

PROBLEM-BASED LEARNING IN CLINICAL NURSING

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B.N., University of Lethbridge, 1994

A Project
Submitted to the Faculty of Education
of the University of Lethbridge
in Partial Fulfillment of the
Requirements for the Degree

MASTER OF EDUCATION

LETHBRIDGE, ALBERTA

March 2002

Abstract

What benefits would problem-based learning (PBL) in nursing have to the clinical setting and would clinical instructor input aid in the successful implementation in the clinical setting? The purpose of this study was to research the ways in which PBL could assist in the clinical nursing setting by exploring the views of instructors directly affected by this new process in curriculum delivery at the Southern Alberta Collaborative Nursing Education (SACNE) program. Four sessional clinical instructor interviews were conducted, each reflecting the four clinical concentration areas offered by the SACNE program: (1) Medical/surgical (hospital based), (2) Public/home care (community based), (3) Psychiatry (acute and chronic) and (4) Maternity/pediatrics (hospital based). The participants had a minimum of three years of clinical expertise/experience in the selected area. The interviews were both qualitative and quantitative and were conducted over a four-week period. The data analysis was completed by the end of February, 2002. From the four interviews it was evident the clinical instructors had a basic understanding of PBL but were unsure how to implement it into the clinical setting. Each of the four clinical areas presented with obstacles that might inhibit successful implementation of PBL. Several recommendations were suggested that might aid in the successful implementation of PBL in the clinical setting. They addressed necessary resources, implementation strategies, learning strategies and stakeholder concerns.

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Introduction

The Southern Alberta Collaborative Nursing Education (SACNE) program is a nursing education collaborative program between the Lethbridge Community College (LCC) and The University of Lethbridge (U of L). Prior to the program's initiation in September, 1995, the two educational institutions worked in isolation from one another. Students who successfully completed the LCC Diploma Nursing Program were awarded a Registered Nurse (RN) distinction. RN's from LCC or other institutions, could then go on to pursue a Bachelor of Nursing (BN) designation at The U of L. Entrance to The U of L assumed completion of study at the nursing diploma level.

The SACNE program allows the nursing student the choice to graduate with an RN following two and a half years of study exclusively at LCC (Diploma Exit Route) or to seamlessly complete four years of study (the first three at the LCC and the final year at the U of L), earning a BN. The first four semesters of study are common to both the RN and BN route. Following these foundational four semesters, the students are required to enroll in the RN or BN route, as the next semester heralds the beginning of the SACNE program's separate paths of study (Lethbridge Community College Calendar, 2000).

With the implementation of the SACNE program, a newly adopted collaborative curriculum was instituted to meet the expectations of the consolidated program. Though the curriculum had been adopted, with minor revisions to make it more suitable and relevant to the Chinook Health Region, the process used to implement the curriculum remained unchanged. The LCC continued with a behaviorist / technical model, stressing decision-making and procedural knowledge. This centered on the perceived necessity to produce a technically safe practitioner within a compacted two-year program. The

opportunities to explore other areas of knowledge, other modes of decision making or other clinical concepts were not available for consideration because of the condensed time frame in which a program change needed to be implemented. As a result, after five years of trialing the adopted, fragmented, altered curriculum, inadequacies and problems in meeting the needs of the students and those directly affected by the program surfaced.

The collaborative program was recognized as deficient (lacking the necessary qualities to make it a viable program). Areas of concern surfaced in: fragmented curriculum; course sequencing; meeting the needs of the student; meeting the needs of those directly affected by the program; accommodating rapidly changing health services and changing roles for nurses; and perceptions of nursing leaders within the Chinook Health Region that some graduate nurses were ill-prepared.

As a direct result of these concerns the SACNE program initiated a curriculum review process aimed at developing a more credible and reputable nursing program. The model of curriculum implementation, specifically problem-based learning (PBL), appeared to be the most vital and pivotal decision to the program. It would mandate the method every instructor would use to facilitate the learning process. This, I felt, was essential as the role of clinical instruction and supervision revolves around unexpected and unpredictable events and having a variety of curriculum delivery methods proves to be an exhausting experience. Clinical nursing education represents one of the most challenging aspects of the faculty's role because nursing educators are required to teach crucial aspects of comprehensive clinical practice in limited time periods and in an increasingly demanding, high-acuity affiliation sites (Beitz, 1996). This challenge would be more manageable if a curriculum were clearly articulated, with a 'process' for

curriculum clearly defined, and a focus consistent with relevant theory that corresponded to, supplemented and enhanced the classroom activities. This, ideally, would enhance instructional effectiveness while simultaneously helping students make the vital link between theory and practicum.

It was with great interest and enthusiasm I chose this topic for my creative project proposal. The project centered around obtaining feedback from clinical nursing instructors on how a process-oriented curriculum (PBL) could be successful in the clinical nursing setting. I chose to solicit the views of several instructors directly affected by the proposed new process of curriculum delivery because I believed they would be most aware of the costs and benefits of implementation of PBL in the clinical setting.

My concern about and interest in PBL was genuine, as I anticipated the role for clinical instructors would be changed as a direct result of this curriculum restructuring. I expected that the more common and familiar practice of teacher-directed learning might be transformed into something many clinical instructors would not recognize, or be familiar with.

My Interest In The Topic

My understanding of PBL is that of a student-centered, experiential learning situation aimed at developing clinical reasoning, structuring knowledge in real-life contexts, motivating learning, and developing self-learning skills. While I am apprehensive in promoting total self-direction and independence in the clinical setting, I am optimistic that this style of curriculum process has the potential to change the future education of nurses in positive ways, especially in terms of meeting the needs of the rapidly changing health care system and the necessity to stay abreast of the constant

health care advancements. I feel the benefits of PBL (such things as autonomy, self-direction and collaborative learning) do promote higher levels of critical thinking and metacognition acquisition. In contrast, teacher-directed learning inhibits the development of self-motivated, life-long learning skills. If learners were expected to take responsibility and be active participants in the learning process, one would hope learning would be more valued and more meaningful.

Because PBL was likely to take center stage in the quest to transform the SACNE program into an effective process to curriculum delivery, I felt I had an obligation to the program and students to be both knowledgeable and cognizant of the issues surrounding this topic.

Others' Interest In The Topic

It was expected the implementation of PBL would directly affect every clinical instructor within the SACNE program. PBL would require a collaborative approach between the student and instructor while simultaneously necessitating the instructor to act a facilitator in promoting skills of critical thinking and life long learning. Traditionally, clinical nursing instruction has tended to be an isolated endeavor with minimal feedback for the purpose of professional growth. When this is combined with variation in the quality of teaching methods in the clinical setting, it is difficult for the nursing student to remain cognizant of the expectations required from the multitude of instructors. PBL, from a clinical nursing perspective, was expected to provide instructors with a consistent framework to guide practice while meeting the goals and expectations of both the SACNE program and the student.

Literature Review

A paradigm shift is taking hold in higher education (Barr & Tagg, 1995). “The paradigm that has governed our colleges is this: A college is an institution that exists *to provide instruction*. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists *to produce learning*.” (Barr & Tagg, 1995, p. 9). Learning style has been described as an attribute or characteristic of an individual who interacts with instructional circumstances in such a way as to produce differential learning outcomes (Linares, 1999). Teacher-directed learning, the student learning strategy presently used at the SACNE program, carries the risk of inhibiting these individual characteristics and potentially restricting the quality and quantity of learned knowledge.

In April, 2000, the SACNE curriculum committee determined a ‘process-oriented’ approach to curriculum implementation would best suit the needs of the institution. Process-oriented curriculum is supported by the literature as giving students the abilities to acquire skills of critical thinking, problem solving and life-long learning (Rambur, 1999). The process can take many forms but the end result is acquisition of skill and knowledge in autonomous learning, critical thinking, self-direction provided through the non-limiting channels of facilitation, corporative learning, and metacognition (Rambur, 1999). As early as 1978, Abrahamson said there needed to be more than traditional teacher-directed instruction in nursing education because curriculum was much more than that. “It is dynamic, not static. It is the product of planning and execution; it varies with its participants, both teachers and learners; it changes in subtle ways even when it is apparently unchanging; in short, it has an existence which goes beyond the concept of a static listing or description of its formal components” (p. 951).

