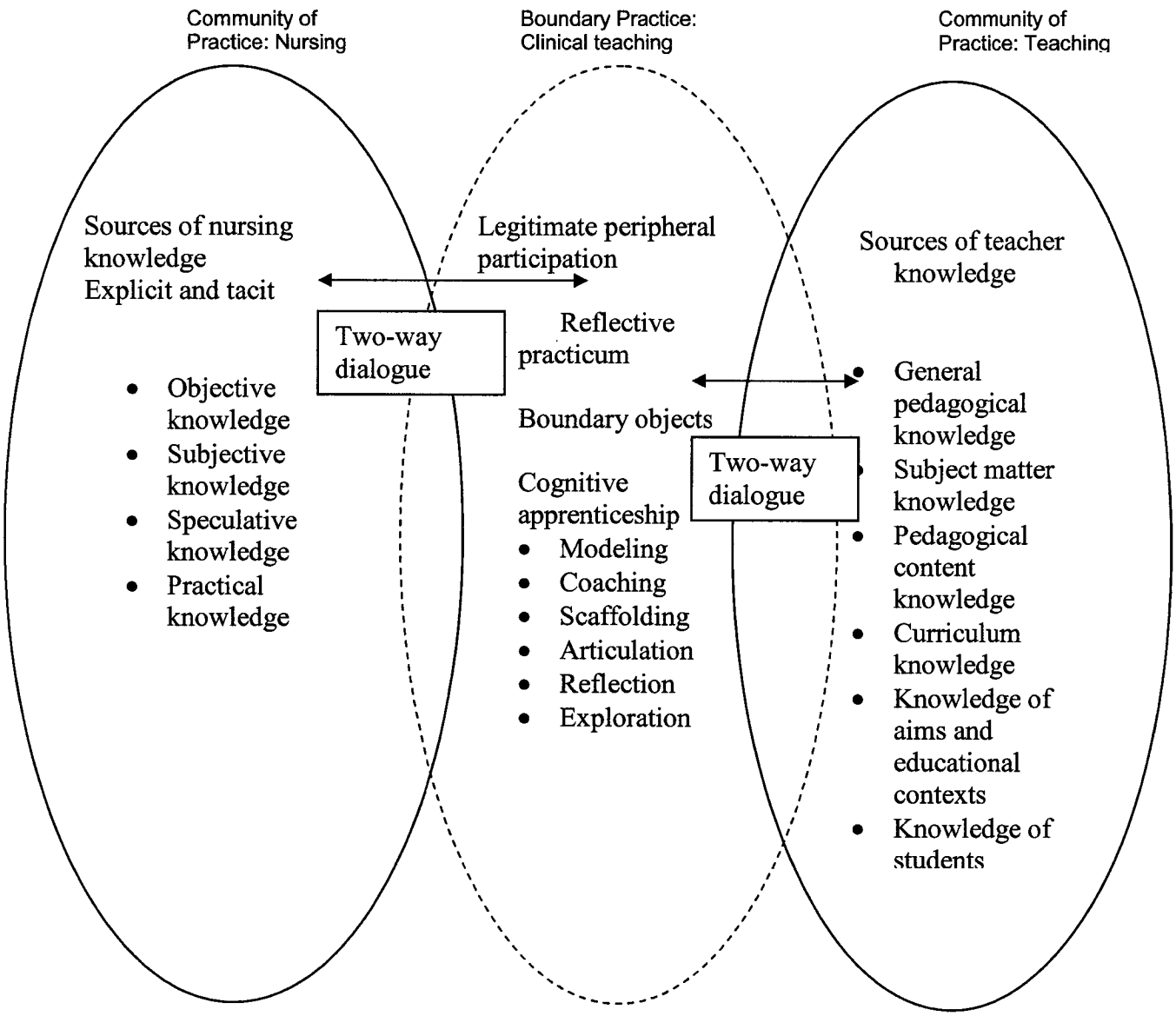

Figure 3. Conceptual framework (created by author).

Statement of Problem

Clinical teachers are recruited from practice to clinical teaching, in part, because they are identified as expert practitioners. The underlying assumption regarding clinical teaching is that if one is an expert in nursing practice, one can translate that expertise to clinical teaching (Scanlan, 2001). Clinical teachers, however, have little if any preparation for the role although there is widespread acknowledgment that clinical teaching is a complex practice especially in an increasingly uncertain and changing clinical environment (Davis et. al, 1992; Knox & Morgan, 1985; Scanlan, 2001; Siler & Kleiner, 2001; Vollman, 1989). It is important, therefore, to have a clearer understanding of what it means to practice as a clinical teacher. Using the conceptual framework of clinical teaching as a boundary practice that is formed because members form a close relationship and an understanding of the practice that others do not share, the following questions were addressed:

1. To what extent do clinical teachers describe the characteristics of a boundary practice?
2. What are the participative connections that clinical teachers use in their professional activities?
3. What boundary objects are transferred from one community of practice to another?

Research Design

Qualitative research design was used to capture an accurate description of clinical teaching (Miles & Huberman, 1994; Strauss & Corbin, 1990; Streubert & Carpenter, 1995). A priori, Wenger's (1998) boundary practice perspective was used to interpret the descriptive materials. Terminology such as participative connections and boundary objects coined by Wenger were incorporated into interpretations of the data. Explanation-building was used as the interpretative process to answer the research questions (Yin, 2003). Were data describing a boundary practice? What explanations were offered?

Miles and Huberman (1994) suggest that tight design with well-defined constructs can be confirmatory seeking to test or further develop a conceptualization. This was the case for this study. The use of a pre-structured design offered the ability to test whether clinical teaching practice fit the construct of a boundary practice. The procedure started with coding of interview data as boundary connections followed by categorization of relationships, strategies and tools. Subcategories were further refined during the data analysis. This is a deductive model beginning with constructs outlined in Figure 3 and extracting questions from the framework. The sample of clinical teachers for this study was a convenience sample of individuals who volunteered to be interviewed sharing their descriptions of their practices. Small qualitative samples are common in qualitative research design where the focus is to work with people 'nested' in their context (Miles& Huberman, 1994). Qualitative samples tend to be purposive (Miles & Huberman, 1994) as was the case for clinical teachers chosen who represented either acute care or community settings.

A pilot was conducted with clinical teachers from a local community college. A

focus group interview was held to determine if the format of the interview was conducive to rich dialogue that Rubin and Rubin (1995) describe as follows: "let people spark off of one another; suggesting dimensions and nuances of the original problem that any one individual might not have thought of" (p.140). The pilot participants offered their suggestions of interview questions particularly in terms of relationships with classroom teachers and relationship building in the clinical context. These suggestions were incorporated into interview questions (Appendix D).

Figure 4 illustrates the design used in this study. Essentially the design was a loop beginning with the research questions. In order to answer those questions, interviews were held with clinical teachers in a university program from both acute care and public health. The pilot informed the large focus group providing key information about logistics, numbers and revisions to interview questions. The pilot also informed the development of the study invitation and information letters sent to prospective focus group participants (Appendix E and E1). A debriefing session was incorporated to provide third party input and an opportunity to validate the explanations. The subsequent focus group interview provided beginning explanations of clinical teaching practice and guided the individual interview questions that followed. All interviews were transcribed and sent to participants for validation and changes.

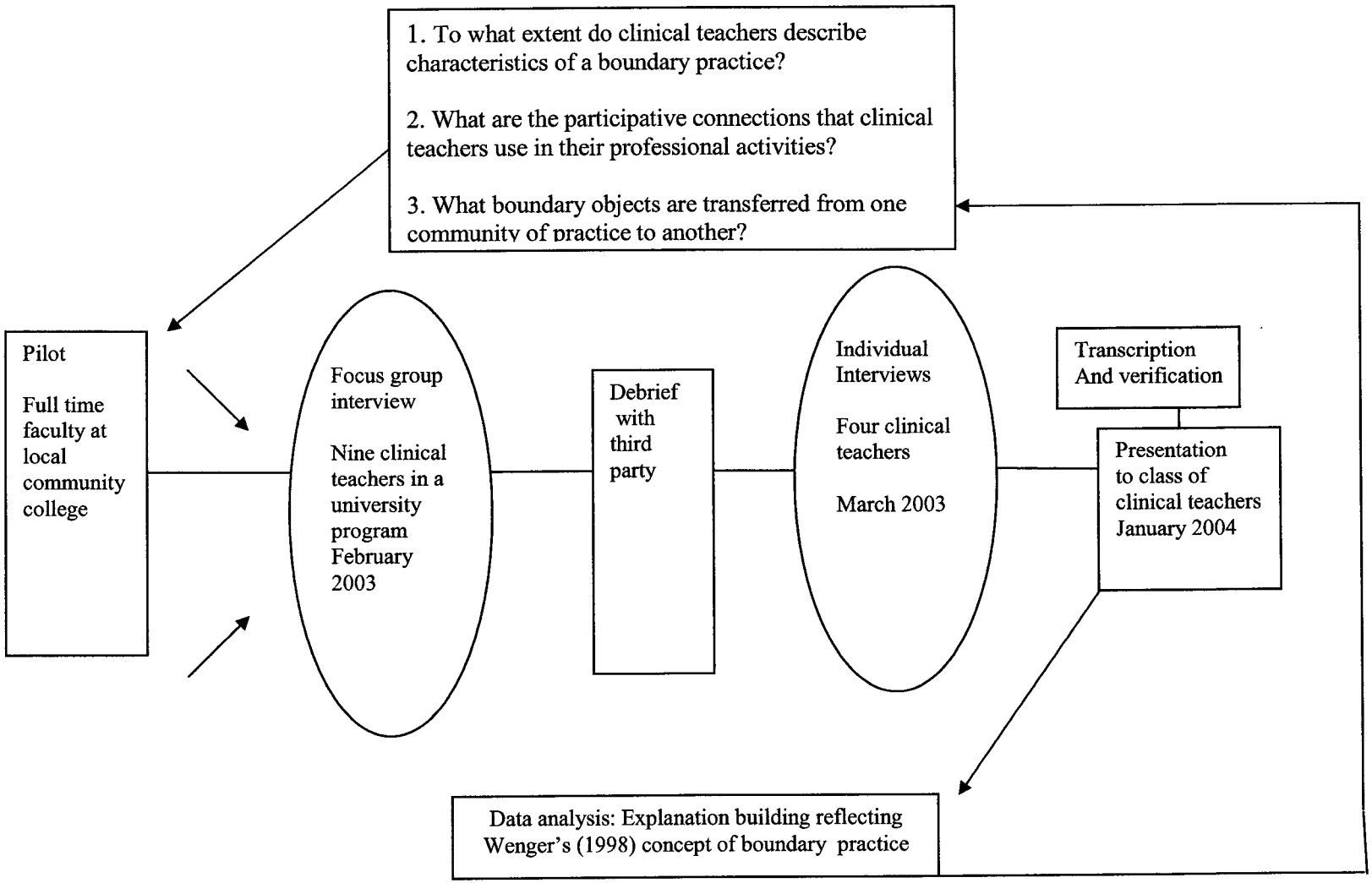

Figure 4. Research design (created by author).

Clinical teachers were recruited from both the hospital and community settings. The benefit of incorporating multiple sources of evidence was to simulate 'converging lines of inquiry' known as a process of triangulation where there are several measures of the same phenomenon (Stake, 1995; Yin, 2003). The ability to question whether there were other explanations for what clinical teachers described was improved with a broader practicum representation. Also, student populations varied across the practicum experiences offering additional insight into the relationship that clinical teachers establish with students.

Trustworthiness was improved by returning to participants to ask if the descriptions reflected their experiences and permitting changes to the descriptions. A debriefing of the focus group interview was held with an independent senior faculty member of the university to review and highlight the key discussion points that served as foundational questions for the individual interviews. This third party participant could verify and validate the direction of the discussion thus contributing to the study's trustworthiness. In addition, trustworthiness was aided by the fact that results were shared with a group of Master's students studying clinical teaching. These students, including one of the study participants, related that the descriptions of clinical teaching as a boundary practice resonated with their experiences and helped them to situate clinical teaching.

The rationale for choosing the focus group and individual interview format was to use two interview strategies; open-ended and focused (Yin, 2003). The focus group interview solicited generic information regarding clinical teaching such as first experiences, relationships and knowledge used in practice. The focused individual interviews were an opportunity to follow-up on specific discussions and question in

greater detail the perspectives of clinical teachers.

Drawing Conclusions

In order to understand how representative the findings of this study are for clinical teachers the results were discussed with a class of Master's level students who were enrolled in an online clinical teaching seminar course. The model of clinical teaching as a boundary practice was presented to the students and they were asked to comment on the description of clinical teaching as a boundary practice. One of the study participants was in the class and collectively the students reported that the model resonated with them in the sense that they could 'see' the connections between nursing and teaching more clearly. The students explained that the model helped to anchor clinical teaching practice within a framework to better reflect the relationships and strategies that clinical teachers use in their daily practices.

In addition, the design controlled for researcher effects and sought out rival explanations by 1) having a third party professor assist with the debriefing; 2) sending the interview transcripts to participants for accuracy and revisions; 3) presenting to the Master's class; and 4) avoiding going to the clinical practice settings that were familiar to the researcher. During the course of the data analysis the researcher returned to the third party professor relaying first impressions and presenting hypotheses. This was a helpful strategy that resulted in the researcher returning to the data with new perspectives. For instance, was the more articulate participant receiving greater attention during the analysis of the data?

Method

Protocol

Preliminary meetings. Meetings were held with the outgoing and incoming Director of the School of Nursing at the university. The purpose of the meetings was to outline the research study and discuss recruitment strategies for clinical teachers (Appendix F). Clinical teachers are usually part time faculty members and the roster of teachers varies from one semester to another. Coordinators of clinical placements were asked to forward names of clinical teachers for recruitment purposes. Clinical teachers were contacted by letter explaining the study and prospective participants signed copies of the consent form; one for the focus group only (Appendix G) or two for the focus group and individual interview (Appendix G1). Ethical approval was granted by the Research Ethics Review Committee of the Faculty of Education, McGill University (Appendix H) and the Social Sciences and Humanities Research Ethics Board, University of Ottawa (Appendix I).

Pilot. During a nursing faculty meeting at a community college, the study was introduced and a request for volunteers to participate in a pilot focus group interview was made. It was indicated that the session would be tape recorded in order to determine the effectiveness of the tools. It was agreed that the tape recordings would be deleted following the session. Interested faculty had an opportunity to read a brief overview of the study. This overview was the draft of the introduction letter sent to clinical teachers in the university program. Eight clinical teachers at the college volunteered to participate in a pilot focus group interview. The purposes of the pilot were to a) decide the feasibility of a large focus group interview in terms of numbers of participants and length of time; b) field the interview questions and seek input regarding changes and addition of new

questions; c) consider the range and measurement of clinical teaching experience; d) solicit input regarding individual interviews; and e) pilot the use of the tape recording tools.