Nursing literature has addressed the importance of theory and research in the baccalaureate curriculum, and professional nursing literature has called for evidence-based nursing practice since the early 1970s (Rambur, 1999). The plea that all nurses must care enough about their practice to make sure it is based on the best possible information is not new (DiCenso & Cullum, 1998). Although evidence-based nursing has been advocated for years, the struggle with how to make it happen overrides the use of it (DiCenso & Cullum, 1998). The likelihood that evidence-based practice / problem-based practice can help ameliorate health care related problems should encourage its dissemination (Guyatt, Cairns, Churchill, Cook, Haynes, Hirsh, Irvine, Levine, Levine, Nishikawa, Sackett, Brill-Edwards, Gerstein, Givson, Jaeschke, Kerigan, Neville, Panju, Detsky, Enkin, Frid, Gerrity, Laupacis, Lawrence, Menard, Moyer, Mulrow, Links, Oxman, Sinclair, & Tugwell, 1992). However, the barriers to practice continue to inhibit and prevent its use. Time constraints, limited access to the literature, lack of training in information seeking and critical appraisal skills, a professional ideology that emphasizes practical rather than intellectual knowledge, and a work environment that does not encourage information seeking (DiCenso & Cullum, 1998) are just a few of the obstacles that present this challenge to implementation.

Evidence-based nursing is merely one method by which nurses can manage the explosion of new literature, introduction of new technologies, concerns about health care costs, and increasing attention to quality and patient outcomes (Kessenich, Guyatt, & DiCenso, 1997). Though the obstacles preventing optimal health care practice seem immense, one need only reflect on the benefits from the patient perspective in making a change seem justifiable. Kessenich et al (1997) discovered that patients receiving

researched-based nursing interventions showed sizable gains in behavior, knowledge and psychological outcomes compared with those receiving routine nursing care.

This struggle to incorporate ‘process’ curriculum and the discovery that a ‘process’ could address rising health care concerns is not unique only to nursing but common to all health care professions, including medicine (DiCenso & Cullum, 1998). Based on the awareness of limitations of traditional determinants of clinical decisions, a new paradigm for medical practice has also arisen. Evidence-based medicine deals with some of the uncertainties of clinical medicine and has the potential for transforming the education and practice of the next generation of physicians (Guyatt et al., 1992). There will continue to be an exploding volume of literature, rapid introduction of new technologies, deepening concerns about burgeoning medical costs, and increasing attention to the quality and outcomes of medical care (Guyatt et al., 1992) and what better way of staying abreast of these challenges than through the use of PBL/evidence-based practice?

Evidence-based nursing involves skills of problem definition, searching and evaluation, and the application of original research literature (Kessenich et al., 1997). Similarly, PBL is a student-centered, experiential learning strategy aimed at developing clinical reasoning, structuring knowledge in real-life contexts, motivating learning, and developing self-learning skills (Baker, 2000). McMaster University School of Nursing has pioneered problem-based learning curricula and has sustained its evolution by supporting other nursing facilities in their endeavor to develop problem-based learning pedagogy (Baker, 2000), so there is proof it can be done, and done well.

Autonomy

Practical concerns for professional survival and institutional efficiency tend to override pedagogic objections that can be raised against independence in learning (Cornwall, 1988). “A move towards independence in learning and relaxation of some conventional constraints must be associated with greater freedom of choice for the learner; but, as it seems to be the case for freedom more generally, one may create more genuine autonomy by imposing a well defined and agreed set of ‘rules of the game’” (Cornwall, 1988, p. 245). While I agree autonomy in learning can be productive I also agree with Cornwall’s statement about ‘rules of the game’. There need to be established boundaries to ensure content focus and relevance. “Autonomous learning is a process in which the learner works on a learning task or activity and is largely independent of the teacher who acts as manager of the learning programme and as resource person” (Higgs, 1988, pp.40-41). Under these circumstances the behavior of the learner is characterized by responsibility for his or her learning, a high level of independence in performing learning activities and solving programs which are associated with the learning task, active input to decision making regarding the learning task, and use of the teacher as a resource person (Higgs, 1988). Boud (1988) states the notion of autonomy encompasses three groups of educational ideas:

First, it is a goal of education, an ideal of individual behavior to which students or teachers may wish to aspire: teachers assist students to attain this goal. Secondly, it is a term used to describe an approach to educational practice, a way of conducting courses which emphasizes student independence and responsibility for decision making. Thirdly, it is an integral part of learning of any kind, no learner

can be effective in more than a very limited area if he or she cannot make decisions for themselves about what they should be learning and how they should be learning it: teachers cannot, and do not wish to, guide every aspect of the process of learning. (p. 17)

Self-directed Learning

There is a link between self-empowerment and self-directed learning (Majumdar, 1999). The innovation of self-directed learning was prompted by the fundamental belief in the importance of nurse empowerment. An empowered nurse is one who has the necessary knowledge and skills to assume a role in health promotion at the macro-social level and one who is able to teach, counsel and empower the patient (Majumdar, 1999). While Linares (1999) argues that academic success can not be predicted on the basis of learning style of self-direction, Lindeman (2000) states adult learners are self-directed, highly motivated, goal directed individuals who want active input into the learning process. There is a positive relationship between learning style and an individual's self-directedness when adaptive flexibility in the context of various learning situations is considered (Lindeman, 2000).

Critical Thinking

The realization that knowledge use is as important as knowledge acquisition has shifted the focus to critical thinking in many disciplines (ONeill & Dluhy, 1997). Critical thinking is a unique type of purposeful thinking using assumptions, knowledge and competence to identify and challenge personal beliefs as one explores and creates alternatives (Sandor, Campbell, Rains, & Cascio, 1998). Nursing educators admission committees must be mindful of which applicants are the most strongly prepared to

engage in the critical thinking skills necessary for clinical practice (Sandor et al., 1998). Critical thinking enables the nurse to reason and make judgments about patients (Oermann, 1997). “Critical thinking is a non-linear, recursive process in which a person forms a judgment about what to believe of what to do in a given context” (Oermann, 1997, p. 25).

Students who demonstrate critical thinking question about care and interventions, demonstrate a willingness to search for answers, are inquisitive and eager to acquire knowledge even if use of this knowledge is not readily apparent, consider multiple perspectives to care, explore ideas and problems in new ways, and are open minded (Oermann, 1997).

Facilitation / Collaborative Learning

“Humans have a natural potential for learning, and learning will occur if the student perceives the subject as important” (Musinski, 1999, p. 29). Learning will occur when the adult student is facilitated and made a responsible participant in the learning process (Musinski, 1999). Learner-student partnerships within nursing education have had a tremendous appeal to nurse educators and students because of the emphasis on the relational nature of teaching in which the partners are able to experience a “mutual connectedness” (Paterson, 1998, p. 288). By integrating cooperative learning experiences throughout the curriculum of nursing education, nursing educators and students alike achieve higher academic outcomes and much, much more (Zafuto, 1997).

Constructivist Epistemology

Constructivist epistemology offers an alternative to traditional pedagogy in that it is student-focused and considers previous learning done by the student as a foundation

upon which to modify, build and expand new knowledge (Peters, 2000). Constructivism appears to be congruent with potential education for the enhancement of self-directed learning. It enhances empowered learning because of the consideration of prior knowledge and the ownership of learning by the student (Peters, 2000). Implicit in this is the development of metacognition skills.

Metacognition

The metacognition skills of monitoring, analyzing, predicting, planning, evaluating, regulating, and revising frame the nursing process and support clinical reasoning (Pesut & Herman, 1992). Nurse educators who encourage metacognition skill acquisition are likely to accelerate student comprehension, understanding, and mastery of nursing diagnosis, nursing process and clinical reasoning (Pesut & Herman, 1992). Metacognition is a major process by which highly efficient and effective clinical learning can be enacted (Beitz, 1996). Students with highly developed metacognition are personally responsible learners and have skills to cope with future uncertain clinical problems (Beitz, 1996).

While the literature supports evidence-based practice and PBL as providing autonomous, self-directed, collaborative learning with the potential of enhancing life-long, metacognitive skills, it fails to familiarize one on how to successfully implement such a process in a non-traditional classroom setting. This is where my concern for the SACNE program originated. I felt the implementation of such a process and all the benefits associated with it might fail if we didn't first explore the perceptions of the sessional clinical nursing instructors regarding the effectiveness of PBL in the clinical setting.