The pilot provided validation that the focus group format of up to ten clinical teachers was feasible using the tape recording tools. The pilot took place in a small classroom and it was evident that a smaller seminar room would have been more appropriate since the recording tools had difficulty picking up participants at the periphery of the room. The pilot confirmed that clinical teachers were eager to discuss and share their knowledge of the practice. In fact, the pilot session was scheduled for one hour, however, two hours later, the group was still engaged in the discussion. An important outcome of the pilot was direction given to pursue the clinical teacher-classroom teacher connection as well as clues that clinical teachers possess unique knowledge that bridges the worlds of teaching and nursing. Participants described a complex practice that involved forming working relationships with fellow nurses.

Information Session. A letter of invitation (Appendix E) with background information about the study (Appendix E1) was sent to 67 part time clinical teachers in the university program inviting them to attend an information session at the university. A total of 12 people responded and eight were able to attend the information session. Interested clinical teachers responded by sending confirmation via email or telephone. The purpose of the information session was to present an overview of the study and to solicit participants.

Participants. A total of nine clinical teachers participated in the study including the eight individuals who attended the information session and one individual who was unable to attend the session but who had indicated a desire to attend the focus group. Four

clinical teachers were selected from the original nine to give indepth individual interviews on a voluntary basis in order to clarify issues from the focus group.

Clinical teachers were coded "A" through "I (Appendix J). Nurses A, C, G, and I participated in the individual interviews. [See below] To delineate the practice speciality, nurses were grouped as AC: acute care; PH: public health or both AC/PH. One teacher had a full time contract position at the university and all others were part time faculty members employed on a semester-by-semester basis.

Participant characteristics were:

Nurse A: 26 years of nursing experience in an acute pediatric environment. Clinical teacher for 10+ years. Educated at the Masters in Nursing Science and employed at local children's hospital. Has taught in the classroom at the university (AC).

Nurse B: 25+ years of nursing experience in acute pediatric nursing. 10-15years classroom and clinical teaching experience. Bachelors Degree in Nursing Science. (AC)

Nurse C: 30+ years of nursing experience in a psychiatric environment. Recently retired and taken on role of clinical teacher in retirement. Masters in Nursing Science. (AC)

Nurse D: 30+ years of nursing experience in acute adult nursing. More than 10 years as a clinical teacher. No classroom teaching. Bachelors Degree in Nursing Science. (AC)

Nurse E: 20+ years of experience mainly in obstetrical and family nursing. 8 years experience as a classroom and clinical teacher. Teaches family theory. Masters in Nursing Science. (AC)

Nurse F: 5 years nursing experience in both acute care and public health but mainly public health. 2 years classroom teaching experience. Masters in Health Administration. (AC/PH)

Nurse G: 15 years nursing experience in public health settings. Clinical teacher for 3 years. Masters in Nursing. Employed with local public health authority. (PH)

Nurse H: 20+ years of nursing experience in acute gerontological nursing. Clinical teacher for 2 years. Masters in Nursing. Some classroom teaching experience. (AC)

Nurse I: 10 years nursing experience in diverse settings including acute care and public health. Educated at undergraduate level. Working part time with young children. Has taught in the classroom at the university. (AC/PH)

Practicum courses and practice settings

Practicum courses are threaded through four years of undergraduate education. Clinical teachers often teach across years of the program and may take, for example, a third year group to the practice area one semester and second year students in another. A practicum course typically runs over an 8 to 10 week, two-day a week experience. As mentioned, the selection of practicum sites is a collaborative decision made by program coordinators, clinical placement coordinators and the health care agencies. Typically, sites are selected that offer the greatest opportunity for students to achieve the practicum learning outcomes.

A practicum course is one that complements a theory course. For example, students in third year study the theoretical aspects of public health nursing and that course is followed by one day a week spent working in the community. Students are assigned to teams that may be working on projects such as strategies to identify high-risk teen pregnancies or low birth weight infants. The clinical teacher in collaboration with the practice expert supervises each student experience by monitoring student progress and student input, and evaluating student outcomes. A practicum course that complements an acute care medical surgical course is necessarily different. In this instance, clinical

teachers work side by side with students, offering support and guidance in learning to care for acutely ill patients. Another practicum course complements a mental health theory course and in this instance clinical teachers guide and support students on acute psychiatric units. Each practicum course provides a different context for student learning; clinical teachers who participated in this study practiced in clinical settings such as those described above. The variety of the practicum experiences was an additional source of replication logic as well as analytical generalization.

Educational Setting

The clinical teachers who participated in this study were associated with a large bilingual university. The university curriculum was designed with the input of the practice community and was revised and approved by the Senate of the university in 2002. The curriculum design has five outcome threads that are developed through the four years of the program. The outcomes are self-directed learner, critical thinker, becoming professional, communicator and knowledge worker. These outcomes are incorporated into each practicum course beginning in first year when students are introduced to the concepts of health and normality, predictable crisis and morbidity in second and third years culminating in fourth year when students are expected to meet these outcomes as a novice practitioner. Participants in this study are employed on a contract basis with responsibilities for clinical teaching and in some instances classroom teaching as well depending on the needs of the program.

Focus group interview. The most opportune time for the focus group interview was the university winter break week. In attendance at the focus group interview was a secretary to help with the tape recording and transcription process as well as a volunteer senior university faculty member whose role was to assist the researcher in fielding the

questions and assist in the debriefing session. These questions explored clinical teaching asking participants to share their experiences as clinical teachers.

Question 1: Describe how you were recruited to clinical teaching

If clinical teaching was a boundary practice, I was interested in knowing what links were formed at the start of the practice. This exploratory question was designed to elicit information about how the first steps were taken by clinical teachers. I questioned how they were recruited to clinical teaching. For instance, was the recruiter a professor, another clinical teacher or a fellow practitioner? This first question was designed to reveal initial connections and relationships. What strategies did they use to establish relationships?

Question 2: Describe your first clinical teaching experience

This question asked clinical teachers to reflect upon their first experiences; some of these experiences were more recent and others occurred many years before. I questioned if there was a common view of how clinical teachers first engaged in the practice. Were the experiences similar to those described in the literature? Were there expressions of isolation? How did clinical teachers describe bridging the objectives of student learning with the busy realities of a unit or project team?

Question 3. Describe your knowledge of teaching at the start of your first experience

The teaching role is familiar to nurses. They mentor new staff and support families in learning to care for family members. By questioning what they knew about teaching during those first experiences, I was asking whether, during those first experiences, they saw themselves differently in the sense of being engaged in something that an outsider (another nurse) could not experience. Was the role of clinical teacher with a group of students different? What negotiations took place and with whom?

Question 4. Describe aspects of your nursing practice that helped you in your clinical teaching.

This question asked to what extent clinical teachers used practice knowledge to inform their teaching. What was different; what was the same? I was interested in uncovering the knowledge of clinical teaching practice that originated in practice. What tools bridged the two communities of practice? Did clinical teachers use tools from nursing practice to negotiate meaning?

Question 5. Describe how your clinical teaching has evolved since the first experiences

The intent of this question was to uncover strategies used by clinical teachers and how these may have changed since the first clinical teaching experiences. Was there a change in strategies over time? Were some strategies in greater use and if so, how did that impact relationships? What has changed about their clinical teaching given the practice changes?

Debriefing session. Immediately following the focus group interviews, the volunteer faculty member and researcher convened to share thoughts and insights. In particular, the session served as an opportunity to review and highlight commonalities in the discussion and to pinpoint direction for the individual interviews. During the session, there was agreement that 1) there was a richness and a keen desire to share experiences and, 2) there was a clarity of expression when clinical teachers described the 'public relations' that they struck with keeping a balance among supporting the nurses on the units, maintaining patient safety and creating and fostering a supportive learning environment. This appeared to be a theme throughout the discussion and was identified as a starting point for the individual interviews.

Individual interviews. In order to elicit more descriptive information about individual experiences as clinical teachers a selection of four clinical teachers

representing community and acute care environments, different speciality areas, and years of clinical background was made. This was a convenience sample of clinical teachers who were available to meet with the researcher in the weeks immediately after the large focus group. These interviews occurred at the university and in individual homes and were tape recorded. The interviews ranged from 60 to 90 minutes. The participants' comments during the focus group interview served as beginning discussion points. For example, one teacher described in the focus group interview different strategies that she used to learn the practice. In the individual interview, I asked more structured questions on the specifics of strategies used. She described how she didn't read clinical evaluations prior to meeting students, wanting to form her own perspective. This strategy, she felt, allowed her to be more open in her relationships with students. Another clinical teacher spoke of intuitive knowledge that she linked to expert practice. I focused my initial questions on what she meant by intuitive knowledge and she described how in much the same way that she 'knew' when a patient's condition was changing, she 'knew' when students were struggling and would intervene quickly before there was a real crisis in confidence.

Transcription and verification Each interview was tape recorded and transcribed using a word processor. Each focus group and individual interview participant received the transcription and was invited and able to amend the record. See transcription forms in Appendices K and K1. Participants signed and returned amended transcriptions. The tape recordings and transcriptions are held in a secure office environment.

Data Analysis

During the data analysis phase the researcher reviewed and dissected interview transcripts reflecting upon the information gathered (Miles & Huberman, 1994). Coding enabled information to be organized and categorized. The interview data were coded as boundary connections, established prior to the start of the coding in accordance with Wenger's concept of a boundary practice. Organizing information under the code of boundary connections identified the links between the two communities of practice uncovering the repertoire of strategies and relationships formed in practice. Subcategories of relationships were those established with students, classroom teachers and practicing nurses. Subcategories of strategies included reconciliation and negotiation strategies such as leveling, advising, mediating and collaborating. Another subcategory of boundary connection included the tools such as nursing care plans, care mapping and reflective journals. Figure 4 outlines the initial coding and categorization of interview data as entered into the computerized software.

Boundary connections	
Relationships	1. Nurses – intuitive, expertise, supportive
	2. Students – advocate, respect, advisor
	3. Teachers- expertise, mentor
Strategies	1. Negotiation- public relations, diplomacy, tact, debate
	2. Reconciliation- compromise, priorities, theory/practice
Tools	1. Care plans – reality, theory
	2. Journals- lived experience, mistakes

Figure 5. Initial coding (created by author).

Analysis of focus group and individual interview data. The QSR N6 software for qualitative data analysis held all the interview transcripts, notes and observations made during the interviews and the debriefing session. Hand-written notes made during the interviews were incorporated into the database.

Beginning with the focus group interview, memos and annotations were added for each participant outlining the area of clinical specialty of each and identifying clinical teaching background. The focus group interview transcript was examined using process of coding with a priori categories. For example, a free node was coded as 'public relations' and the transcript was analyzed using this as a descriptor asking the questions: "What are clinical teachers telling us about the need to create a welcoming environment? Is this an example of a boundary connection used to negotiate their participation? 'Public relations' as a free node was eventually coded into a strategy subcategory labeled 'negotiation' meant to capture the importance of understanding how clinical teachers negotiate meaning through their participation.

Once the individual interview data was added to the qualitative computer software and coded it became apparent that there were three relationships that reflected clinical teachers' participation: relationships with other nurses, classroom teachers and students. Clinical teachers described their efforts to build and maintain relationships using a variety of strategies. The nodes coded as relationship/student included advocate, respect, stress, attitude, advisor, mistakes, collaborative and mentor. The nodes coded as relationship/practitioner included energy, intuitive, expertise and supportive. Coding as relationship/professor included expertise and mentor. Coding suggests that although clinical teachers focused on the three relationships, more emphasis was given to the

student-teacher relationship. The coding also revealed the importance of negotiation and reconciliation strategies utilized by clinical teachers to coach, mentor, advise and advocate for students and student learning needs through communication and collaboration with fellow nurses and professors. Collectively, the data provided a portrait of competency in clinical teaching.

Once all interview data were accessible, an ongoing review and analysis continued and gradually a tree node system was developed that captured the key concepts and themes that emerged from the data. The coding framework was shared and debated with the independent faculty member who attended the focus group and debriefing session. Over a four month period the data were repeatedly reviewed and questioned with the resulting coding capturing the key ingredients of a conceptual model of clinical teaching as a boundary practice.

Validity Criteria: Selected criteria used for this study were objectivity, auditability, credibility, transferability, and application.

Objectivity: Interview data, coding and analysis were shared with a third party reviewer and transcripts reviewed by participants avoiding unanticipated researcher bias. The researcher and third party reviewer analyzed data for alternative explanations of the findings. The researcher was careful to avoid using labels from the communities of practice literature such as boundary practice. Participants used terms such as bridge and conduit to describe their clinical teaching practice.

Auditability: One year and two years following data collection results were shared with Master's students enrolled in a clinical teaching course. These students reported that the data fit with their experiences as clinical teachers.

Credibility: Confirmation of the interview transcripts was obtained from all participants through signed returned transcripts. Results were shared with participants and the results were credible to participants, in particular, the vocabulary used to describe clinical teaching practice. Triangulation among clinical environments produced similar conclusions.

Transferability: The results of this study fit within the communities of practice theoretical framework of a boundary practice that bridges nursing and teaching. Identifying the relationships and strategies that clinical teachers use in their practice confirmed the boundary connections that are characteristic of competence in practice.

Application: Our understanding of clinical teaching practice is limited. Participants and students in the Master's clinical teaching course reported that the model of clinical teaching practice described in the study could be applied to their practice and was helpful in explaining the work of clinical teachers. The results provide a vocabulary for clinical teachers to discuss their practice exchanging understandings of how to build connections between practice and education.

Results

Overview

In keeping with the conceptual framework of this study, the results sections reflect the social construction of knowledge within communities of practice as well as the knowing-in-action perspective of professional practice. Clinical teachers described their participation in practice relying on their professional practice knowledge and competency in negotiation and reconciliation strategies. The results of the coding of the interview data revealed the push and pull of what it means for nurses to actively participate at the periphery of nursing practice in the role of teacher.

The boundary connections that clinical teachers described were establishing and maintaining relationships using a repertoire of strategies that included an understanding of the outcomes students must achieve through use of boundary objects. These connections are characteristic of competence in practice (Wenger, 1998). Clinical teachers highlighted the relationships established with students, professors and fellow nurses. These relationships were nurtured over the course of the practicum experiences. Clinical teachers also described a repertoire of negotiation and reconciliation strategies used to establish competency in practice balancing the needs of the practice environment as well as student learning needs. The balancing and reconciliation of different practice perspectives is evident in the stories of these teachers.

The results of the coding of interview data are illustrated in a concept map, Figure 5. The map details clinical teachers' use of participative connections to bridge nursing and teaching. The connections include use of specific strategies to build and nurture relationships with nurses, classroom teachers and students. Clinical teachers also use boundary objects such as care plans and projects to bring into focus what it means to

practice as a nurse. Clinical teaching competency evolves as teachers build connections between nursing and teaching as identified at the bottom of the map. The map attempts to illustrate the interwoven nature of clinical teaching; participative connections working together with the goal of facilitating student learning in the real life practice of nursing.

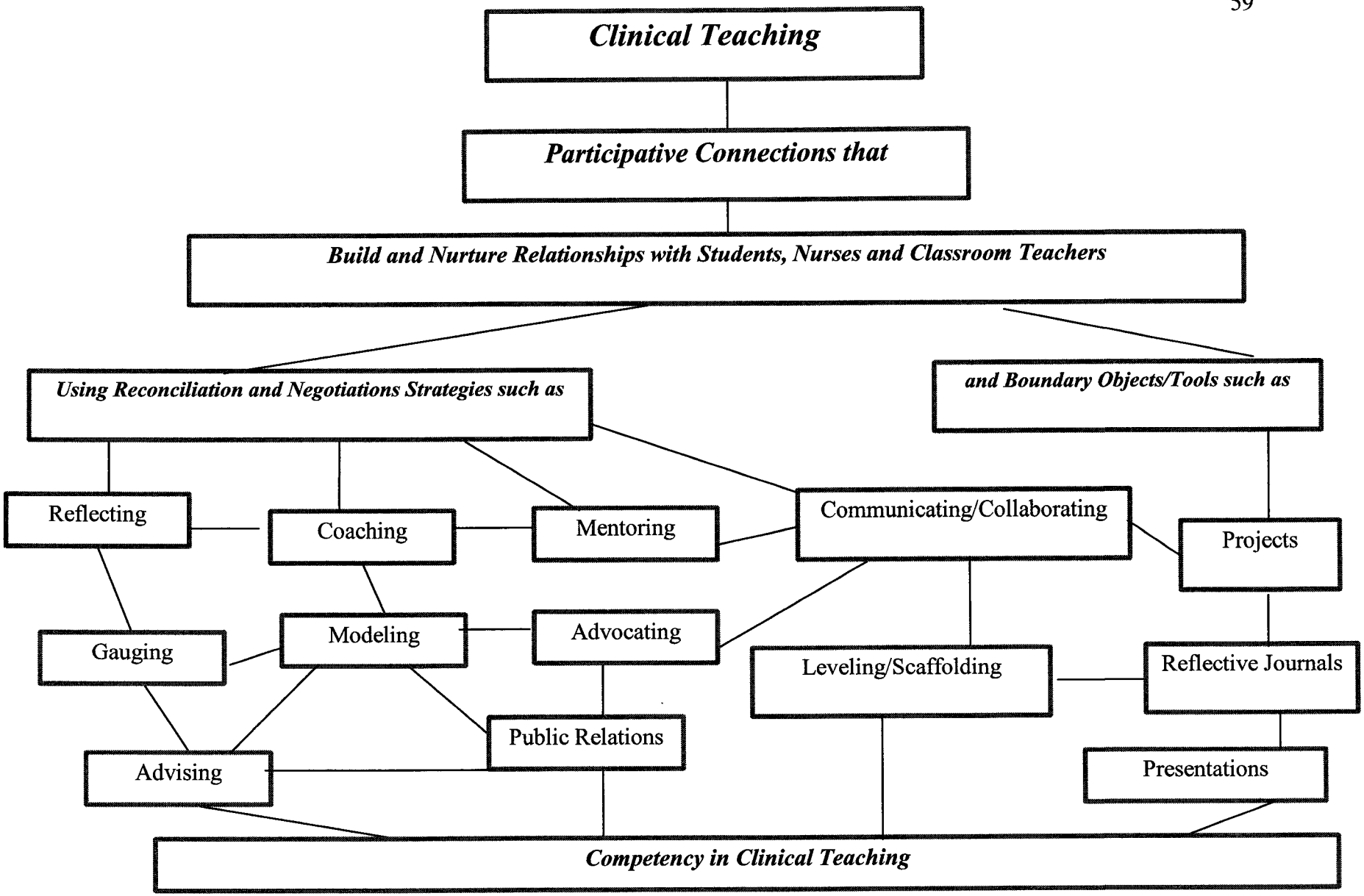

Figure 6. Concept map of coding of interview data (created by author).

Participative Connections

Relationship Building and Nurturing

Competent members of a community of practice form relationships to provide an identity to one's participation (Wenger, 1998). Clinical teachers described how they nurtured their relationships with students, nurses and faculty. Each relationship influences the degree of acceptance of clinical teachers and students as guests who are participating at the periphery of the nursing experience. As the relationships are built, the student and clinical teacher are received as 'legitimate' members of nursing's community of practice.

Relationship with practicing nurses. Clinical teachers negotiate to pair students with nurses. Nurses must regard students and their teachers as competent participants in practice. Nurse Teacher C explained how she kept ties with the practice community.

> What I had done is kept up that network in psychiatry through the interest group. And I had a couple of really good contacts at the hospital; people who had been teaching in the review course that we organized in the hospital and was always inclusive of everybody, so maybe I already had a reputation when I got there, which was nice to have and, of course, then the unit manager was hired from the hospital, so knowing the unit manager and all the psychiatrists was helpful.

Clinical teachers highlighted the importance of being regarded as the 'go-between' linking teaching and nursing. They emphasized the importance of creating and maintaining good relationships using their skills in diplomacy and public relations. This reflects how clinical teachers negotiate meaning and new understandings in their community of practice.

> Yes. I think it was an important role in terms of the liaison. I see myself as an extension of the university in the sense as a clinical teacher, you are the liaison for the university to ensure that the work place will be receptive to having students in the future and I think that's important. (Nurse Teacher G)

The relationship between nurses and clinical teachers is one of mutual benefit. Nurses support clinical teachers in reaching student learning goals and teachers learn to balance student needs with the realities of practice. The balance that clinical teachers described is creating a safe learning environment; one that is just the right blend of not frightening the student nor trivializing the work. A clinical teacher described an incident on a psychiatric unit where she feared that students were vulnerable. She shared her concerns with the nurse on the unit who reassured the teacher that the students were not in danger. The nurse recognized the legitimacy of the student experience and how much would be learned by letting students actively participate. This anecdote illustrates the collaborative relationship that is created between clinical teacher and practitioner. Other clinical teachers described the need to 'give something back' to the practicing nurses.

> So they have to give back something. At first some places they roll their eyes and say, oh great, students. And I think, ok, I've got to work here, I've got to bring donuts or something. It was hard to start off, but you have to work at it. The students have to give something back (Nurse Teacher E)

Some clinical teachers talked about how the presence of students could take some of the practice burden away from the nurses, one spoke of the 'give and take' that occurred between teacher and nurse when there was negotiation of who would do specific tasks. The clinical teacher selects the student assignment in consultation with nursing staff. Nurses indicate the degree of complexity of the assignment and offer alternative suggestions. Clinical teachers explained that these decisions are collaborative and their choice of student assignment is influenced by their relationship with the nurse caring for the patient. Clinical teachers indicated that they knew which nurses would support the students and who would not. This is a characteristic of a boundary practice when people form a close relationship and a way of relating that no one else can experience (Wenger,

Summary

Nursing teachers relate how, when they are in the clinical setting, they begin to view their knowledge of the subject from a different perspective and begin to think of their ability to transform that knowledge into forms that students can understand (Scanlan, 2001). Clinical teachers are experts in their clinical speciality and are recruited to teaching on the premise that the transition to clinical teaching will be relatively easy. The narratives from clinical teachers do not support this premise, indeed, clinical teachers describe a good deal of chaos in the first few months of clinical teaching as they struggle to understand the practice itself (Davis et al., 1992; Scanlan, 2001). This study asked clinical teachers to describe their practice questioning whether they would describe a boundary practice as defined by Wenger (1998). The next section explores teacher knowledge revealed through exploration of teaching practice.

1998). It is also an example of how clinical teachers used their relationships to establish themselves and their students as legitimate members of the community of practice.

The relationship between clinical teacher and nurse in the community health setting was similar in the sense that both are collaborating to create a supportive environment for students. However, the relationship was slightly more 'arms length' as described below:

> Well, we were called faculty advisors in that particular role. We were not clinical instructors, they called us faculty advisors, so it was more like we would meet with our group at the beginning and then I would meet with them separately. So I would go there and spend the whole morning there - meet with one group at 9:00, how's it going and meet with the preceptors - they would come to the meetings often, and we would discuss as a group where they were at in their assessment, and how they were doing and how they needed help. And then I would move on to the next group, hopefully the preceptor too? (Nurse Teacher F)

Another clinical teacher working in the community described the relationship as one of mutual respect. She understood the stresses and the complexity of the workplace and strived to negotiate a balance so that students are not placed in situations where they are unprepared or unable to engage in the project work.

> At the same token you are very accountable while the students are there to make sure that they are learning well and that they are learning, It also has to be beneficial to the work place - that the students are there - you have to be willing to orient the student if you want them to succeed. You have to invest some time. Be available to mentor them to some extent, so that's the delicate balance. And there are different styles, in terms of work styles of preceptors - some are much more directive, prescriptive. Others are much more autonomous, they tell students that they will be autonomous and trust that they will do well. (Nurse Teacher G)

The relationship that clinical teachers establish with fellow nurses is identified as an important ingredient in clinical teaching practice and becomes a focal point of negotiation in order for students to understand what it means to practice nursing. If the

relationship is strained, the participation of the student may be in jeopardy. The nurse-teacher relationship is critical to the success of each practicum assignment since the nurse and teacher work in tandem to support the student.

Relationship with professor/classroom teachers. A second relationship is established between clinical teachers and professor/ classroom teachers. Nurse G described the support she received from the classroom teacher who was a resource explaining what was taking place in the classroom so the clinical teacher could support the concepts in the practicum.

> I also knew the theory teacher well who was teaching. I knew I had her support, she had reassured me of that. She said "give it a try; I will support you and we will look at the group", so I had a sense of the group as well, the way that they needed mentorship.

Clinical teachers spoke of meetings with coordinators. Coordinators are classroom teachers who are assigned coordinating responsibilities. During the course of the clinical experiences these meetings are regarded as valuable opportunities to share perspectives and receive feedback about what was occurring in clinical practice.

Clinical teachers noted the importance of understanding what is occurring in the classroom or laboratory in order to better connect theory and practice. Clinical teachers described a collaborative relationship with the classroom teachers. They sought opportunities both formally and informally to meet, share insights and to seek validation that the approaches they were taking in practicum matched the classroom component. One clinical teacher described how as a novice she sought out the support of more experienced classroom and clinical teachers.

> I find informal ways to talk to other teachers. I'd be like ok I know she takes her lunch at this time and she's usually in the lunch room so I would go to her and say are you having that problem with such and such, are your students saying that they

> haven't learnt this? So I'd find informal ways to talk to other teachers who were teaching the same course to see if they were having the same problems or concerns. (Nurse Teacher H)

Narratives included descriptions of teachers studying theory texts, seeking out course descriptions, and meeting with coordinators. Understanding the theory to practice connection was cited as increasing the clinical teacher's credibility in the eyes of students.

> Eventually as I started to teach more, I wanted to know what they were learning in theory and that would help me in clinical because I always thought there is a purpose to having theory and clinical. It's not supposed to be separate. I'm teaching and I'm also current because I'm teaching clinically. I know it helped me to teach theory because I could give clinical examples. (Nurse Teacher E)

In addition, teachers who had taught in the classroom and/or laboratory as well as the clinical area describe greater confidence and understanding that they were able to bring back to the clinical area. Nurse Teacher I explained.

> I could still bring in things from that theory class, like ethical cases, CNO (College of Nurses of Ontario) guidelines, you can still squeeze it in somewhere. So it's not necessarily the theory pertaining to that patient population but it could just be the general theory as well. I found it very beneficial.

Clinical teachers seek to translate and align what is taught in class and laboratory to their particular clinical environment. They used terminology like 'bridge', 'conduit', and 'overlap' to describe the connection.

Relationship with students. The teacher-student relationship is the third kind of relationship identified in clinical teaching practice. Clinical teachers typically have small groups of 8-10 students and they get to know each other quite well by the end of an 8-week clinical experience. Clinical teachers described themselves as student advocates, mentors, and collaborators.

> I really do advocate strongly for the students. To make sure that every learning opportunity there is, that they are there for that. Some are very good at doing that for themselves, and they'll come and say can I do this, can I go there? So they

> catch on pretty quickly to what's going on. Others who maybe less assertive and who are a little more lost or frightened. (Nurse Teacher C)

Clinical teachers spoke of their understanding of student issues including fear of failure, making mistakes, and of being overwhelmed by the clinical environment. Remembering their own student experiences, teachers described how they were able to empathize with students. Other teachers explained that they regarded students as adults and sought out assignments that would build on prior knowledge.

Clinical teachers described their relationship with different levels of students expressing satisfaction seeing the progress of students across the various years of the curriculum. For example, teachers described how they worked with the students to achieve a behavioural change.

> I think of one group in particular, who was very strong, and they really had a lot of professional issues in the way they were behaving. And I think it was very difficult that first evaluation because I had to raise that issue with three out of the four of the girls, because their demeanor just wasn't what I would have appreciated in terms of being third year. It was petty stuff like eye rolling, but when professionals would give them advice, they would roll their eyes and it was unbelievable. I thought now how will I address that they roll their eyes? You are thinking "is it just me or did they just roll their eyes?"
>
> "One of the girls I thought I really should raise it with her, because I really felt strongly about what I had observed and intuitively and had comments also from the preceptor, I said "you know what I want you to identify, something you need to work on and something that is a strength for you" and that's how we went through the evaluation. And she said "you know, I really have to work on my attitude, that's been my problem all my life". I thought well I couldn't have asked for a better response. And I think that was a lot, because what I worked through. In the twelve weeks that I had been with them, they were able to verbalize that, and she said "yeah I am going write that down, I'm going to work on my attitude in clinical placements. (Nurse Teacher G)

Clinical teachers explained that there was a time to 'let go' and provide opportunities of individual growth as legitimate members of the community of practice. Clinical teachers

decide on the timing and draw from their practice knowledge to inform their decision-making.

> There is one thing I found as I got more used to it, was that the more space I gave a student, the better they will perform. If you have someone over your shoulder, it's stressful for them. I find in pediatrics you've got the child, you've got usually one or two parents, and then you sometimes have the nurse plus me. So if I can see if the student is doing alright then I'll just go out, and I will ask her afterwards how it went, or I'll ask the nurse. (Nurse Teacher A)

> I think when you have an intuitive feeling about a student. What makes them good? And a lot of it doesn't have so much to do with skills; a lot of it has to do with comfort level, communication skills, and being able to fit in… (Nurse Teacher D)

Clinical teachers form close relationships with fellow nurses, teachers and their students during the course of their practice and in so doing develop a way of communicating with one another that is unique to the practice and one that outsiders do not share. Nurse teacher C explained.

> The first group I took into the hospital, I knew my nursing so it shouldn't be too hard, but I really wasn't prepared for that multidimensional the complexity of the relationships that you have with the staff, the students and the patients, and their relationships with each other and you coming in as an extra body.

Clinical teachers set the stage for student learning in the sense that they form relationships with fellow nurses explaining the range of student involvement and underscoring the need for the balance between simply doing and deep understanding that comes from being engaged in the practice. The following excerpt is an exemplar of the duality of participation and reification in clinical practice.

> We just had an interesting situation in our unit, where we have two consolidation students both of whom are doing great and one of our long term staff nurses came to be and asked how much can they do and how much can they not do? And I knew she wasn't talking about judgments and all that, she was talking about skills and we have lots of skills. And I said "well what is your concern around this?" "Well so and so is doing lots of things, she's doing intravenous blood work and she's doing this and she's giving IV push meds and she's charting." And I said I think they chart right from the start,

> I think you need to know how to chart if you are doing stuff. "She is here for observation." And I said NO, they're not here for observation. So I had to set that straight, but then I had to go back and think what can they do, I know this is not the purpose of consolidation to accumulate all of these skills (Nurse Teacher C).