Methodology

Research Question

What are the benefits of PBL for clinical nursing and does a collaborative (inclusion of sessional clinical instructor input) approach aid in its implementation in the clinical setting?

I initially began with the intention of carrying through with research based on the hypothesis: Implementing problem-based learning (PBL) in the clinical environment enhances a student nurse's clinical decision-making skills and promotes self-directed learning. After conducting my first pilot interview in reference to PBL I realized the goals of increased clinical decision-making skills and enhanced critical thinking were overshadowed by how PBL would be implemented into the SACNE program clinical field. While it sounded scholarly to enhance student skills, it was not the concern taking center stage, as I learned from a close colleague and friend during the pilot interview. In light of this revelation I realized a more important task was discovering then addressing the concerns of those who would be directly affected by the implementation of PBL in the clinical setting, the clinical instructors. Thus, my working hypothesis changed to: Discovering and addressing the concerns of the SACNE clinical instructors in reference to the introduction of PBL in the clinical setting will aid in its successful implementation.

All instructors expected the implementation of PBL would directly affect them. PBL requires a collaborative approach between the student and instructor. Simultaneously it challenges the instructor to act as a facilitator in promoting skills of critical thinking and life-long learning, all in a non-flexible, time pressured clinical environment. Clinical instruction presently tends to be an isolated endeavor with minimal

feedback for the purpose of professional growth. Couple this with the many differences in teaching method preferred by each individual instructor and there exists the potential to make the implementation of a uniform approach to PBL highly difficult, if not impossible. My initial grandiose idea of enhancing student-centered critical thinking for the purpose of improving clinical decision-making skills would have little meaning if there were no interested or motivated instructors willing to carrying on the essential role of acting as facilitators to this process. I had little doubt PBL would enhance, strengthen and provide consistency to the quality of learning the student nurse would receive through the SACNE program. However, without the cooperation of the clinical staff, any efforts in that direction might be pointless.

Research Tradition

There was an apparent need to find out what the present issues, concerns, perceptions and attitudes were toward PBL in the clinical setting. A starting point for discovery and investigation needed to be established before there could be any expectation of success in changing the SACNE clinical program for the better. Because I was interested in personal opinion and insight into PBL and the impact it would have on each clinical instructor I chose to use interviews that focused on the roles of current clinical instructors, their knowledge of PBL and the potential impact they felt PBL would have on existing instructional roles. According to Bermosk and Mordan (1964) the interview process should come naturally to nurses since they have had to rely on their own ability to communicate effectively through goal-directed, purposeful conversation in order to effectively perform their jobs. So, I was confident interviewing would produce accurate, reliable results. I tried to use both a qualitative and quantitative approach to

interviewing since I was seeking descriptions, opinions, and suggestions. Neuman (1997) believes that qualitative and quantitative interviewing allows one to become familiar with basic facts and concerns, allows one to develop a well-grounded mental picture of what is occurring, determines feasibility of doing additional research and develops techniques and a sense of direction for future research. All of these were pertinent points to the intent of my study.

I feel my choice of interviewing is supported by Gorden (1969) and his reasons for using interviews:

1. The interview provides opportunity to motivate the respondent to supply accurate and complete information immediately. This was essential for my interviews, as every clinical instructor was going to be directly affected when PBL was introduced in the clinical setting.

2. The interview allows a greater flexibility in questioning the respondent. This was important, especially if the respondents would want to elaborate on specific areas of concern. As well, if an important concern was raised, I wanted to have the liberty to ask for clarification or elaboration immediately, something other non-contact methods of gathering information and data would not allow.

3. The interview allows for greater control over the interview situation as opposed to other methods of information retrieval. If necessary I felt I could alter the sequence of questions and review or reflect on areas where additional interpretation was required.

4. The interview allows for greater opportunity to evaluate the validity of the information by observing the respondents' non-verbal reactions. I wanted to be able to gain a sense of feeling (such things as passion, frustration or anxiousness) for the areas

discussed and, perhaps, even determine when respondents might be saying things they were not sincere about. I expected some respondents might be anxious if they did not support my views or did not support PBL. These were real issues since it had been designated as the new curriculum process for the SACNE program.

I was looking to explore another's mind, to obtain information in regard to specific situations of attitudes, evaluate resources, and to seek advice, all of which Fenlason, Ferguson and Abraham (1962) discuss as being purposes of interviewing. Interviewing is regarded by researchers as one of the best ways to obtain detailed data (Frey & Oishi, 1995).

The purpose of the interview is to bring to light new knowledge of purposes and needs as well as new information about the relevant facts (Garret, 1972). The interviewer should not let a set plan of action dictate the interview; flexibility is always desirable (Garret, 1972). I began my research prepared to hear things I perhaps did not believe in or agree with.

Strategies

I needed approval from the Dean of Health and Sciences and Dean of Nursing at both The U of L and LCC. I stressed the importance of conducting clinical instructor interviews as being the vital first step to develop a sense of direction and insight for the introduction of PBL to the clinical setting. Once approval was granted I began the participant selection process.

The sample group chosen for the interviews consisted of SACNE sessional clinical instructors with at least three years of fulltime instructional clinical hours or an equivalent to 1572 hours of part-time clinical instructor hour, completed in the last seven

years of working for the SACNE program. This experience was essential, as I needed to ensure familiarity with the roles and duties of present clinical instruction and a familiarity with the proposed PBL curriculum. I chose three years of experience or its equivalent as I feel it took me three years of teaching experience to feel comfortable with the clinical teaching role. The participants were not selected from the full-time tenured faculty (who also engage in clinical instruction) as it is mandatory they participate in all meetings associated with the curriculum change. Sessional clinical instructors have the option of attending such meetings and, therefore, might be expected to have a different understanding and knowledge of PBL. Since sessional clinical instructors perform the majority of clinical instruction hours I felt it was important not to skew the results with the knowledge the tenured faculty have when it comes to PBL in the clinical setting.

The sample group was chosen purposefully, as one instructor was chosen from each of the four focus clinical areas: (1) Medical/surgical (hospital based), (2) Public/home care (community based), (3) Psychiatry (acute and chronic) and (4) Maternity/pediatrics (hospital based). This ensured representation from the four focal clinical areas for which the SACNE program allocates the majority of clinical experience hours. I expected information gained from any of the above four areas would be unique in some way. Because some instructors teach in more than one area I based their category selection on the majority of hours worked in an area over the three years or its equivalent. I contacted the prospective participants by phone to discuss the possibility of participating in the interview. I discussed the intent of my research project during this initial contact to portray and stress my commitment to ensuring productive and relevant

use of the data collected and to stress to prospective participants the importance of their input.

The interviews were conducted over a four-week time frame, thus allowing for one interview per week. One-week per interview gave me time for analysis, interpretation and reflection between each of the interviews. I felt this was crucial as “efficiency in the interview relationship is proportional to the adequacy of understanding that is obtained, understanding that will make effective help possible” (Garret, 1972, p.74). Each interview lasted between 15-20 minutes. I did not conclude the interview after all questions were asked. Rather I stayed for discussion because I had found in the pilot interview the quality of discussion continued even after the formal interview had been completed.

The consent letter, which described the purpose of the interview and project, was thoroughly reviewed with participants before they were asked to sign it. (see Appendices A and B for consent letter and form).

Consistency of location was maintained for all four interviews. The hospital library worked well for the pilot interview so I chose to reuse that identical location. If the participant would have chosen some other location it would not have influenced the interview adversely provided the setting and location had some degree of privacy with a comfortable, relaxed atmosphere (Garret, 1972).

The interviews were audio-taped. I took my notes on a pre-scripted interview guide (see Appendix C for interview guide). The use of the tape recorder and note taking was explained to participants. They had the option of refusing if they felt threatened or intimidated. I stressed that the tape-recording was to gain all I could from the interview

while simultaneously minimizing any misinterpretations or missed facts, opinions and concerns during the task of note-taking.