Relationship building and maintaining is a boundary connection described by participants in this study. In order for students to be received as legitimate participants at the periphery of professional practice, clinical teachers forged relationships that facilitated and supported student participation.

Negotiation and Reconciliation Strategies

The results revealed that clinical teachers draw from a repertoire of negotiation and reconciliation strategies to gauge, coach, model and evaluate student learning. Clinical teachers described instances where they instituted supportive strategies to minimize student fear of failure as well as instances where they have sought attitudinal change. Clinical teachers decided at what stage students can practice more independently still within safe parameters. A desired outcome is the demonstration of beginning professional decision-making.

Negotiation and reconciliation strategies build connections between nursing practice and teaching practice. Through the relationships that clinical teachers form with practice experts, classroom teachers and students, strategies are developed to forge the connection. For example, clinical teachers spoke of how they gauged the receptiveness of clinical environments, negotiated student assignments with both students and staff, and modeled professional practice.

From an understanding of curriculum, subject matter and pedagogical content knowledge, clinical teachers described how they gauged student progress towards meeting learning outcomes. They assess, monitor, and intervene with the goal of

supporting students. Clinical teachers described a strategy of negotiation highlighted in the following excerpts.

> So I'm looking for data, if you (the student) are looking for more information and you want to spend more time on schizophrenia, why do you need that, what is missing over there that you need clinical time you can apply to. And it always needs to get around to being applied to a particular patient that they are looking after. So we negotiate. (Nurse Teacher C)

> I think back to those students who came back full around, like the one who wrote that she had to change her attitude right on the formal evaluation. At the same token there was another one who was much harder to reach overall, and I'm not sure that she gained as much as she should have. I did mediation as I said, and tried to work with them. (Nurse Teacher G)

Clinical teachers spoke of offering reassurance to students that their goal was student success not failure. Comments such as "I'm here to help them learn, I really respect that these students bring a body of knowledge with them and I have to see where they can apply it and where they need some help" were recorded.

Clinical teaching decision-making described by participants highlights the clinical teaching competency; judging when to 'let go' and when to intervene to protect the patient and/or the success of a community project. Clinical teachers described coaching students, learning by doing and reflecting on what works and what does not. Patient safety must not be in jeopardy. Clinical teachers described how they drew from their practice knowledge to support their decisions. Clinical teaching decision-making is described as follows.

> I know that this person isn't going to progress unless I do let him or her go off and do it, but with me looking and watching from a distance as opposed to me being right behind her. The only way they are going to grow is to realize what their limitations are. The only way that you are going to help them one way or another, is to say "you know what here's all your theory, we've covered it, I've seen you do all these pieces individually in discrete units, now you have to pull them together, and I'm going to let you go do that, I'm still here, but I'm going to let you go do that, and we'll see what happens." And either they do it or they don't. (Nurse Teacher D)

> What I found difficult was not doing the work myself, I had to continually say whoops, no I am not working here, because I had just been working there and I still worked occasionally at the hospital, so now I had to put a different hat on and say no I have to back off, I have to show her how to do it and let the student do it, if it takes the student longer or if it's not quite the right way, it doesn't matter. That's what I found the hardest with the first years, patience, patience. To be able to back off and say now I've taught you how to do it now I have to let you do it. (Nurse Teacher A)

Clinical teachers explained their use of evaluation forms to assess learning. Students complete a self evaluation and together with the clinical teacher discuss their progress in meeting the learning outcomes of practicum.

> I think the nice thing about those evaluation tools, as complex as they are and everybody hates filling them in, is that they do indicate what they need to know that it is perfectly ok at the beginning to break things down into manageable bits, and that they aren't going to deal with the whole picture and nobody expects them to, but you know what you can make this bed or you can sit down and have a conversation with a patient and maybe do a bit of an assessment. (Nurse Teacher D)

Examples of student misbehaviour including 'eye rolling' and being disrespectful to fellow professionals were identified as areas of concern. Clinical teachers described strategies to deal with student misbehaviour including role modeling professional behaviours. Although giving constructive criticism was difficult, clinical teachers explained the importance of dealing with concerns in an open and consultative fashion.

> If I'm going to criticize someone, then I'm going to do it in a very gentle way. And I'm going to use...if there's an error gone wrong...I'm going to use that as another means of learning. A teaching tool rather than being critical. (Nurse Teacher C)

Participants reported incidents when students gained insight into their own behaviour by reflecting upon the experiences. Clinical teachers encouraged reflection-in-

action as a tool to assist students to understand how new knowledge is generated from practice. A clinical teacher in public health practicum related her perspective.

> I think they came a long way from that (student attitude concerns) by the end and having me, and they saw that I valued more life long learning; they were there to learn vs. me being there to pass or fail them. I think I brought that, and in some ways I wasn't sure if I felt comfortable with that sort of "I'm there to pass or fail them" and I thought well I'm there to help them learn. To me of course you are going to pass, I don't see why you wouldn't pass, you are motivated, you passed your theory course, and you are going to work well and we are here to help you. So there isn't an issue of you wouldn't, unless of course it was unbelievable that you would fail this placement. (Nurse Teacher G)

Other strategies are designed to reconcile different practice perspectives. In general, the practicing nurse is concerned with delivery of the optimum nursing care to her patients whether in acute care or in public health. The classroom teacher's focus is student learning. Marrying the two foci is the responsibility of the clinical teacher. The clinical teacher and students are guests of the clinical partner. Clinical affiliation agreements (Appendix B) set out the lines of responsibility in terms of the legalities of placement as well as workplace safety. It is the job of the clinical teacher to ensure that the student practices within safe parameters. This work is unique to the practice of clinical teaching.

Clinical teachers are brokers; the difference is the extent to which they are comfortable aligning the different practice perspectives. Clinical teachers related feelings of confidence in their clinical knowledge but were less confident in their understanding of how to bridge the theory to practice perspectives especially in their early experience. One clinical teacher related that she remembered approaches clinical teachers used that worked for her as a student and used similar approaches. Participants related how their understanding and confidence improved when they were able to share their practice experiences with others. For example, Nurse teacher G explained.

> "I think a lot of it, in bridging the theory, I relied a lot on J., and she was doing a lot of it in her course and we did discuss it. For example they were having a lot of difficulty with literature searches, they said "we don't know how to do a lit search", and they really didn't and they were in fourth year. And I thought "could that be, perhaps it is, if they are legitimately telling me that, then they need my support." So she did support them and did some review and encouraged them to go to the library, so there was that supportive piece."

In addition, clinical teachers spoke of the need to keep up to date with changes in the classroom.

> I remember when I was called for an interview, actually it was a friend of mine who worked at the university and she called and she said well in the first year it's the Roy model. I bought the book and there's just no way that you can read a book like this in just a matter of a few days and I did my best at reading as many of the passages as I could but anyways I am so glad that they never asked anything about this Roy model. When I came back another year, now it was the Neuman Model and now I'm going to have to learn all of these things. So anyways it was these models that scared me more than actually taking the students in the clinical area; it was really trying to help them with the theory aspect than anything else. Once I got onto the unit it was ok. (Nurse Teacher H)

Clinical teachers especially those who also teach theory or laboratory classes described greater self-confidence in bridging theory to practice. They spoke of developing an intuitive understanding of how to bridge the theory-practice gap. They are able to quickly assess the practice environment, its staff and pinpoint where to place their efforts in, for example, reconciling practice expectations or when to seek out classroom experts for student problems.

> I think the nice thing about going into teaching after you have been a nurse for awhile is that it doesn't take you long and I'm not even going to begin by saying that I am an expert at teaching but it doesn't take you as long to get up to speed in another discipline if you are already an expert in one area, because there are certain skills that are transferable. (Nurse Teacher D)

As brokers, clinical teachers explained their role as sharing practice knowledge with students in ways that students can understand and one clinical teacher described it as

'complementing the gray areas' between theory and practice. Nurse G explained her strategy to bridge practice and teaching.

> Given the information we have, theory, and the information that we have collected, what's the best decision we can make, but then what I think what we add is "now I will give you my experience and I will share openly with you what I think this experience will bring to your experience, now what do you think we should do together? (Nurse Teacher G)

The preceding excerpt highlights negotiation as a strategy used by clinical teachers in their relationships with teachers, students and nurses.

Boundary Objects

Policy and procedure manuals, health assessment reports, environmental scans, individualized nursing care plans, care portfolios, drug cards and public health project reports are examples of the boundary objects that clinical teachers use in practice. These objects are the focus of discussion and negotiation with the purpose of supporting students in learning how to nurse either a patient or a population. Policy and procedure manuals provide nurses and students with outlines of procedural rules as well as policy statements regarding the delivery of nursing care. As a clinical teacher noted, she used the policy and procedure manual as the starting point for guidance to students explaining that these are the rules that are to be followed by novice practitioners. The clinical teacher modeled when and how practicing nurses use their discretionary judgment to modify and/or adapt their plans of care. In addition, nursing care plans in hospitals are used as a communication tool from one practitioner to another documenting interventions and expected outcomes. There are standard care plans for most medical diagnoses on the units. Students are encouraged to review the plans and then individualize the plans of care for specific patients. The individualized plans of care become a focal point for review between clinical teacher and student. The student shares their analysis of the patient

situation and defends the priorities of care established for the patient. Care maps are a newer addition providing a planned trajectory of events from for instance, surgery to discharge. Students are asked to prepare plans for their assigned patients and these plans become the center of discussion on the unit and are a means by which clinical teachers evaluate (Appendix L).

In a public health practicum, students work on project teams created to address for instance, the needs of young mothers and babies. During the course of the practicum students submit project updates that teachers review with them on a weekly basis. A clinical teacher explained that during the review of project work, she worked with students to suggest new interventions or to reinforce interventions already in place.

Clinical teachers use established tools such as care plans as boundary objects helping to bridge the connection from what students learn in the classroom and the clinical practice realities. They modify and adapt these tools to meet the specific needs of the student and in so doing, these tools become learning tools used in clinical teaching practice.

Competency in clinical teaching practice

Learning the practice Clinical teachers explained that they followed a similar learning trajectory as teachers as they did in practice. They described working with what was familiar to them first taking time to break things down into discrete units and then building on that base as they became more experienced.

> Well, you are a novice again. And you may not realize that you are a novice but if you admit to it that I'm new at this and we will walk through this together. I don't know any student who would say well this sucks, I'm out of here. But when you are really new, you don't realize that you can say I don't know this but I will find out for you. And you don't even know how to do that comfortably. (Nurse Teacher D)

During the focus group interview clinical teachers were asked to share their first clinical teaching experiences. Most described a degree of uncertainty and stress because they were unsure of the role, their abilities and the expectations. Some commentary was:

> I think you don't know what their expectations are. What does your boss expect from you, what the students, what do the staff nurses or nurse manager and what you expect of yourself. Do they really expect you to know everything. (Nurse Teacher I)

> My first experience was perhaps a little different because I started out as a preceptor in our unit, only in those days you were a buddy. And you were chosen for this role because you had a certain degree of clinical expertise. And the nature of our unit is everyone is around you, you have three or four other nurses around you in the room. So while I loved teaching, this person's asking me questions and I don't have the answers but I'm thinking that I'm supposed to. I would be elaborating on things, not necessarily making things up but winging it. And I'm looking at my colleagues around me and they're looking at me like is that true? So I would be frantically going out to find books and leafing through things and I'm thinking this is wrong they picked the wrong person for this because I'm supposed to be an expert and I don't have all of the answers. I don't know if any one else felt that way, but initially you feel like you are supposed to know all of the answers and I can't say I don't know. (Nurse Teacher D)

Another clinical teacher had a different experience because there was an established connection with other clinical and theory teachers. This teacher spoke of greater confidence in her role because of the strong classroom connection but she also described working with students on community health projects that she knew well. Other practitioners respected her practice knowledge.

> And it was an area that I had a lot of background in - there was the injury prevention area, in terms of alcohol related injury and pregnancy and I had been on the injury prevention project for, I think, two years, and recently I had presented at a provincial, national and international all of the information, so I felt comfortable in terms of the knowledge of the project. In terms of teen pregnancy prevention, I had also worked on that project team, because I have been in public health for close to 15 years now, so previously I had been on that team, so again that was an

issue I was quite comfortable and knowledgeable about. (Nurse Teacher G)

Clinical teachers describe the challenges that they face when the clinical environment is not supportive of student learning. They are able to assess the situation and plan how to improve relationships. One teacher shared her opinion that even experienced teachers refer to strategies that served them well as practitioners and used similar approaches in new clinical teaching situations. In particular, teachers described their practice using vocabulary such as mentor, supporter, facilitator, evaluator, model, and advocate. They spoke of how they worked to reconcile the differences that arose between satisfying the demands of the nursing staff, keeping the students within safe parameters and trying to bridge what they called the 'theory-practice gap'. The following excerpts highlight the collaboration between student and teacher.

> I like to be collaborative, but I know from my point of view I have to be responsible and make sure that the students know what is expected of them. So I'm going to try...well their first clinical conference was last Friday and we did that, we did a group therapy session, I modeled facilitating a group session with them so that they could talk about what it was like after their first day in psychiatry where they were at. The next thing that they are going to need is to how to use a mental status exam and to go over it. I think they had it in their theory, but to go through it again with their patient in mind and then to look at it with a really simplified form. What do you need to assess that patient on paper. (Nurse Teacher C)

> For me, I think, because I do teach theory, I think I'm more focused on viewing the connectiveness of the theoretical material with the clinical situation. Whereas I don't know if I would have been...I think I would have been more skill task oriented if I didn't know what they learned already. (Nurse Teacher I)

Learning the practice of clinical teaching is one for which there is no 'how-to' manual. Teachers related how they drew from their nursing knowledge and reflected on how they learned to nurse as novices. They utilized similar strategies to help them understand the practice of clinical teaching. In much the same way as they would seek out

the expert nurse on the unit, clinical teachers described seeking out the experienced teacher either in the same clinical area or in the classroom. A clinical teacher described how clinical teaching teams were formed to meet and review progress during the course of the practicum experience. This is an example of a beginning community of practice in clinical teaching when groups of nurses who share a common practice come together to better understand practice knowledge.

Clinical teachers explained the complexity and diversity of the clinical environments and the importance of establishing safe parameters for student learning. As competent practitioners themselves clinical teachers were able to use their practice knowledge to establish legitimacy with members of the practice community. Clinical teachers described their struggle to apply theory to practice given practice realities. In choosing student assignments that illustrate the complexity of decision making in nursing, clinical teachers demonstrated an understanding and valuing of knowledge embedded in practice. Another aspect of competence in clinical teaching practice was knowing when and how to offer coaching and mentoring support to students and when to draw back and permit students to make independent decisions whose outcomes can be predicted both positively and negatively.