Technique

The interview consisted of some open-ended questions as I wanted the respondents to talk freely (see Appendix D for interview blueprint). MacKay (1980) refers to open-ended questions as “non-restrictive” or “indirect” questions as respondents are in no way restricted in their choice of answer and are unobtrusively given the opportunity to say as much as they like, without the danger that the interviewer might put answers into the respondents’ mouths (Garret, 1972).

General questions and opinion-seeking questions, both types of open-ended questions, were used because I wanted to know the how and what, the concerns, and the opinions and feelings of the respondent. MacKay (1980) contends this is best accomplished using these two types of questions. *What* is a question that evokes an explanation or description (Fenlason et al., 1962) and it is a question I used frequently throughout the interview. “The open question is broad; allows the interview full scope; invites him to widen his perceptual field; solicits his views, opinions, thoughts and feelings; and may widen and deepen the contact and open wide the door to good rapport” (Benjamin, 1981, p. 83).

The coordinator of the SACNE program requested that I present the data obtained from the interviews to the entire faculty in hopes of shedding insight into the potential impact PBL would have on the clinical setting, from the clinical instructors’ perspective. I will then compare this data to the literature, and add additional recommendations, in hopes of aiding in the seamless implementation of PBL in the clinical nursing setting.

A chronological timeline of the events of this study is attached (see Appendix E).

Definitions of Terminology

Southern Alberta Collaborative Nursing Education (SACNE): A collaborative nursing program between the University of Lethbridge (U of L) and the Lethbridge Community College (LCC) that allows the student the choice of a nursing diploma after two and a half years of study, or a nursing degree after four years of study.

Problem-Based Learning (PBL): A process-oriented approach to curriculum delivery that is a student-centered, experiential learning situation aimed at developing clinical reasoning, structuring knowledge in real-life contexts, motivating learning and developing self-learning skills. It focuses on acquiring skills of learning much broader than the acquisition and application of content. PBL requires a collaborative approach between the student and the instructor while simultaneously necessitating the instructor act as a facilitator in promoting skills necessary for life-long learning.

Sessional Clinical Instructor: A nursing teacher, hired for either a semester or one year contract, who facilitates student learning in a non-traditional classroom setting. The goal for the instructor is to facilitate hands on task and skill acquisition while simultaneously facilitating theory to practice application.

Clinical Setting: A student-learning environment outside of the traditional classroom setting aimed at facilitating student nurse technical skill while simultaneously bridging the gap between the concepts of theory and practice.

Problems

Before the study began, I anticipated several problems that might have had a negative influence on such things as access to subjects and usefulness of results.

1. Fear that the stakeholders, Dean of Health and Sciences and Dean of Nursing, would deny permission for the study based on the perceived threat the data obtained from the interviews might pose to PBL implementation. I stressed my intention of wanting to aid in the smooth and competent transition to the new curriculum process and to discover potential remedies to unforeseen difficulties or issues before they occurred. I stressed my intention of acting proactively. Both parties reacted positively to me going forward with the study and an invitation was received to present the interview findings to the entire SACNE faculty.

2. Clinical instructors' refusal to participate. I stressed my intentions of using the interview data as a means of identifying the level of understanding among clinical instructors in reference to PBL, and to act as an advocate on behalf of the clinical nursing instructors to ensure their voices were heard, both prior to the PBL implementation process. The first four selected instructors all agreed to participate in the study. The only hesitation that surfaced was in respect to the issues of anonymity. After reassuring absolute anonymity, except in reference to clinical expertise area, there was no refusal or doubt about participation in the study.

3. Obtaining an overwhelming amount of data (either in support of PBL or not in support of PBL) and not being able to address or accommodate all concerns. The interviews were 15-20 minutes in duration. The data obtained from the interviews was analyzed and presented in a manner that effectively and accurately reflected the views of the four respondents.

4. Receiving negative feedback only because the respondent was opposed to change and not necessarily PBL. I was able to differentiate between the respondent not

wanting change and not wanting PBL. In general, I sensed the respondents were not intimidated by change, they seemed to genuinely want what was best for the SACNE program, especially in terms of student satisfaction and learning.

Data Analysis and Discussion

Based on the data obtained from the four interviews I was concerned about and interested in (a) exploring what the clinical instructors have presently done in the clinical setting to compare how PBL would affect the current clinical practice (b) how clinical instructors felt PBL could be successfully implemented in the clinical setting based on current clinical practices and (c) any input that would assist in the challenge of educating clinical instructors to a new form of curriculum delivery. My categories for analysis were as follows:

1. Clinical instructor area of expertise: The four clinical focus areas will have unique assets and barriers to address in the quest for successful PBL implementation.
2. Instructor's current practice in the clinical setting: It was important to know the current practice of clinical instruction to effectively understand how PBL might affect or alter current practice.
3. Instructor knowledge level of PBL: This was vital in determining a starting point in reference to PBL education.
4. Instructor experience with PBL: This was useful information that would aid the researcher in implementation. Insight into what worked and what did not work in any PBL setting would be useful information.
5. Instructor suggestions on successful implementation of PBL in the clinical setting: Any suggestions or input from clinical instructors about PBL implementation would be an asset, especially in terms of working in a collaborative approach to increase the success rate of PBL implementation.

Thematic and content analysis was used because of the amount of qualitative data obtained from the interviews. I was looking for major themes that surfaced from the categories mentioned previously. The interview responses were analyzed for both common and uncommon themes necessary in illustrating clinical nursing instructors' different levels of knowledge about PBL. Four sessional nursing instructor interviews, one per week, were conducted in the areas of medical/surgical, public/home care, psychiatry and maternity/pediatric nursing instruction. The medical/surgical interviewee was a female instructor with five years of clinical teaching experience teaching first through third year nursing students. In addition to clinical instruction she also worked part-time as an acute surgical nurse educator for an urban hospital and had ten years of intensive care unit experience. The interview was conducted on January 7, 2002 at 1800 hours in an office at the hospital. The public/homecare interviewee was a female instructor with four years of clinical teaching experience instructing first through fourth year nursing students. In addition to clinical instruction she also worked part-time in a neonatal intensive care unit, maternal child and labor and delivery in an urban hospital. The interview was conducted on January 15, 2002 at 1000 hours in the hospital library. The psychiatry interviewee was a male instructor with four years of clinical teaching experience instructing second and third year nursing students. In addition to clinical instruction he also worked part-time on a medical floor and dialysis unit. The interview was conducted on January 28, 2002 at 1000 hours in the hospital library. The maternity/pediatric interviewee was a female instructor with three years of clinical teaching experience instructing first through third year nursing students. In addition to

clinical instruction she also worked part-time as an educator on pediatrics. The interview was conducted on January 21, 2002 at 1230 hours in the hospital library.

The verbatim responses to the interview questions were as follows:

Table 1:

Medical/Surgical Interview Data

Interview Question	Interviewee Response
1. Tell me what you do at the college?	I function as a clinical instructor on a sessional basis for the college.
2. How long have you been a clinical nursing instructor?	Five years in medical/surgical nursing.
3. Rank in order, from the most to the least time consuming, the top activities you perform in a typical clinical day.	Ensuring basic nursing care is done. And that includes baths and medications and that sort of thing. Secondly, likely teaching. The teaching role and that corresponds to all of the activities in the first activity and involves all activities of care to the patient. Thirdly, reviewing patient safety issues. Either by myself ensuring the patients are safe or reviewing it with the student to ensure the patients are safe. Fourth, acting as a mentor. It depends on student personality on whether I am received well or not. And number five sometimes I feel like a babysitter. Being sure that they are doing their work. That they are signing off for breaks. Ensuring students are conducting themselves professionally and responsibly. Calling them on poor behavior, that perhaps they could have done things a little differently. Asking how would you have handled the situation differently? Have you done this, have you done that? At the end of the shift it is definitely a lot of babysitting. Maybe I shouldn't consider it babysitting but there should be certain standards, since they are adults, that I do not have to chase after them, but yet I have to. Students have no clue that certain things need to be done. There not forgetting to do things because they are being nasty or don't feel like doing it, they don't have a clue. Sometimes they are not organized enough and they are not taking notes. I chase them around. Evaluation. Done independently of clinical time. I try to make notes throughout the day on (con't)

Table 1 Continued:

Interview Question	Interviewee Response
	my breaks just because evaluation is such a big part of what we do.
<p>4. From your perspective is the focus of clinical learning presently on the acquisition of:</p> <ul style="list-style-type: none"> a) skill b) knowledge c) both d) neither e) ensure 	<p>Skill – yes Knowledge – indirectly Both</p>
<p>5. In your own words, define PBL.</p>	<p>Self-directed, learner centered learning that revolves around the student encountering a problem and gaining the knowledge and skills to solve that problem.</p>
<p>6a. Do you feel that PBL would be an effective teaching method in the clinical setting?</p> <ul style="list-style-type: none"> a) Yes b) No c) Unsure <p>6b. Describe.</p>	<p>No, not under the present circumstances. The way we have to run clinical sessions now is very structured and very routine in order to get things done. Having clinical groups of six to eight students does not lend itself to learner centered learning, it has to be patient centered work being done. It has to be patient centered, skill focused. I barely make it to knowledge we get to the completion of skills. PBL does not lend itself to having time to identify a problem and having time to work our way through it. It might work if we had instructors very well trained in it and small student-instructor ratios.</p>
<p>7a. Have you used PBL in the clinical setting?</p> <ul style="list-style-type: none"> a) Yes b) No <p>7b. If yes, describe</p>	<p>Indirectly. If a student approaches with a concern, realizing there is something they need to figure out or questions then I talk with them their way through it. What is the problem exactly and how do we go about solving it? Happens only two times in a shift related to it being so time consuming. It is ongoing throughout the day. Quite often if we identify a problem in the morning it's on the side and in addition to all the skills and tasks we need to already complete. We work on it throughout the day. They will come back to me through the day and say I have learnt this. I often say (con't)</p>

Table 1 Continued:

Interview Question	Interviewee Response
	have you considered this or maybe you should check this. I am usually multitasking. I am checking charts, checking medications while I am talking to someone about a problem-based situation. I find myself prompting the student, have you checked this or thought of that?
8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?	Definite a mentor, someone that can teach me hands on. Someone to give examples and maybe some role-playing. I would need literature. Student input into how it would work. We need everything. I do not know enough about it to know how to implement it properly.
9. What do you feel should be the role of the clinical nursing instructor in making PBL a success in the clinical setting?	Huge, the whole crux of everything because it is going to cause the student to have an entire shift in how they learn. Needs to be consistent otherwise there is going to be confusion between one clinical instructor and another and one day to another. If it is not consistent and done well it is going to fold. The nursing instructor is pivotal. It will fold without the instructor's input and involvement.
10. With your present knowledge of PBL and your experience as a clinical instructor would you agree that PBL promotes critical thinking? a) Yes b) No c) Unsure	From what I know, yes. Under perfect circumstances yes. In the real world of what we have now, I don't know.
11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?	I think I would need some theory type lecturing, written and verbal. Working in a group possibly. Figure how we are going to do it as instructors before delivering it to the students. Back up, lots of back up from the College and from someone who is doing it. Clinical instructors using it effectively. It is one thing theoretically to say this is the way it is to go, but when you get to the bedside I would like to talk to someone who really knows. So hands on what will work and (con't)

Table 1 Continued:

Interview Question	Interviewee Response
	what will not work. Need to use time wisely in this because if we get burnt from the onset, it will be really difficult.
12. Is there anything else you would like to add?	The one thing that does cross my mind some things are must knows in nursing, not because you want to or because you discovered there is a problem related to it or because you stumbled upon it, there are some things you must be known at certain points in time and in a certain time frame. For example, you can't decide you need to figure out how to do a blood pressure two semesters in, there are some things that must known at certain times and this does not lend itself to true PBL, but that lends itself to true nursing care. Can you assume that every learner has the critical thinking skills in the first place to identify a problem because if you do not know what you are looking for how can you solve the problem. Every learner is so different. It will be a difficult transition. If there are instructors not willing to do PBL then they should not be kept on staff. Either you are on board or you are not. Someone needs to follow it to ensure that it's actually being done. I know it's difficult and that it is probably a difficult thing to ask of the College at this time. It has to be full force or nothing.

Table2:

Public/Home Care Interview Data

Interview Question	Interviewee Response
1. Tell me what you do at the college?	I am a clinical adjunct instructor. So my actual contact with the students is in the clinical setting.
2. How long have you been a clinical nursing instructor?	I started teaching public health clinical in January 98, so four years. Half of the time or just a little more has been in public health and the other half would be obstetrics, labor and delivery and post-partum. I have also taught diploma exit students. I teach first (con't)

Table 2 Continued:

Interview Question	Interviewee Response
	through fourth year nursing students.
<p>3. Rank in order, from the most to the least time consuming, the top activities you perform in a typical clinical day.</p>	<p>Probably the most time consuming could fall under housekeeping type activities or public relations or anxiety control. Having students and instructors actually come to terms with the experience and what is required. It is a learning experience as opposed to a mentoring or more of instructional as opposed to a mentoring experience. I think a lot of what I did in public health initially was to set up the experience and make sure it was working for the preceptors and the students. We would be in various different places, urban and rural. It would be all different offices and personalities and scheduling. So in some ways that was probably my number one job. In ranking I guess the second would be ensuring the needs of the students are met and getting the experience that would facilitate their professional development and show the breadth of nursing that community has to offer. One on ones is third. After the first few days of ensuring scheduling is in place and making sure everything is running smoothly and going over where would you like to go and what would you like to see, I would then spend some time clinically with students in the immunization clinics and going on home visits and sometimes both of those things in one day. I guess trying to have all the aspects that we or all the knowledge that we bring to nursing— showing the relevance to community. I found that students often want to leave the theory component and medical knowledge behind and didn't want to deal with that part of it as much. Because I was the only and first public health nurse our agencies had not been used to students in that nature. They were used to diploma exit students or RN's who had gone back to school. Unfortunately not mentoring. I learned more from a public health nurse who was employed the following year. Depends on agencies, the flavors of communities and the preceptors. Each student will get a different experience.</p>

Table 2 Continued:

Interview Question	Interviewee Response
<p>4. From your perspective is the focus of clinical learning presently on the acquisition of:</p> <ul style="list-style-type: none"> a) skill b) knowledge c) both d) neither e) ensure 	<p>I think it is a combined. So it would be a combination of both skill and knowledge. The one that I would rather add to tell you the truth is one that would say to have people to have a bit of a look at what nursing is outside of the hospital. Because these were third year students most of their clinical focus has been in an institutional setting. Again, nursing outside of the hospital is different because most of the students experience up till this point has been in the institutional setting. So I focus with the different roles the nurses do in the community. I am involved with fourth years who are somewhere in a public health rotation and they are really looking at moving from student to entry-level practitioner. Where you find the information is also important, not just knowledge acquisition. Depending on the level of training of the student there are different limits to accessibility.</p>
<p>5. In your own words, define PBL.</p>	<p>PBL is what we do typically in the clinical setting. It is acquiring knowledge surrounding a problem or case study as such. It gives them some grounding into why they are learning what they need to learn and it almost gives them somewhere to hang it on to. PBL or my idea behind that is about discovery and sometimes it's not about discovering the answers, it's about discovering the methods of finding the answers or the avenues to get there. Very apparent in public health. Public health has a huge umbrella that it sits underneath. There is a lot of knowledge there from basic immunizations clinics to childhood development and all the way through mothering and communicable disease follow-up, health and sexuality. I think you really start to see how large the knowledge base that we need to have access to becomes more apparent in the community.</p>

Table 2 Continued:

Interview Question	Interviewee Response
<p>6a. Do you feel that PBL would be an effective teaching method in the clinical setting?</p> <p>a) Yes b) No c) Unsure</p> <p>6b. Describe.</p>	<p>I think I am unsure. I'm probably unsure because I don't know how it will work within the community or within the clinical setting. I think that within the community setting PBL will be much more accepted than within the hospital setting. It might work better in community than acute because of the pace. In the community, not because it is slower, it is busy, but they do have that ten minutes to look something up. They are not as specialized and probably not as territorial. Biggest issue will be clinical agencies and their response to PBL.</p>
<p>7a. Have you used PBL in the clinical setting?</p> <p>a) Yes b) No</p> <p>7b. If yes, describe</p>	<p>No, not in its form that I've seen now. I think that's what we really do in the clinical setting because so many of the problems and interventions you are not aware of until you are in the home and they do kind of take you by surprise and you have to be able to run with it from there and you can't take your little package all set up and say here it is. So I think that in a sense we kind of do that but we all tend to come from more the expert role in telling them this is what I would do in this situation rather than have them explore the opportunities. Community forces you to think in PBL ways. We, as instructors, act more as the experts in trying to provide all the answers.</p>
<p>8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?</p>	<p>Huge, more than we have. I really think we have to improve our computer literacy. I think we need to have access and greater understanding among staff. I think it is electronic. Familiar use of electronics. And become familiar with their use. We need to have access to journals and a greater understanding of what is good research.</p>