Students in a practicum have the opportunity to see and live the culture of nursing including watching how nurses relate to one another, to other members of the health care team and with their patients. Clinical teachers described an awareness of the social dynamics of a unit and reported how they orchestrated student experiences building on the positive relationships and minimizing the negative ones. Clinical teachers explained the importance of understanding the environment including interpersonal dynamics in order for them to create a place that is supportive to student learning. This is consistent

with the social and personal dimensions described by Vollman (1989) and reflection-in-action (Schön, 1987). Clinical teachers described some environments that are supportive of the student placement while others are outright hostile environments. Clinical teachers described their experiences in the following terms.

> There are some wards where in one particular ward you feel totally like there's no stress in the ward, it's incredible how far you can go. And then there's another ward that I was on quite often and there's a stress there. You feel like you are always being watched. And no matter how many years, when there is one particular person who isn't there, it's like the stress level isn't there. (Nurse Teacher A)

> And sometimes, what's helped me is to make a mistake and realize after the fact. Now having said that, I'm not going to let a student make a serious mistake, but I will certainly watch them do something, for example a dressing change, less than the way it is done in the procedure book and see them...knowing that they are going to get to a point and say oops, you forgot, ok (Nurse Teacher D)

A clinical teacher described a public health project team that was not working well together and because she had worked in a similar environment, she was able to work around the environment.

> I knew the history of conflict with the team, so a lot of environmental issues are already there without introducing four new students. It all went well, but I think it is just the reality of the place now, energywise. Sometimes there is just one working and it's just too much. (Nurse Teacher G)

A common theme expressed by clinical teachers is their role as ambassadors working with nursing staff, students and classroom teachers to build and maintain supportive learning environments. They use what they called their 'PR' skills to create a welcome environment. Clinical teachers spoke of the need to create a 'give and take' in their interpersonal relationships with staff so that the student-teacher presence was not perceived as putting an additional burden on staff. Nurse teacher C explained

> But that's part of PR. I once had to be away for 2 days and I was

> replaced by somebody who was completely competent to do the supervision of the students and the teaching. But by the time I had got back the next week, she had said something to one of the physicians that really upset that person. I had to spend half a day getting it all sorted out, making sure everybody was happy and back on track.

In terms of the contextual and political dimensions of the clinical environment, clinical teachers described an ability to assess the receptiveness of the environment to students. They were able to assess the organizational culture and diverse clinical contexts to determine who made decisions formally or informally. As the following excerpt points out, clinical teachers make decisions based on their assessments of the immediate environment and intervene to support student learning.

> In this case she (the student) was having a problem with another staff nurse and she didn't need that, it was inappropriate. I said fine, I'm glad you pointed it out to me, let's do something about it. So not only did we fix the problem, she's realizing that I'm her advocate too. And I've helped them to understand that we are here to help you succeed, we aren't here to fail you, we want you to succeed. What can we do to get you from the place where you are not going to succeed to where you are going to be comfortable and safe enough so we can say you're safe to be on your own. (Nurse Teacher D)

The clinical environment may be a frightening place for novice teachers and students especially when patient acuity levels are high. Clinical teachers acknowledged that ongoing changes in the clinical environment influence the student-nurse-teacher relationship. These anecdotes reflect the contextual as well as the physical dimensions of the clinical environment.

> Is it because they (the nursing staff) feel threatened by these students who are going to ask them questions and they won't be able to answer. Is it because we are so busy clinically now that the acuity is so much higher in hospitals, they see students as more work even though there is an instructor with them who is responsible. (Nurse Teacher D)

> The staff can reduce the student to tears. When they are near a student, the student is scared to start off with. They have to perform

> and they are very nervous. So a staff member who interferes in a teaching situation, a student can't cope with that at all. (Nurse Teacher B)

Being familiar with the curricular dimension of the clinical environment was identified as an important aspect of clinical teaching practice. Clinical teachers explained how they bridged nursing theory taught in the classroom and applied in clinical.

> I think it (teaching) is a real link between theory and clinical, it's a kind of overlap position. Here's a chance for these people to look at what they have learned in the classroom and have it make sense to them clinically, and you are the conduit, if you will. (Nurse Teacher D)

> Eventually as I started teaching more, I wanted to know what they were learning in Theory and that would help me with the clinical. Because I always thought there's a purpose to having theory and clinical and it's not supposed to be separate. And we are trying to teach them to integrate it right. (Nurse Teacher E)

Novice nurses struggle aligning the 'textbook' and the realities of clinical practice (Benner, 1983). Clinical teachers expressed a similar tension when they were trying to reconcile the practice realities with the theoretical framework of class.

> It is very familiar. Especially in acute care psychiatry and theoretically these students come and say that their whole focus is to develop a care plan, to do a really good assessment using, in this case, a mental status exam, collecting all the data to sort through that data using a theoretical framework to sort that all out. And from that come up with some nursing diagnoses and develop their plan of care according to the textbook and best practice in that particular situation. In reality it's an acute care psychiatric unit, the turn over is quite something. And there is really isn't time for a staff nurse to go through that process and the patients do get very good care but it's not textbook. So how do you bridge that? (Nurse Teacher C)

Students question what they see in practice. The clinical teacher explains the rationale for nursing decision-making and models discretionary judgment. One clinical teacher utilized the organizational policy and procedure manual as a reference point to explain how nurses collect essential data, analyze the data and decide on an appropriate course of

action taking all the factors into consideration. The teacher modeled the decision-making process.

> That even our policy procedure manual...I say to them "you know, these are guidelines only, at first you are going to follow them exactly as they are written because you don't know any other way, and that's fine. And you know what you are going to see people doing things a number of different ways because they have learned over time that it's ok, you have a certain amount of flex room in here to vary according to the patient's needs and you will learn that you don't need to learn that now. It's fine for you to follow this and I want you to follow this exactly as it's written down, and if someone comes to a procedure without having read about that procedure then they don't do it. So that to me is an important step, to know this is where you are and that's good. And maybe in three weeks time they will be able to adapt that to a particular patient, and I'll go yes that was a good decision. (Nurse Teacher D)

Clinical teachers explained how clinical environments influenced them personally and professionally. Clinical teachers who returned to a familiar practice environment commented that it was a 'weird' experience in the sense that their primary responsibility was not the patient but the student. One clinical teacher described her early experience when she felt the 'eyes' of the staff were on her to have all the answers and if students were not 'stellar' that reflected on her personally.

A challenge that all participants discussed was the degree of stress that was obvious in today's clinical environment. Teachers spoke of a time when staff had time to spend guiding and mentoring student nurses. Clinical teachers acknowledged the demands on practitioners and described approaches to ensure that the presence of students did not become an additional stressor.

> And as a practitioner, the reality is nothing comes off your plate. You always have one more thing added and it takes a lot of energy. It's still valued I think, no debate there. But I think where we run into resistance, and I'm looking at our work place there's change to the point of near chaos. (Nurse Teacher G)

> I see myself as part of a group of experts and the preceptor group, they're experts too. So I'll throw things back at them, like I'm not sure, here are my thoughts.

> You tell me whatever feedback you have. I'm not the final authority here. So I see them as a support as well and I think that it works both ways. (Nurse Teacher D)

Each participant in this study expressed an understanding of the complex nature of the clinical environment and spoke of the number of changes that have occurred in recent years to influence how they practice. Creating and maintaining a supportive clinical environment was identified as a delicate balance between the demands of the environment and the needs of the student.

Summary

The results of this study described a boundary practice connecting two otherwise separate communities of practice; nursing and teaching. The results revealed participative connections used in clinical teaching and highlighted competency in clinical teaching practice. Clinical teachers described their support of student learning-by-doing recognizing that, in order for students to be seen as legitimate participants, teachers must be regarded as competent practitioners. It is by forging relationships through the use of carefully planned strategies that clinical teachers are able to coach students in the practice of nursing, allowing students the opportunity to learn nursing knowledge embedded in practice.

Students and clinical teachers as guests in the institutions participate at the periphery of nursing practice within safe parameters and clinical teachers described how they judged when to allow students more independence in practice. The results suggest that the relationship between clinical teachers and practice colleagues is pivotal to establishing student legitimacy in practice.

Clinical teachers described the importance of maintaining relationships with classroom teachers illustrating an understanding of how to reconcile 'doing' nursing care

with understanding the practice through use of boundary objects such as care plans and maps. Clinical teachers spoke of the theory-practice gap discussing strategies to help students connect knowing and doing in practice.

Clinical environments are multidimensional and working in those environments calls for skills of negotiation, public relations and reconciliation. Clinical teachers developed negotiation and reconciliation strategies to reconcile different practice perspectives and negotiate new understandings. The results also revealed that clinical teachers' practice involved creating a balance between the priorities expected of each practice community while keeping student learning as their central focus.

Discussion

Wenger's (1998) communities of practice model and Shulman's (1987) teacher knowledge model provided the conceptual framework for this study. The results of this study suggest that clinical teaching is the formal participative connection building ongoing relationships across practices. The connection is established because clinical teachers have nurtured the relationships through use of negotiation and reconciliation strategies that help to maintain connections over time. The results showcase the complexity of clinical teaching as a bridge between two parent communities of practice.

The results of this study provide a framework for understanding the practice of clinical teaching. Although nursing and teaching's communities of practice share similar activities and perspectives, there has not been a framework to advance clinical teaching knowledge and understanding across the practices. It is particularly important that educators and practitioners have a common model and vocabulary to negotiate and reconcile differing practice perspectives. In particular, the results highlight the importance of the relationships established among teachers, practitioners and students. These relationships and the strategies clinical teachers use to marry different expectations come together to create a clinical environment that is supportive to student learning.

Competence in clinical teaching practice is revealed through their ability to establish and maintain relationships as well as the ability to draw from a repertoire of negotiation and reconciliation strategies. These strategies are a source of clinical teaching knowledge. The identification of this source of clinical teaching knowledge enriches our understanding of the practice of clinical teaching and educators can integrate this knowledge into orientation programming for novice clinical teachers.

Our understanding of clinical teaching is enhanced by the results of this study. In particular, there is recognition of the importance of the relationships established among teachers, practitioners and students. These relationships and the strategies clinical teachers use to marry different expectations come together to create a clinical environment that is supportive to student learning. Competence in clinical teaching practice is revealed through their ability to establish and maintain relationships as well as the ability to draw from a repertoire of negotiation and reconciliation strategies. The results of this study add to Shulman's (1987) teacher knowledge model extending the sources of teacher knowledge in field/practicum environments.

Collectively the outcomes of the study suggest a model of clinical teaching practice. The following sections describe the nature of the practice.

Boundary Practice

Clinical teaching happens because students are required to attend practicum placements where they have the opportunity to learn the practice of nursing under the supervision and guidance of the clinical teacher and the staff nurse. The results of this study suggest that clinical teachers do indeed build strong relationships with nurses, classroom teachers and their students. They work hard to maintain those relationships as is evident from the narratives. The relationships become the foundation of clinical teaching practice because from the relationships are built strategies to assist students and help to reconcile differing views of student placements. For example, clinical teachers described the strategies used to bridge theory to practice including meeting with classroom teachers, reading theory texts and sharing the learning outcomes with practicing nurses. Clinical teachers describe connections with practice and over time develop more teaching knowledge to help them bridge classroom and practice

expectations. Their relationship with classroom teachers helped to build teacher knowledge. Clinical teachers spoke of understanding student perspectives, practicum expectations and the realities of the practice environment and from that knowledge they were able to map out strategies to create supportive clinical learning environments for their students. Clinical teaching described a reflective practicum in which students have the opportunity to participate as legitimate members in the nursing community of practice. Clinical teachers explained coaching, modeling and leveling strategies that support knowing-in-action and understanding that can only come from lived experience.

Because the objective of a boundary practice is to bridge two parent communities, a vehicle is required to accomplish this task. Boundary objects serve that purpose. Boundary objects are the vehicle for negotiation and communication. In clinical teaching practice, nursing care plans, project reports, care maps, drug reviews, and communication reviews are examples of boundary objects. These objects become the focal point for discussion among the nurse, student and clinical teacher. For example, in the hospital setting, the nursing care plan is the guide for students outlining priorities of care, identifying specific nursing interventions and evaluating whether the care plan succeeded. The nurse, clinical teacher and student review and revise the plan of care on a daily basis to ensure that the patient receives optimal care. Decisions are made in terms of changes to the plan especially as the patient's condition changes. Clinical teachers who participated in this study explained their use of these tools to negotiate an understanding with both the student and the nurse of the expectations of the student experience. The plan of care that students modify and adapt is a tool by which students establish themselves as legitimate members of nursing's community of practice.

Clinical teachers described a boundary practice where 1) relationships are formed among clinical teachers and practicing nurses, students, and classroom teachers and 2) competency in clinical teaching included skill in negotiation and reconciliation bridging the connection between nursing and teaching.

Clinical teachers who participated in this study identified participative connections that helped to build bridges between nursing and teaching. Strategies used by clinical teachers help to reconcile and balance the competing demands of the practice community and the teaching community resolving conflicts with the goal of building supportive learning environments. Negotiation and reconciliation strategies included for example, gauging the receptivity of the unit and staff to student placements, understanding the dimensions of the clinical environment and deciding how to integrate students into the dynamics of clinical environments, understanding student expectations, supporting classroom learning objectives, and maintaining strong relationships with all partners. Competence in clinical teaching practice is reflected in effective use of these strategies.

All participants spoke of the need to 'take the pulse' of the practice environment as well as the classroom. Clinical teachers sought out the expertise of practitioners and teachers to assess the practicum progression asking "Am I on the right track? Do I need more information? If I do, where do I go for that information? Who are my supports here?"

Clinical teachers described how they sought out the advice of more experienced colleagues questioning how to bridge the expectations of education and nursing. They remembered their feelings of insecurity and loneliness and explained how they reconciled what the practicing nurses expected with the learning objectives set by the educators. It

was as a result of the relationships formed with teaching colleagues and practicing nurses that clinical teachers developed their repertoire of strategies that helped to create the desired learning environment for their students.

Clinical teachers described the challenges they faced when environments did not welcome students and how they worked to reconcile the competing demands of patient safety and workload and maintain the connection to student learning. Clinical teachers focused on working with their practice colleagues helping them to see student involvement as an asset rather than a burden. For example, nursing care plans updated by students were kept on the units for all staff to use.

Clinical teachers pointed out the dilemma of being the 'go-between' linking nursing and teaching especially when there are differing views of student participation in practice. They described a delicate balance building on relationships and using strategies to negotiate student participation at the periphery of practice gradually 'letting go' as students' progress toward independence in practice.

Model of Clinical Teaching Practice

The participants in this study described a practice that bridges nursing and teaching practices. It consists of permeable boundaries allowing the flow of clinical teaching knowledge across boundary lines. The results suggest that clinical teachers draw from knowledge sources of each practice environment and develop participative connections. Clinical teachers draw from their nursing practice knowledge including subjective, objective, speculative and practical knowledge sources. They know their clinical speciality. Clinical teachers also draw from their understanding of the curriculum, student background, general and pedagogical content knowledge to assist them in their clinical teaching practice.

Figure 6 depicts the model of clinical teaching practice that has emerged from the cases presented. The model is configured to represent clinical teaching as the boundary practice with three concentric circles illustrating the relationships, strategies and competency of clinical teaching practice. At the core of clinical teaching is competent practice that is a reflection of the relationships created and nurtured by clinical teachers with practice and teaching colleagues as well as with students. The relationships are supported by a repertoire of strategies used to support a reflective practicum. Boundary objects link teaching and nursing and are used by clinical teachers to negotiate practice knowledge with students. Boundary objects such as care plans give meaning to clinical practicum experiences. Dotted lines depict the interwoven nature of clinical teaching practice. Two-way arrows illustrate the strategies used to negotiate and reconcile practice perspectives as well as the relationships formed with classroom teachers and practicing nurses. The model situates clinical teaching practice within a community of practice framework highlighting how clinical teachers participate and make sense of clinical experiences.

Articulation of a clinical teaching model sets out the parameters of clinical teaching practice and establishes the context in which clinical teaching occurs. The model also brings to the forefront the language of clinical teaching practice. Clinical teaching can be described using language that those outside the practice can understand. The identification of clinical teaching language also provides a vehicle for discussion and analysis of the practice of clinical teaching. The following sections review limitations and implications of the results for both nursing and teaching practices.

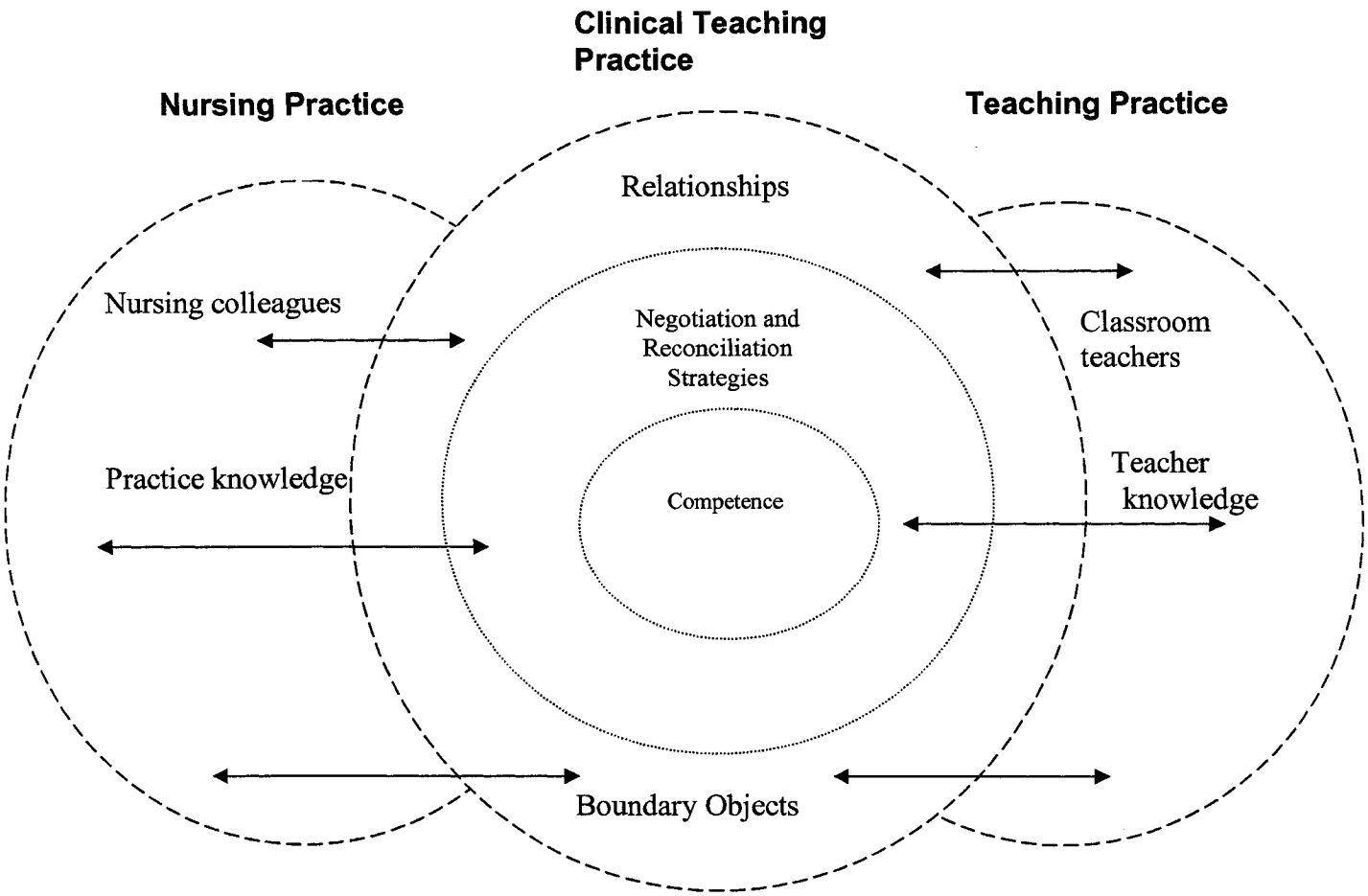

Figure 7. Model of Clinical Teaching Practice (created by author).

Limitations

This study asked clinical teachers to describe their practice asking whether they were describing a boundary practice. Each clinical teacher offered an individual professional perspective of the practice of clinical teaching. The purpose of the study was to determine to what extent clinical teachers described a boundary practice and what explanations they offered.

Clinical teachers who participated in this study are, for the most part, practicing nurses who have taken time from their nursing practice to assume the role of clinical teacher. In addition, several participants taught in the classroom or laboratory. Participants described how they reconciled their understanding of the realities of nursing practice with the objectives of clinical teaching practice. The perspective of practicing nurses is alluded to in the interviews particularly when clinical teachers described increased workloads, stress and complexity of clinical practice. The relationship between clinical teacher and practicing nurse is identified as an important one and a limitation of this study is an absence of the voice of practicing nurses except as told by clinical teachers reflecting on their role as practicing nurses. A future study would benefit from hearing the perspective of practicing nurses in terms of how they perceive the practice of clinical teaching. Do practicing nurses regard students as practicing at the periphery of practice and how do they see their role in supporting student learning? How do practicing nurses view their relationship with clinical teachers? Are there other dimensions to clinical teaching practice that practicing nurses identify?

The perspective of classroom teachers/coordinators was not an independent focus although alluded to by participants who taught in the classroom. The relationship with classroom teachers was highlighted during the interviews and clinical teachers stressed

the importance of staying connected to the classroom teacher. A future study might investigate how classroom teachers viewed their role in the practice of clinical teaching and whether they regarded themselves as integral to the success of clinical teaching. What brokering strategies do classroom teachers use to connect theoretical knowledge with application in practice? Are there other boundary objects that might be used to assist students understand the connections?

Participants in this study were a convenience sample of clinical teachers from a local university and could not be seen as representative of a broader community. A future study would need to replicate the design to a wider population.

Implications for Nursing Practice

There are accountability standards to guide the practitioner working with students and indication of the competencies required of the clinical teacher. However, there has not been a clear picture of how the practice of nursing and teaching share responsibility for student learning. Identification of clinical teaching as a boundary practice establishes how the two parent communities of practice connect with one another through clinical teaching. Viewing clinical teaching as a boundary practice situates the relationships and responsibilities within a defined framework. The framework/model becomes the focal point for discussion and negotiation reconciling different practice expectations.

Using the model to explain how the student and teacher are situated in practice offers the potential to avoid misunderstandings of the student role and create clinical learning environments that support students. Securing clinical experiences for students is an ongoing problem, in part, because of the changes in health care delivery and patient acuity. Schools of nursing negotiate with agencies for appropriate clinical experiences and there has not been a means of communicating how clinical teaching fits into the

continuum of practice. The model can be the tool to explain how students and clinical teachers are situated at the periphery of practice and how students make the gradual transition to full members of nursing's community of practice.

Descriptions of nursing practice that participants related highlight the complexity of nursing practice and the multitude of demands placed upon practitioners each day. Stress was identified as a continuing difficulty encountered by practitioners in acute care and in public health. The addition of students is viewed by some practitioners as another stressor because, in part, the practice of clinical teaching has not been clear. Practitioners have not had a frame of reference for understanding clinical teaching. Positioning students as legitimate participants under the supervision of clinical teachers provides a context for student participation and can be a focus for negotiation of the degree of clinical involvement.

The model, Figure 6, is a vehicle for discussion and analysis of the clinical placements in general and the degree of student participation specifically. Teaching hospitals and public health departments have a mandate to support ongoing learning including generic and post-diploma training. This model can be used as a focus for discussion about student learning at the periphery of professional practice illustrating how practitioners coach, model and advise students and novices at all levels. Practitioners have the potential to learn more about the pivotal relationships and strategies that help to situate learning within the realities of clinical practice. Once the legitimacy of students and their teachers is established on clinical units, practicing nurses can be encouraged to reflect upon their practice thus fostering the development of reflective practicums. Indeed, the model for clinical teaching may be of utility for clinical nurse specialists who are mentoring new staff and may experience difficulty articulating practice knowledge.

Nurses new to practice environments might be regarded as establishing themselves as legitimate members of the community in a similar fashion as did nursing students.

The narratives of clinical teachers illustrate that the relationships established in clinical teaching are important to the ultimate success of the clinical experience. In particular, the relationship between clinical teacher and practitioner is one of consultation and collaboration. The articulation of a model of clinical teaching practice is especially relevant at this time since, as participants described, there are many competing demands in an increasingly complex clinical environment. The model can serve as a starting point for negotiation of new clinical experiences and/or for re-negotiation of the meaning of existing experiences. It is also of benefit to be able to describe clinical teaching practice in language nurses can relate to.

Implications for Teaching Practice

Understanding clinical teaching as a boundary practice offers the opportunity for faculty to reflect upon their roles in relationship to practicum. The assumption has been that the clinical teacher who is an expert practitioner makes an easy transition to clinical teacher. The narratives of clinical teachers suggest that learning the role is much more difficult. The clinical teacher relies on the classroom teacher for guidance and support in understanding expectations of the practicum, evaluating student learning and reconciling different expectations. Schools of nursing might consider an expansion of existing orientations for new clinical teachers and offering more ongoing support and mentorship during the course of the clinical practicum.

The clinical teacher has developed a repertoire of strategies that broker the connection between the practice realities and the classroom expectations. However, it was

still important for them to stay connected with the classroom teacher and/or coordinator to avoid missing important connections.

The model can be incorporated into clinical teacher orientation at the start of each semester. I intend to create a clinical teaching handbook for teachers using the model as a foundation for understanding the role of clinical teacher and learning how to situate clinical teaching as a legitimate peripheral practice. The model would introduce clinical teaching and be the frame of reference for clinical teachers. As well, during orientation sessions experienced clinical teachers can share how they negotiate and reconcile differing perspectives. Clinical teachers will have a picture of how they bridge two communities of practice and a better understanding of what it means to be a boundary practice legitimizing their presence on clinical units. It is anticipated that by using the model as an instructional tool, clinical teachers will be better prepared to take on the responsibilities of clinical teaching practice and be able to explain their role to others including students.

Participants described the public relations strategies that they used to build a supportive environment for students. Students struggle to understand where they fit into the clinical environment especially when environments are not welcoming. Once again, clinical teachers can use the model as an instructional tool explaining to students how they are situated at the boundary of nursing practice gradually moving into full membership in the nursing community of practice. The model can be introduced on the first clinical day describing how students are paired with nurses, outlining the lines of communication and indicating how during the course of the clinical experience students move from the periphery of practice to share responsibilities with practicing nurses.

The results of this study situate clinical teaching within a community of practice framework recognizing that clinical teaching is where students learn by doing and supported by coaching. Students become proficient in reflection-in-action, understanding how nurses share insights, debate interventions and generate plans of care. By participating at the periphery of practice, students and clinical teachers work within safe parameters. Participants in this study revealed how important negotiation and reconciliation strategies were to build and maintain relationships.

Contributions to Knowledge

The three research questions that guided this study provide the framework for commentary on the knowledge contribution of this study. First, the results suggest that clinical teaching is a boundary practice as evidenced by the close relationships that are formed with students, practitioners and classroom teachers and by the repertoire of strategies that outsiders do not share. The descriptions also revealed the deep understanding that clinical teachers have of clinical teaching especially in understanding the complexity of the clinical environments. These findings are important since so little is known of clinical teaching. An important outcome of the study was the development of a model of clinical teaching practice that can be utilized by nurse managers to prepare practitioners to work with students and by nursing faculty to guide and support novice clinical teachers. Another noteworthy outcome was the identification of a vocabulary of clinical teaching practice. Being able to describe the practice in terms that are familiar to members of each practice community is a benefit and helps to avoid miscommunication and conflict.

Second, the results identified how clinical teachers bridge two communities of practice: nursing and teaching. Clinical teachers formed relationships with fellow nurses,

students and classroom teachers. These relationships need to be nurtured and maintained in order for clinical teachers to negotiate student learning experiences. Using a repertoire of strategies, clinical teachers position students at the periphery of nursing practice negotiating with practicing nurses the degree of student involvement in patient care. Boundary objects such as care plans and project summaries are used by clinical teachers to reify student experiences helping students understand practice knowledge. Identification of the range of boundary practices used by clinical teachers provides a context to negotiate clinical placements situating student experiences at the periphery of nursing practice. As well, with an understanding of participative connections, schools of nursing have the opportunity to orient nurses new to the role of clinical teacher describing strategies to build and maintain relationships with fellow nurses, students and classroom teachers and generate a repertoire of strategies to support each type of relationship.

The descriptions suggest that strategies were used by clinical teachers to negotiate and reconcile differing practice expectations. For instance, clinical teachers were skilled in public relations, negotiating student assignments and determining when to intervene to prevent conflict from arising. As well, clinical teachers described their skill in gauging both students' readiness and the environment's receptivity to student assignments developing strategies to maintain these connections.

Third, nursing care plans, policy and procedure manuals and patient portfolios are examples of boundary objects used in clinical teaching practice. These boundary objects are the focus of discussion between practitioner, student and clinical teacher. Boundary objects are part of the lexicon of clinical teaching

Clinical practicum courses are an integral part of nursing education. The results of this study contribute to a better understanding of the practice of clinical teaching and

provide insights into the nature of the relationships and knowledge embedded in clinical teaching practice. The outcomes are 1) description of participative connections, 2) a vocabulary to describe the practice of clinical teaching and 3) articulation of a model of clinical teaching that can be used by both educators in hospitals and schools of nursing.

The results of this study have the potential to be extrapolated to other clinical teaching contexts including medicine, respiratory therapy, physiotherapy and dentistry.

Recommendations

This study has provided insight into the practice of clinical teaching. The descriptions provided by clinical teachers complemented the definition of a boundary practice as outlined by Wenger (1998).

Clinical teachers are typically recruited from nursing practice because they are expert nurses. However, as novice clinical teachers they have limited understanding of the practice of clinical teaching (Scanlan, 2001; Silar & Kleiner, 2001). The results of this study, in particular, the model of clinical teaching practice establish a foundation for discussion of clinical teaching practice outlining the parameters of the practice and shared knowledge sources. The negotiation and reconciliation strategies that clinical teachers utilize can be profiled in professional development workshops with practitioners and clinical teachers.