Table 2 Continued:

Interview Question	Interviewee Response
<p>9. What do you feel should be the role of the clinical nursing instructor in making PBL a success in the clinical setting?</p>	<p>I think they have to bring enthusiasm for nursing, that's probably the big one. In clinical you have to really like what you do because that is what comes across to the students. We need to bring the questioning mind that we are always asking questions. Speak out loud about what's going on in our minds so that students are aware even in things like group dynamics, when we look at the students groups we work with. I think that most people in the clinical setting have done this already, we have to feel OK with saying, I don't know all the answers, we aren't the experts. I personally find it a lot more friendly environment when I'm not supposed to have all the answers. We can look it up together and explore it together and come to different ways to nursing. We can get to the same place and I think new blood coming in and new ideas is really important, probably they haven't been indoctrinated in to our old ways of thinking. It is really hard for us to let go of our sacred cow. It has to be looked at in a new way. We need to take new challenges. PBL is in a sense just that, it is very hard to give up our old ways, to look at a new way that won't necessarily solve all of our problems.</p>
<p>10. With your present knowledge of PBL and your experience as a clinical instructor would you agree that PBL promotes critical thinking?</p> <p>a) Yes b) No c) Unsure</p>	<p>I want to say the research says that. I think I would say yes. I think that we critically think. I think we critically think when we decide how much toothpaste to use every morning. It is inherent in you and it can be developed in you. I certainly have met students who can't. My problem is that I am not sure that I have come to a definition of critical thinking. That is a nice word that we throw around, what is it really? PBL is not memorizing this piece of information and regurgitating it to the clinical instructor at the appropriate time. I think our med cards are a perfect example of how not to learn something. We go home and research our meds and buy the cards. There is no learning that goes on from that. I don't know if this will work better but I don't know in some ways that it can be worse.</p>

Table 2 Continued:

Interview Question	Interviewee Response
11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?	PBL groups with student and instructor participation. Role-playing. Better understanding than reading because it is more hands on. I think partly it will come from working with the group and I think a lot of it will be the group dynamics. Some groups are more cohesive to learning and some are detrimental. I think it will be easier for the clinical instructors to make that shift.
12. Is there anything else you would like to add?	PBL is not new, PBL is old, it's over 30 years old. Why haven't we developed a combination method or looked at a different style? Why do we have to be purists? Possibly lecture and PBL combined. We are not reinventing the wheel here. Why now? I think we should be looking at what has driven the change for PBL? What has driven the change for PBL? Student learning or political and are we going to meet the needs of either of them.

Table3:

Psychiatry Interview Data

Interview Question	Interviewee Response
1. Tell me what you do at the college?	I am a clinical instructor, part-time with the SACNE program.
2. How long have you been a clinical nursing instructor?	Since 1998. I have worked in mental health – psychiatry acute care and mental health on a medical and surgical floor and psychiatry unit.
3. Rank in order, from the most to the least time consuming, the top activities you perform in a typical clinical day.	In psychiatry that would be feedback on charting. Going over charts ensuring everything is done and giving individual feedback. Going over individual charts to ensure they are complete because there are often entire page entries. One on one with students. Basic care in regards to the chart and what should be entered into the chart. Charting is a huge thing down there, for me it is, maybe not for them. When I have six students and they make an entire page entry, to give feedback on that is time consuming. It is a lot of (con't)

Table 3 Continued:

Interview Question	Interviewee Response
	<p>reading, there is not a lot of policy and procedure in charting. I suppose there is a lot of a subjective observation. Psychiatry is very individual to the patient. Sometimes the patient walks away from a one to one conversation, but if there is a policy it is the ABC's of psychiatry: Affect, Behavior and Conversation must be charted. Anything over and above that it is so individual to the patient. You push them away, you never go in on a one on one. What you do as an instructor would be an admission, their first admission, you observe that and give any assistance that they might require. Watching and direction. I push the student away. Do a lot of observing. Medications and knowledge of medications is probably second. I want evidence of research, example medication cards. What is the drug family, what it does and what it is used for? I want them to have it in their pocket to know that they researched it. If they can bring it out and read it to me that is proof enough of their research. If I catch a student walking over to a patient and they do not know what the drug is then there is an issue. I use a lot of tomorrows. If you do not know it today research it for tomorrow. Tomorrow they will conference on it. For the most part you observed the patients but you can't say what went on in their mind, so you more or less have to agree with the charting and take it as accurate. Third would be direction. Orientation is a big thing in psychiatry for the students. It is a whole day of orientation. They do not have an assignment and then giving direction after that. There is a lot of direction in who gets to do what and when. That's not real time consuming stuff, just organization.</p>
<p>4. From your perspective is the focus of clinical learning presently on the acquisition of:</p> <ul style="list-style-type: none"> a) skill b) knowledge c) both d) neither e) ensure 	<p>They should be coming with knowledge. They don't come with a lot of skill, some do. Most are coming with those communication skills and book knowledge. It is more book, it is what they have been taught in theory at the college or university, used learned communication skills and a lot of them use it. I often put in their evaluations: used the learned communication skills. They are practicing and learning skills down there. For the most part they don't come with skill. Students are usually overwhelmed, (con't)</p>

Table 3 Continued:

Interview Question	Interviewee Response
	scared and terrified. Once in a while there is one that comes in with a lot of confidence but for the most part they don't know what to expect. For the most part it is very quiet down there.
5. In your own words, define PBL.	To me critical thinking tends to come to mind. If you have a problem you think your way through it and learn. Critical thinking focuses you, gives you direction. If you have a problem you think about it, you learn. In psychiatry there is more room for this, more possibilities, more opportunity because they do learn the communication skills and do learn mental health skills that they can bring in and use in the clinical setting.
6a. Do you feel that PBL would be an effective teaching method in the clinical setting? a) Yes b) No c) Unsure 6b. Describe.	Definitely. It forces you to problem solve.
7a. Have you used PBL in the clinical setting? a) Yes b) No 7b. If yes, describe	To that I would have to say yes. Without knowing there is a specific term PBL. I really encourage critical thinking. If someone comes to me with a question I nine times out of ten fire a question back at them. I don't give the answers, I encourage thinking. What do you think?
8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?	You are promoting it yourself. A format would be good. A syllabus at the beginning of a rotation given to the instructor. Expectations to keep consistency. Not something that we invent on our own. Specific guidelines, other than that you are promoting it. Students need the responsibility of PBL knowledge from the instructor. The student needs the situation, so you have to give them the problem.

Table 3 Continued:

Interview Question	Interviewee Response
<p>9. What do you feel should be the role of the clinical nursing instructor in making PBL a success in the clinical setting?</p>	<p>Knowledge and consistency. Easier in psychiatry and more difficult in med/surg because of the wider broader focus. But in psychiatry a handbook to ensure everyone is promoting the same ideas.</p>
<p>10. With your present knowledge of PBL and your experience as a clinical instructor would you agree that PBL promotes critical thinking?</p> <p>a) Yes b) No c) Unsure</p>	<p>Absolutely.</p>
<p>11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?</p>	<p>It sounds like I am repeating myself but I would go back to saying guidelines. I want to read about it and then I can go and do it. Literature. If I have seen something on paper that I can use and they are telling me this is what we are doing then I can go with that. Watching and observing. But I am a reader and I like to read. Setting the stage is important. I love to role-play and visual. I have never been asked to attend a SACNE workshop about PBL.</p>
<p>12. Is there anything else you would like to add?</p>	<p>No. I can easily pull a situation and create some type of scenario that would reflect PBL.</p>

Table 4:

Maternity/Pediatric Interview Data

Interview Question	Interviewee Response
1. Tell me what you do at the college?	I work as a clinical instructor throughout the whole year on pediatrics for the second year students. In the spring semester I teach mental health full-time for the diploma exit students and I do that also in pediatrics. I have also done the degree students on mental health.
2. How long have you been a clinical nursing instructor?	Three years.
3. Rank in order, from the most to the least time consuming, the top activities you perform in a typical clinical day.	I would say supervising them, it depends where they are at but especially supervising their IV medications, helping them calculate the partial doses and to dilute it properly and in the right concentrations and it seems to take awhile because it is hard for them to understand. I think the concept is hard, we are quite picky with the students because things are triple checked, by the instructor and by another RN, so it is a little more time consuming. I think it is time consuming even starting out the day making sure they have a care plan to ensure they know what they are doing. Another thing that can be time consuming is procedures like dressing changes. Going through the charts. Chart checking. Just overall making sure they are providing safe care.
4. From your perspective is the focus of clinical learning presently on the acquisition of: a) skill b) knowledge c) both d) neither e) ensure	I think for sure it is both.

Table 4 Continued:

Interview Question	Interviewee Response
5. In your own words, define PBL.	I guess that you base your teaching on the problem and having the student be self-directed and develop from there and come up with their gaps in knowledge and what they need to know. They figure it out from the problem instead of just giving the information and giving out the answers. Only parts of this is happening, I guess it depends on the instructor. I think in some ways I do it. I don't give the answers. If you don't know where are you going to find it? It is difficult for them to leave the floor to research answers. We are not able to go down to the library and take it that step further.
6a. Do you feel that PBL would be an effective teaching method in the clinical setting? a) Yes b) No c) Unsure 6b. Describe.	I think probably yes. I like the basics of getting students to think on their own and be in charge of their learning. I like that part of it.
7a. Have you used PBL in the clinical setting? a) Yes b) No 7b. If yes, describe	Attitude is in that direction but not necessarily in its entirety or in full.
8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?	Proper textbooks on the floor. Journals that are up to date and preferably on the floors. I think it would also be helpful if we had internet access.
9. What do you feel should be the role of the clinical nursing instructor in making PBL a success in the clinical setting?	Well I think you would be the one implementing it with the student. So I think you would be the main person doing it. To have a knowledge base. To have the proper support of the College, to give you direction.

Table 4 Continued:

Interview Question	Interviewee Response
<p>10. With your present knowledge of PBL and your experience as a clinical instructor would you agree that PBL promotes critical thinking?</p> <p>a) Yes b) No c) Unsure</p>	<p>Yes, I think for sure it does. It would be ideal for the student to be able to do problem solving and find out what the important problem is in a certain situation.</p>
<p>11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?</p>	<p>Inservice on the college level. Most helpful if everyone needs to be on the same thread in reference to the instructors. I think there are a lot of differences between the instructors, and we need that coordination from the supervisors to make sure we are on the right track with it. Group work.</p>
<p>12. Is there anything else you would like to add?</p>	<p>I think it is the way you approach the students. One thing that I have been doing in the last year is making sure that they fill out a complete care plans and from that come up with the actual nursing diagnosis. What I found from that, beside the students complaining that they had to do them, it forces them to look things up in textbooks a little bit more and forces them to do a little more critical thinking. It forces them to look at the patient problem. So I find that helpful.</p>

Six central themes surfaced in response to the interview questions:

Perceptions of Current Working Context

It was essential to know the current practices of clinical instruction before any proposed change to instructional style could be implemented successfully. A basic understanding of the fundamental duties and responsibilities in clinical nursing would be necessary in establishing a sound foundation in which to initiate PBL. Thus, it was

necessary to compare the present duties and responsibilities to assess how these might aid or hinder the process of PBL. The four respondents prioritized their top clinical instructional responsibilities as follows:

Medical/Surgical.

1. Ensuring completion of basic nursing care: This basic care covers everything from baths to the administration of medications.
2. Teaching: Corresponds to and involves all activities of patient care.
3. Reviewing patient safety issues: As an instructor there is a need to ensure the safety of patients and also review these patient safety issues with the students.
4. Mentoring: Acting as a mentor to the students.
5. Babysitting: Instructor's need to be sure student work is completed and ensure students are conducting themselves professionally and responsibly. Often students are unaware that certain things need to be done, therefore it is the instructor's responsibility to ensure required tasks are completed. I routinely review the way things could have been done better or differently. There should be a certain standard that the adult learner is expected to maintain in order to prevent the instructor from having to chase after the student in order to ensure a certain standard is maintained on behalf of the nursing program.
6. Evaluation: This is done independent of clinical time. While this is not categorized as part of the clinical day it is an extremely time consuming mandatory requirement of the nursing program

Maternity/Pediatrics.

1. Supervision: Medications and drug calculations are extremely time consuming because of the required triple checks. Ensuring basic concepts are understood prior to administering patient care is essential for the delivery of safe patient care.
2. Care Plans: This is necessary for student organization and structure.
3. Procedures: Hands on skill-oriented tasks.
4. Chart Checking.

Psychiatry.

1. Feedback on charting: Often the students are making entire page entries. The documentation is often the only way of knowing what the students have done during the shift. The three golden rules that must be included in psychiatry charting are affect, behavior and conversation, and it is essential that the instructor follows up to ensure they are charted. The students engage in a tremendous amount of one on one conversation with the patients. In psychiatry it is important to push the student away and let them practice therapeutic communication skills independent of instructor supervision.
2. One on one conversation with students. Psychiatry can be mentally fatiguing, therefore it is important that one on one debriefing with the students occurs on a daily basis.
3. Ensuring completions of basic care: This is very individual to each patient and very different than medical/surgical nursing. Basic care often focuses on mental care and not the physical care.

4. Ensuring knowledge of medications: Medications administration is not allowed unless an adequate knowledge base is demonstrated.
5. Watching, observing and giving direction.

Public/Home Care.

1. Housekeeping: Public relations and anxiety control. It often boils down to having students and preceptors come to terms with the experience and requirements of the rotation. It is a learning experience, even for the instructor, as opposed to a mentoring or instructional duty.
2. Ensuring the needs of the student are met: Providing the experience that facilitates professional development. Every attempt is taken to show the breadth of nursing that the community setting has to offer.
3. One on ones: Pleasing students and ensuring their needs are met is an important task. Asking, "What would you like to see?" Students often want to leave the theory component and medical knowledge behind, so it is important to show its' relevance to community nursing.

The clinical areas of medical/surgical and maternity/pediatrics set priority on ensuring the safe, competent and organized delivery of patient care by the student, all while under the quality leadership and supervision of the instructor. Psychiatry and public/home care, on the other hand, set priority on the emotional and mental satisfaction of both the patient and student. Student reflection and observation, rather than time pressured performance and supervision set the tone for the clinical experience in psychiatry and public/home care. Based on these responses it is evident the current practices and working contexts of the two areas are quite different; one allowing for

reflection and the other feeling pressured to complete tasks. In psychiatry and public/home care there exists an opportunity to discuss, reflect and communicate, lending itself to the true possibility of successful PBL.

Awareness of PBL

All four of the instructors thought they had indirectly used the concepts of PBL while being unaware of the PBL label. As one instructor stated, “I think I have used PBL without knowing there is a special term PBL. I really encourage critical thinking. I don’t give answers, I encourage thinking.” The question about the possibility of PBL being an effective method to curriculum delivery in the clinical setting was answered differently by all four of the respondents, confirming the varying degree of clinical relevance PBL could have to each area of practice. The instructor responses to PBL being an effective method to curriculum delivery in the clinical setting were as follows:

Medical/Surgical.

No, not under the present conditions. The way we have to run clinical is very structured and very routine in order to get things done. Clinical needs to be patient centered and skill focused. I barely make it to the testing of knowledge. It would work only if instructors were very well trained in PBL or there were small student/instructor ratios. PBL is indirectly used in clinical. It is a very time consuming process. The ideal of, “What is the problem and how do we go about solving it?” is more often presented as: “here is the problem and this is what to do”. The clinical instructor is the crux of everything. Instructor input and involvement is pivotal in making PBL successful.

Maternity/Pediatrics.