Clinical teaching knowledge can guide and support practitioners and novice clinical teachers. In a challenging clinical practice environment the following questions should be addressed. To what extent can the nursing practice environment support the practice of clinical teaching? What are the constraints that impede the practice of clinical teaching? Are there additional strategies that reconcile different practice perspectives?

Conclusions

Clinical practicum courses are an important part of nursing curriculum. Practicum courses are threaded throughout the four years of an undergraduate program providing the opportunity for nursing students to learn the practice of nursing. The person who orchestrates the clinical practicum experience is the clinical teacher. Clinical teachers are usually clinical practice experts chosen for their knowledge of nursing practice and in many cases they have been strong mentors or preceptors to nursing students. The purpose of this study was to ask clinical teachers to describe their practice, hypothesizing that clinical teaching is a boundary practice bridging the practices of nursing and teaching. Using a structured qualitative research design, nine clinical teachers from acute care and public health backgrounds agreed to participate in a focus group and four participants volunteered to, in addition, give individual interviews.

The results of this study suggest that clinical teaching is a boundary practice where key relationships are formed between clinical teachers, practicing nurses, students and classroom teachers. In order to develop and maintain these relationships clinical teachers utilized a repertoire of strategies to negotiate and reconcile differing practice perspectives. Clinical teachers integrated particular tools, boundary objects, to assist students to learn the practice. These boundary objects included care plans, care maps, projects, and presentations. Clinical teachers described a reflective practicum where students are coached in the clinical complexities of nursing practice, reflect upon the decisions made by practicing nurses and build a foundation of practice knowledge.

An important outcome of this study was the development of a model of clinical teaching practice that can provide both a working vocabulary and framework to describe the practice of clinical teaching. This model has the potential to be used by educators and practitioners in professional development workshops to prepare novice clinical teachers and mentor experienced clinical teachers. In addition, the model can be translated to other clinical teaching contexts including medicine, respiratory therapy, physiotherapy and dentistry.

Practitioners and educators understand the importance of clinical practicum experiences in nursing education, however, there has not been a good understanding of the practice itself and the results of this study contribute to filling that knowledge gap.

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Appendices

Appendix A

- **Critical Thinkers Who:**
  - make connections among concepts in client situations selected for this year of study
  - analyse the benefits and limitations of tools they are using in their clinical practice eg. standard care plans, nursing diagnoses
  - adapt their thinking to more complex yet predictable clinical situations
  - explore ways of being creative in their practice with clients
  - apply a broader range of theoretical constructs to client situations
  - anticipate health needs and changes in status of individuals and families
  - recognize health needs of communities
  - derive and test hypotheses in complex situations
  - evaluate effectiveness of planned strategies with individuals

- **Becoming Professionals Who:**
  - identify areas where they can effect change
  - identify different nursing roles in more complex situations
  - identify non-traditional areas where nursing can impact on health
  - incorporate cultural and spiritual differences in the delivery of care
  - identify and apply standards of nursing practice, codes of ethics and professional regulations as they relate to their practice
  - demonstrate therapeutic use of self with **individuals, groups**, and aggregates
  - act as role models for student colleagues
  - take responsibility for their own decisions
  - identify leadership skills in the clinical milieu
  - participate in the interdisciplinary team
  - establish partnerships with groups and aggregates
  - act as a client advocate with groups and aggregates
  - identify non-regulated health care options pertinent to client situations
  - are aware of the role of federal, and provincial professional organizations
  - rely on their developing expertise in providing nursing care
  - balance personal and professional roles

- **Communicators who:**
  - use therapeutic communication skills with **individuals, groups,** and aggregates
  - adapt their communication styles to a variety of clinical situations
  - identify dysfunctional communication patterns
  - demonstrate increased competence with their verbal and written communication skills
  - apply teaching/learning principles with individuals, groups, and aggregates
  - recognize the effectiveness of assertiveness in selected clinical situations
  - begin to use strategies for conflict management
  - adapt principles of professional and therapeutic communication to clinical situations

- **Knowledge Workers Who:**
  - use nursing theories to guide practice and derive meanings for clinical situations
  - transfer knowledge and skills learned in other settings to new clinical environments
  - apply research findings to practice
  - use appropriate tools and technologies to manage data
  - plan restoring strategies for predictable crisis situations
  - plan care to maintain, protect and enhance health
  - identify the context that impacts the health of communities
  - anticipate potential crises and risk with clients
  - begin to resolve some ethical dilemmas
  - understand organizational cultures and their impact on client care and nursing's scope of practice
  - begin to engage in praxis by integrating nursing's ways of knowing, being and doing

Appendix A

COURSE CURRICULUM

I. Course Learning Requirements/Embedded Knowledge and Skills

Course Learning Requirements	Knowledge and Skills
When you have earned credit for this course you will have demonstrated an ability to:	
Within the **context of acute care**, the student will 1. Demonstrate professional conduct.	Demonstrate insight into own behaviour and it's effect on others. Demonstrate respect and a willingness to follow the policies and regulations of clinical agencies. Demonstrate professional collaboration with peers, professors, nurses and other health care professionals.
2. Demonstrate accountability and responsibility for clinical decisions.	Seek appropriate guidance and assistance when necessary. Articulate clinical reasoning. Adapt critical thinking to more complex clinical situations. Demonstrate an increased speed of decision-making. Assume a beginning leadership role in advocating for change. Demonstrate initiative and assertiveness as a patient advocate. Is accountable for decisions and actions.
3. Practice within the legal and ethical guidelines of the CNO.	Identify legal and ethical issues related to patient care. Share appropriate information about patient care while respecting confidentiality. Demonstrate behaviors that contribute to effective partnerships with patients (respect, empathy, honesty). Provide care that demonstrates sensitivity to patient diversity (culture, race, age, gender, beliefs, values).
4. Provide knowledgeable care to patients and families experiencing acute and episodic health problems.	Integrate relevant theoretical knowledge into patient assessment. Collect relevant data from appropriate sources. Organize clinical data according to agency and/or model format. Elicit and understand the perspective of the patient and family. Assess the patient's readiness to learn. Identifies appropriate nursing diagnoses based on relevant clinical cues.

Appendix A

	Formulate a realistic plan of care to meet patient's needs. Evaluate and revise plan of care as appropriate. Includes patient, family and significant others in the planning process, as appropriate. Set measurable, feasible and realistic patient outcomes. Select evidence based nursing interventions. Utilize appropriate teaching/learning strategies. Document and communicate relevant information in a comprehensive and concise manner utilizing appropriate terminology. Deliver care in an organized manner. Demonstrate effective time-management skills. Anticipate changes in health needs and status of individuals and families. Follow appropriate procedures when unforeseen difficulties arise. Perform clinical skills and procedure according to principles and unit/agency policies.
Demonstrates accountability and responsibility for personal learning.	Is self-directed in identifying and meeting learning needs. Seek assistance appropriately from professor, staff and peers. Self evaluate progress towards course learning requirements in an ongoing manner. Accept constructive criticism and modify performance accordingly. Consistently prepare for clinical practice. Submit all learning assignments in a timely manner. Punctual and regular attendance at clinical and lab learning experiences. Actively participate in clinical conferences. Engage and commit to clinical learning experiences.

6. Demonstrates effective and professional communication skills.	Communicate with empathy, congruency, unconditional positive regard, hopefulness and presence with patients and their families. Employ interaction skills including open and closed questions, restating, clarifying, reflecting thoughts and feelings, silence and summarizing. Utilize communication/interviewing strategies that enhance collaborative patient care. Be aware of and avoid blocks to communication. Assist patients and their families to regain a sense of control and to actively participate in their care.

II. Learning Resources

Required Texts

- Black JM, Hawks JH, & Keene AM, (2001) *Medical surgical nursing: Clinical management for positive outcomes* (6th ed.). Philadelphia: WB Saunders Company.
- College of Nurses of Ontario.(2000). *Compendium of Standards of Practice for Nurses in Ontario.*
- Hockenberry MJ, Wilson D, Winkelstein ML, and Kilne NE. (2003). *Wong's nursing care of infants and children*, (7th ed.). St Louis: Mosby.

Recommended Texts

- Carpenito LJ (2000) *Nursing diagnosis: Application to clinical practice* (9th ed.). Philadelphia, PA: Lippincott.
- Registered Nurses Association of Ontario: *Best Practice Guidelines:* found in the left hand column of the R.N.A.O. website homepage at http://www.rnao.org

Relevant Texts from Previous Semesters

- Arnold E, & Boggs KU, (1999) *Interpersonal relationships: Professional communication skills for nurses (3rd ed.)*. Philadelphia: W.B. Saunders
- Friedman M (2002) *Family nursing, research, theory and practice* (5th ed.). Stamford, Connecticut: Appleton and Lange.
- Wright L & Leahey M (2000) *Nurses and families: A guide to family assessment and intervention* (3rd ed.). Philadelphia: F.A. Davis

III. Teaching/Learning Methods

There are two components to this course:
A) nursing psychomotor skills laboratory
B) clinical practice in acute care setting either adults or children

During this course you are likely to experience:

- reading assignments
- clinical practice in an assigned practice setting
- clinical conferences
- laboratory practice to prepare for the clinical setting
- audio video presentations
- group discussions
- clinical practice and evaluations
- online literature search

Students are expected to prepare for laboratory practice, in-hospital clinical experiences, and other clinical activities by completing required readings and viewing videos.

IV. Learning Activities and Assessment

Learning activities will take place in the nursing laboratory and acute care hospitals.

- application of theoretical constructs in clinical practice settings
- planning and delivery of nursing care for an individual and the family in the acute care setting
- collaborating with members of the health care team in planning and delivering nursing care
- participating in and leading clinical conferences
- developing professional comportment appropriate to the professional a professional nursing role
- collaborating with clinical teachers and peers in the clinical learning environment
- other assignments at the discretion of the clinical professor to be announced

Blackboard (BB) web courseware will support the delivery of this course.
Students will

1. activate their internet accounts within the first week of the course.
2. use their Algonquin College email addresses to communicate with the teacher.
3. access course materials as outlined in the course syllabus.

Please note:

All email communication to professors must have **NSG3135** in the subject line.
All file attachments to email **must include the students name.**
Student email inquiries will be answered **within 48hrs.**

V. Evaluation/Earning Credit

Please Note: This is a Pass/Fail Course. A passing grade will be assigned with the successful completion of <u>all</u> the course learning requirements and embedded knowledge and skills indicated on this course outline.

N.B. If a student demonstrates unsafe clinical practice at any time, the student will be withdrawn from the clinical setting and this may result in a failing grade for this course.

CLINICAL ATTENDANCE IS COMPULSORY. Inform your clinical professor about your absence as soon as possible. Each student will document the variety of skills practised, in the nursing skills lab. Students will be assigned to groups.

The following will provide evidence of your learning achievement:

- Completion of all course learning requirements at a satisfactory level.
- Attendance at all sessions (compulsory). Any absence must be communicated to your clinical or professor.
- Active group participation.
- Satisfactory completion of all practicum components, i.e. adherence to submission dates for anecdotes and written reports; scheduling of meetings with clinical professors.
- Lab validation testing and completion of lab progress sheet.
- Completion of a self evaluation. Each student will complete one written self-assessment. This self-assessments must be completed in ink and submitted to the clinical professor before the scheduled evaluation meeting.

Appendix B

THIS AFFILIATION AGREEMENT CONCERNING

CLINICAL EXPERIENCE

BETWEEN:

hereinafter called "X"

-and-

hereinafter called the "Agency"

RECITALS

SINCE X desires to affiliate in order to provide students clinical experience in an Agency setting; and

SINCE the Agency desires to affiliate in order to enhance its level of operation and its profile by the presence of students gaining clinical experience in an Agency setting; and

SINCE the Agency has agreed to make available to X certain facilities for students' clinical experience in an agency setting;

THEREFORE, by mutual consent, we agree to the following:

DEFINITIONS

"THIS AGREEMENT" means this agreement; this agreement as it may be amended under Section 8; and a renewal of this agreement under Section 11.

"STUDENT(S)" means a person(s) enrolled in X's Health Science Program, and assigned a work placement for clinical experience with the Agency pursuant to this agreement.

INTERPRETATION

1. The headings in this agreement are for convenience only and do not form a part of this agreement. These headings are not intended to interpret, define, or limit the scope, extent or intent of this agreement or any of its provisions.

2. A reference to a Section or subsection or clause, is to the specified Section or subsection or clause of this agreement, unless otherwise expressly stated or the context otherwise requires.

3. A reference to a statute is to that statute and regulations made thereunder as such statute and regulations made thereunder may at any time be amended and in effect, and to any statute or regulations thereunder that may be passed and have the effect of supplementing or superseding such statute or its regulations.

4. Nothing in this agreement limits the Agency's authority to coordinate and control the activities of teachers and students during a work placement.

5. Nothing in this agreement limits the Agency's primary responsibility for, and its overall authority over, the care and safety of patients in the Agency.

IMPLEMENTATION

6. This agreement shall be in effect from June 1, 2004 up to and including the 1st day of June 2006.

7. (1) Subject to subsection (2), a party may terminate this agreement, solely by giving the other party three months' notice in writing of termination of this agreement.

(2) Where termination of this agreement under subsection (1) would prevent a student from completing the clinical phase of the program, the notice of termination shall not become effective until the party that issued the notice has provided the student the opportunity and the facilities to complete the program.

8. The parties may, by mutual consent, amend this agreement at any time. Any amendment must be in writing, signed by the parties' authorized signing authorities, and attached hereto.

9. In circumstances beyond the control of the Agency, resulting from a community disaster, fire, labour strike, or any other event by which the Agency's continuing provision of facilities under this agreement would substantially interfere with the Agency's duty of care to its patients, the Agency may immediately suspend its obligations under this agreement until the Agency determines that the facilities are again suitable for use by X.

10. The parties shall review this agreement before it expires, for the purpose of determining whether to renew it.

11. The parties may, by mutual consent, renew this agreement. If renewal is by way of a letter of renewal, the letter of renewal must be signed by the parties' authorized signing authorities, and it must be attached hereto.

ADMINISTRATIVE OBLIGATIONS

12. (1) Subject to subsection (2), X shall comply with those requirements concerning immunization of students and for which an educational institution is responsible, under the Ontario Agency Association Communicable Diseases protocols, and all formal adoptions thereof by the Agency.

(2) The Agency shall:

(a) provide X with the protocols and adoptions referred to in subsection (1), and

(b) ensure that these documents are attached to this agreement.

13. X shall ensure that its students meet the particular discipline/program's requirements for compulsory education.

14. X shall ensure that criminal reference checks of students are actioned in accordance with the procedure established by X, for the conduct of these checks.

15. X shall provide and maintain for students, Workplace Safety and Insurance Board (WSIB) Compensation Coverage, pursuant to the Workplace Safety and Insurance Act, 1997 or equivalent private insurance for agreements where the WSIB doe not have jurisdiction.

16. When a student sustains an injury related to work placement with the Agency and that injury results in treatment by a medical practitioner or lost time for the student from the work placement, the parties shall advance and complete the reporting process to the WSIB or private insurance provider, as follows:

(a) within 24 hours after the accident, the Agency shall provide X with the necessary information to complete the WSIB Form 7 (Employer's Report of Injury) or the private insurer's accident report form as well as a duly signed Letter of Authorization to Represent Placement Employer. X shall send the documentation to X's Manager of Occupational Health and Safety ; and

(b) X shall file the Form 7 with the WSIB . For agreements that are not under the WSIB jurisdiction, X shall file the private insurer's accident report.

17. (1) Subject to subsection (2), a party may discontinue its provision of a particular discipline/program within the clinical phase of the program by giving the other party three months' notice in writing of the discontinuance of the particular discipline/program.

(2) Where the Agency provides notice under subsection (1), the Agency is no longer obligated to provide facilities for the particular discipline/program specified in the notice, except,

(a) where the discontinuance of that discipline/program would interfere with, or prevent, a student's completion of the clinical phase of the program, then,

(i) the Agency shall continue to provide the student the opportunity and the facilities to complete the clinical phase of the program; and

(ii) the notice of discontinuance is temporarily suspended until the student completes the clinical phase of the program; and

(iii) the notice of discontinuance revives when the student completes the clinical phase of the program.

TRAINING AND CLINICAL OBLIGATIONS

18. X shall make available qualified teachers who are responsible for the program of instruction and for collaboration with appropriate Agency personnel in matters of planning, the selection and evaluation of a student, and a student's clinical experiences.

19. X shall ensure that its teachers, referred to in Section 18, confer regularly and frequently with the Agency's designated and particular discipline leader or its equivalent, and with other Agency staff, for the purpose of establishing and maintaining mutually beneficial relationships.

20. X shall submit to the Agency a proposed schedule of student assignment in writing that,

(a) includes the dates of the work placement, the numbers of students and teachers involved in the work placement, and X's desired objectives in respect of the work placement; and

(b) is submitted with advance notice sufficient to provide the Agency a reasonable period of time to determine whether it approves X's schedule.

21. X shall ensure that its teachers and students:

(a) observe, in accordance with the Agency's policies, a patient's right to complete confidentiality of any information concerning that patient and to which teachers or students may have access, regardless of the form of that information; and

(b) comprehend the Agency's responsibility to protect and maintain this confidentiality.

22. X shall provide the Agency ongoing feedback on the effectiveness of the clinical experience, from the perspectives of students and teachers.

23. X shall notify the Agency when a student is unable to continue in the clinical phase of the program.

24. X, in conjunction with the Agency, will plan and schedule student placement rotation.

25. The Agency, where applicable and through its particular discipline leader or equivalent, shall determine in cooperation with X and other training bodies, the minimum standard for the ratio of students and teachers in each discipline/program.

26. The Agency is entitled to intervene in instances where a student is functioning in a manner that the Agency considers potentially dangerous to the well-being of a patient.

27. The Agency shall:

(a) provide emergency first aid care to a student or instructor who is injured while on duty, or who may become ill; and

(b) report any serious accident to X.

INDEMNITY AND INSURANCE

28. (1) X shall indemnify and save harmless the Agency from all claims for damages or injuries, incurred as a result of negligence that is attributable to X, its directors, officers, employees, volunteers, faculty members, teachers, coordinators, and students, solely with respect to this agreement.

(2) The Agency shall indemnify and save harmless X from all claims for damages or injuries, incurred as a result of negligence that is attributable to the Agency, its directors, officers, employees, volunteers, and coordinators, solely with respect to this agreement.

(3) X shall procure and maintain, at its own expense, the following insurance coverage:

(a) 11 million dollars' commercial general liability insurance coverage that includes coverage against bodily injury liability and property damage liability; and

(b) 5 million dollars' malpractice liability insurance coverage.

(4) The Agency is entitled to obtain proof of the insurance coverage referred to in this Section, by contacting X.

9. (1) X shall include the Agency as an additional insured in its commercial general liability insurance policy, in respect of liability for property damage or bodily injury that is attributable to the negligence of X, its directors, officers, employees, agents, volunteers, faculty members, teachers, coordinators, and students.

(2) X shall provide the Agency with proof of X's inclusion of the Agency as an additional insured in X's commercial general liability insurance policy; and this proof shall form part of this agreement.

IOTICES

). Any notice to be given under this agreement shall be personally delivered or sent by prepaid registered mail addressed to the parties at their respective addressed to the parties at their respective addresses or by facsimile transmission, as follows:

a) To X at:

Fax Number:
Attention:

b) To the Agency at:

Fax number:
Attention:

MISCELLANEOUS

31. The parties hereto are neither partners, nor are they engaged in any joint venture in relation to this agreement and nothing herein shall be construed as to imply a partnership or joint venture between the Agency and X.

ENTIRE AGREEMENT

32. This agreement constitutes the entire agreement of the parties.

IN WITNESS WHEREOF the parties hereto attest to this agreement by the hands of their authorized signing officers of this ____ day of _____, _____.

Signature _____ Position

Signature _____ Position

IN WITNESS WHEREOF the parties hereto attest to this agreement by the hands of their authorized signing officers of this ____ day of _____, _____.

Signature _____ Position: _____

Signature _____ Position:_____

Appendix C

Accountability Standards for Nurses Working with Students

for Registered Nurses and Registered Practical Nurses in Ontario

TABLE OF CONTENTS

College of Nurses of Ontario

STANDARDS

Expectations of all nurses involved with students

Each nurse will make her or himself available to discuss the student's learning plan with the educator and/or student. Each nurse will know and understand the level of preparation of the student, the objectives of the experience and the specific assignment(s) of the student. Each nurse will use good communication skills in interactions with students and educators.

Expectations of the nurse whose clients are receiving partial or total care from students

The nurse, in situations where students are providing partial to total care for the nurse's client assignment, will:

- have a clear understanding of the objectives of the experience;
- understand the limits of the student's responsibilities and competence;
- understand and clarify with the student exactly what responsibilities the student will assume and what responsibilities the nurse will continue to carry;
- make her or himself available to the student for assistance or help with assigned activities or any other activity that may be necessary;
- provide feedback to the student and the educator as necessary; and
- consider the safety and well-being of the clients in planning the learning experience for the student.

Expectations of the nurse in a preceptor role

A nurse in the preceptor role will:

- provide necessary supervision as articulated in the preceptor agreement;
- assess and provide accurate and timely feedback to the student and the educator regarding the student's progress towards the objectives of the experience;
- provide appropriate supervision of the student as the student progresses in the experience;
- recommend and facilitate possible learning experiences that will meet the student's goals; and
- consider the safety and well-being of the clients in planning or suggesting learning experiences for the student.

Expectations of the nurse in an administrator role

The nurse in an administrator role will:

- identify nurses who are expert practitioners to function in the preceptor role;
- facilitate the communication process so that the staff nurses know the level of competence of the student and the objectives of the experience; and
- assess the workload of the nurses who are preceptors and the nurses whose clients are partially being cared for by students and make adjustments as necessary to ensure that nurses are available to communicate with and support the students.

Expectations of the nurse in an educator role

The nurse in an educator role will:

- maintain competence relevant to the student's required learning and clinical practice experience;
- ensure that the staff nurse as well as the nurse manager are involved when communicating objectives for the experience, and when receiving feedback about the student's progress be clear in communicating the scope and limits of the student's responsibilities to the nurses involved;
- verbally thank the staff involved in assisting the students in the learning process; and

Appendix D

you were recruited to clinical teaching.

first clinical teaching experience
riented you?
id you feel in that role for the first time
was your contact with other clinical teachers?

knowledge of teaching at the start of your first experience.
u have classroom teaching experience?
was your understanding of the curriculum, students, and pedagogy?

cts of your nursing practice that helped you in your clinical

your clinical teaching has evolved since the first experiences.
be your practice today.
as your clinical teaching knowledge developed; changed over the

ALGONQUIN COLLEGE McGill Université d' University of Ottawa

Introduction

The purpose of this study is to explore clinical teaching from the perspective of a boundary practice that bridges two communities of practice; nursing and teaching. Using an exploratory multiple case study design, novice and experienced clinical teachers are interviewed collectively in a focus group and again individually. Communities of practice consist of members who share a similar practice focus, in this case nursing and teaching, and who learn the practice through active participation and negotiation in the practice context (Wenger, 1998). The concept of a boundary practice acknowledges that two practice communities often share similar perspectives and activities. In certain circumstances there is a need for a more formal connection to be established between and among communities resulting in the formation of distinctive boundary practices. This study hypothesizes that clinical teaching is an example of a distinctive boundary practice and explores the mechanism by which new members learn the practice.

I am interested in learning to what extent clinical teachers describe a similar boundary practice and the extent to which their descriptions extend the concept of a boundary practice. An exploratory case study design provides the framework to develop hypotheses about how clinical nurse teachers bridge the two practices, identify who the individuals are who help 'broker' the connection, and explain why understanding this connection is important is for the professional development of novice clinical nurse teachers.

Clinical teaching is the cornerstone of nursing education. This is the time when students are in the clinical setting as novice nurses under the supervision of both experienced nurses and clinical teachers. Experienced nurses and clinical teachers model their practice. Student assignments are carefully crafted to maximize the learning experience while delivering the standard of patient care required.

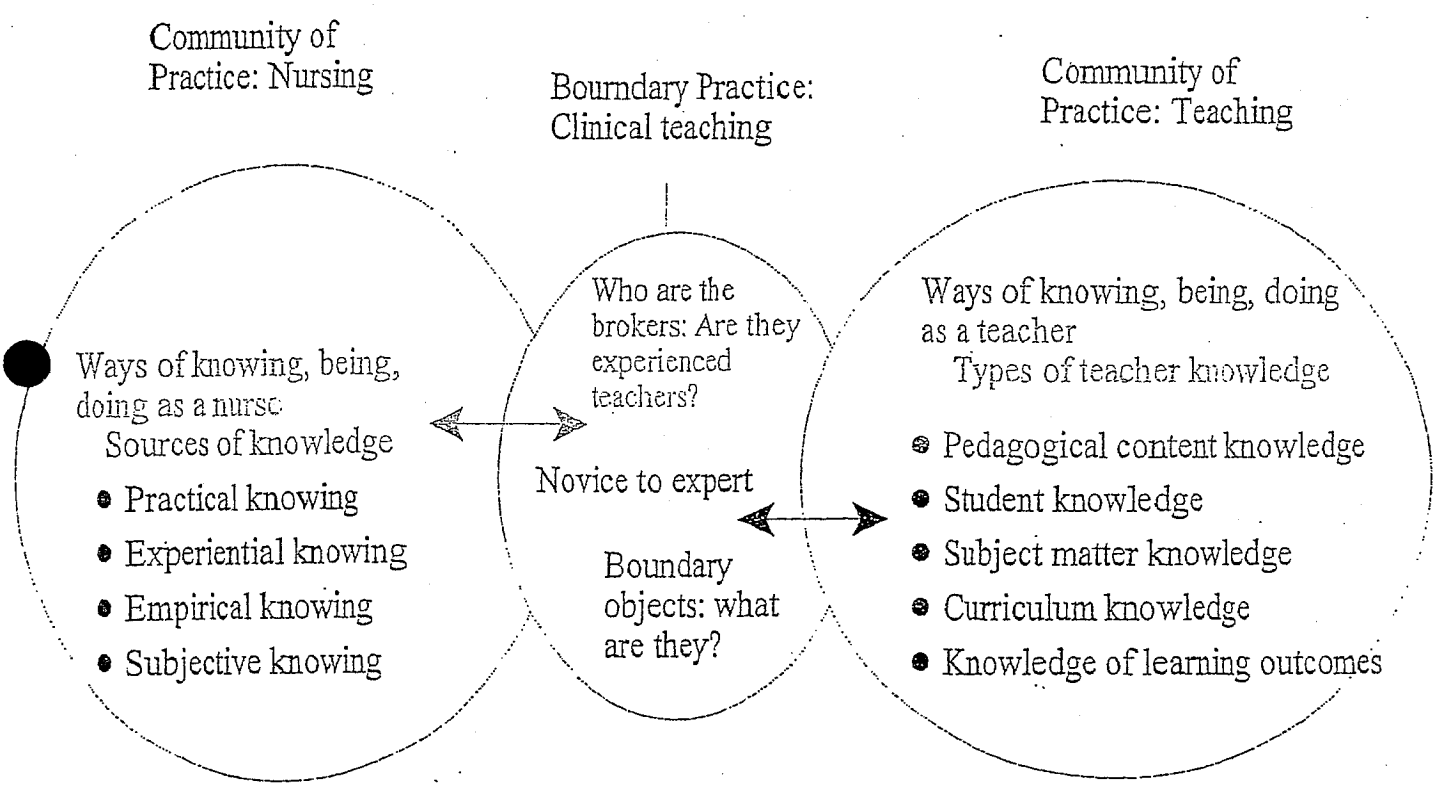
Research studies have tracked the competencies and functions required of clinical teachers and there is some evidence that clinical teachers follow a similar learning trajectory as novice practitioners in developing expertise in practice (Benner, Tanner & Chesla, 1996; Davis, Dearman, Schwab & Kitchens, 1992; Knox & Morgan, 1985; Vollman, 1989). Unfortunately

there is little formal preparation for the role of clinical teacher and few mentoring opportunities with the result that teachers report they resort to teaching as they were taught (Scanlan, 2001).

Preparation and support for novice faculty is identified as a priority in nursing education, however, there is no framework for understanding how novice and experienced clinical teachers learn their practice (Benner et al., 1996; Davis et al., 1992; Scanlan, 2001; Siler & Kleiner, 2001; Vollman, 1989). This study proposes a framework for exploring clinical teaching as a unique boundary practice and the insights gained have the potential to inform both the professional development and recruitment strategies for novice teachers. As well, the findings of the study have application to other health disciplines such as medicine, dentistry and physiotherapy where clinical teaching is an essential part of the program of study.

The theoretical framework guiding this study combines the community of practice model proposed by Wenger (1998, 2001), Benner's (1984) model of novice to expert nursing practice and Shulman's (1989) model of pedagogical reasoning and action. The educational construct common to each model is that learning is an active process that evolves as individuals are engaged in the real-life practice setting.

Benner (1984, 1996) outlines how clinical expertise evolves from the beginner stage through to expert practice. Nurses describe how they learn to negotiate what it means to nurse in the context of practice and how they develop specific competencies as members of the practice community. From a teacher knowledge perspective, Shulman (1989) traces the development of expertise in teaching. Novice teachers relate stories of how difficult it is to translate subject matter knowledge into forms that students can understand. These teachers indicate that it is through participation and negotiation in their teaching practice that they develop the specialized knowledge that transforms subject matter knowledge. This specialized knowledge is known as pedagogical content knowledge. Together these theories of practice, learning, expertise and knowledge provide the lense from which to view the connection between two communities of practice (see Figure 1).



ıre 1. Theoretical model of clinical teaching as a boundary practice

Appendix J

Nurse	Clinical Speciality	Employment
A	AC	PT
B	AC	PT
C	AC	PT
D	AC	PT
E	AC	PT
F	PH	PT
G	AC/PH	PT
H	AC	C
I	AC/PH	PT

Note:

AC = acute care
PH = public health
AC/PH = both acute care and public health
PT = part time
C = contract