Yes, I like the basics of getting the students to think on their own and being in

charge of their learning. The present clinical attitude is in the direction of PBL but not necessarily in its entirety. Only parts of PBL are presently happening. The current practice does not allow for use in its entirety. The clinical instructor needs to be knowledgeable of PBL and have the support of the College in order to make it a success.

Psychiatry.

Definitely yes, PBL would be an effective teaching method in the clinical setting. It is used without knowing there is a specific term PBL. "I don't give the answers, I encourage thinking." The clinical instructor needs to be knowledgeable and consistent in the approach for it to be an effective method to use in clinical. It would be easier in psychiatry, but unfortunately more difficult in the acute care areas because of the wide focus.

Public Health/Home Care.

Unsure because I do not know how it will work. It might work better in the community than acute care because of the pace. The biggest issue will be clinical agencies and their responses to PBL. Community forces you to think in PBL terms. As instructors we act as experts in trying to provide all the answers. The clinical instructor needs to have enthusiasm for nursing, a questioning mind and be OK with saying "I don't know all the answers."

There appeared to be enthusiasm for the possibilities of PBL but discouragement because of the inconceivable thought of PBL reshaping a structured clinical practice. Both the psychiatry and public/home care instructor's felt PBL would be less effective in the acute areas of medical/surgical and maternity/pediatrics because of the wide clinical focus and demanding pace. Maternity/pediatrics nursing is more specialized than general

medical/surgical nursing and for this reason the pediatric nurse instructor was more optimistic than the medical/surgical nurse instructor that PBL might work in this setting. There were also the variables of instructor knowledge, SACNE support, acute care demands and agency responses that would dictate whether PBL would be a success or not.

Barriers to PBL Implementation

The four instructors expressed the present clinical, top priority activities as strenuous and not always attainable. Time constraints, large student to instructor ratios and staff expectations forced the students to be skill-driven in order to meet the immediate needs of the patients were concerns expressed by the medical/surgical and maternity/pediatric instructors. The medical/surgical and maternity/pediatric instructors felt they did not have adequate time in a clinical day to expand on the knowledge base of the students because of the essential time consuming hands on skill requirements. As one instructor stated, “Only parts of this (PBL) is happening. I don’t give the answers but it is difficult for them (the student) to leave the floor to research the answers.”

Distant constraints in public health as a result of dispersed student practicum placements throughout Southern Alberta limited the amount of contact time with the students, resulting in less opportunity to facilitate student learning endeavors. The public/home care and psychiatry instructors were more concerned with ensuring professional development and knowledge attainment than acquiring task-oriented skill. Unlike acute care instructors on the medical/surgical and maternity/pediatric areas they appeared to have more time to engage in non-technical skill driven activities. As the psychiatric instructor stated, “The students come with the knowledge they have been

taught in theory, they don't come with a lot of skill which is good because psychiatry is less skill driven and more about the therapeutics of communication, something you need textbook knowledge in.”

All instructors stressed the importance of providing a positive learning experience while attempting to simultaneously ensure the achievement of competent nursing practice. Three of the four instructors thought the clinical focus was not only on the acquisition of skill but also knowledge, with the psychiatric instructor feeling it was presently only on knowledge. This was encouraging since the PBL focus is knowledge enhancement, only with a more student, self-directed effort. The instructors, however, did not believe the acquisition of knowledge by the student was to a degree with which they were satisfied.

Evident in these responses is the apparent demand placed on the learner and instructor by the learning institutions and agencies. Skill requirement, time constraints and staff expectations are external factors that can and should be altered if the student needs are not being met. For PBL to be an effective process in the clinical setting there needs to be priority set on knowledge acquisition, not institutional mandated priorities.

Definitions of PBL

The interviews affirmed for me the lack of PBL understanding especially in terms of how to make it an effective method of curriculum delivery in the clinical setting.

Based on the following definitions it was evident each instructor had a basic understanding of the concept of PBL but was unsure how it might be implemented.

Definitions are as follows:

1. "PBL is acquiring knowledge surrounding a problem or case study as such. It gives them some grounding into learning what they need to learn and it almost gives them somewhere to hang it onto. PBL or my ideas behind it is that it is about discovery and sometimes it is not about discovering the answer, its about discovering the methods of finding the answer or the avenues to get there. Public health has a huge umbrella for knowledge needs and the need for access becomes more apparent in community." "I don't know how it will work. It might work better in the community than acute because of the pace."
2. "PBL is self-directed, learner centered learning that revolves around the student encountering a problem and gaining the knowledge and skills to solve that problem." "I don't know enough about it to implement it."
3. "You base your teaching on the problem and having the student be self-directed and develop form there and come up with their gaps in knowledge and what they need to know. They figure it out from the problem instead of just giving the information and giving out the answers."
4. "To me critical thinking comes to mind. If you have a problem, you think your way through it and learn. Critical thinking focuses you, gives you direction. If you have a problem, you think about it, you learn. In psychiatry there is more room for this than on med/surg." " I have never been invited to a workshop on PBL so I truly don't know what the SACNE program expects from it."

Based on these comments it appears the lack of understanding stems form not being involved in the PBL learning process. While all the instructors were able to recite

definitions they lacked the necessary understanding to comprehend the implications PBL would have for clinical practice

Resources Necessary For PBL Implementation

Important to the implementation of PBL is discovering the resources needed to make it a feasible endeavor. All instructors agreed internet access, PBL literature, accessibility to journal material and most importantly support from the SACNE program in the form of: (a) mandating clinical instructor involvement, (b) ensuring support from a SACNE supervisor well educated in clinically focused PBL instruction, and (c) providing a guide or syllabus clinical instructors could access for reference while in the clinical setting. These were cited as vital resources and requirements to make PBL a viable mode for curriculum delivery.

Educational Preference For PBL

Vital to successful implementation of PBL is tuning into the learning strategies most conducive to individual instructor success in learning, specifically in reference to increasing PBL knowledge levels. Change is difficult, especially if confronted with change one is not receptive to. Receptive attitudes are often a direct result of well informed, knowledgeable participants. The learning styles preferred by the instructors were: group work, inservicing, role playing/observation, inclusion of students and effective mentorship. These were expressed as essential to increasing, and in some cases, introducing PBL content. As one instructor stated: "We need to be on the same thread. There is a need to figure out how we are going to do it before delivering it to the student."

Recommendations and Conclusions

Several recommendations have been presented that might aid in the smooth transition to PBL implementation:

1. Implement slowly. Trial PBL in psychiatry and public/home care first. These two areas presently appear most conducive and receptive to PBL implementation. The pressure from time constraints and meeting mandatory physical demands of patients are not as evident in these areas, which should aid in allowing a slow transition to the change.
2. Implement through modeling. All instructors expressed their preference to group work, mentoring and observation in learning more about PBL.
3. Involve students at every stage. While the instructor needs to be the facilitator of PBL the student needs to be aware of the expectations that PBL places on the learner. Self-direction and in some cases autonomous learning are aspects the students need to be cognizant to.
4. Develop more opportunities for awareness and readiness for instructors. This should come in the form of inservices, group work, literature reviews, and effective mentorship lead by those instructors already knowledgeable about the process. It is essential that all SACNE faculty be mandated to participate in the pursuit for PBL literacy.
5. Ensure that appropriate resources are in place prior to implementing the PBL process. It would be extremely discouraging and frustrating to be expected to work with inadequate resources.

6. Expand on this present study by informally interviewing the remaining clinical instructors and tenured SACNE faculty using the same interview questions. The more information in reference to resources, experience with and views to PBL success in the clinical setting should aid in the PBL implementation.
7. Continue with and expand on the current literature research. This will ensure current literature is guiding the endeavor to implement PBL to the clinical setting.
8. Involve the clinical institutions and agencies in the PBL learning process. If PBL is going to change student practices in the clinical placements the learning institutions and agencies need to know how these changes will affect what they are presently accustomed to.

In conclusion, it was encouraging the instructors had a general knowledge about PBL, however not enough to implement it into their current practice. It was evident throughout my conversations with the instructors that there needs to be a better way to encourage student knowledge enhancement, not just skill acquisition, even though three or the four thought the clinical focus was presently on both. The SACNE program needs to take what is presently occurring in the clinical setting and attempt to blend the concepts of PBL to this setting, keeping in mind the resources and learning methods the clinical instructors feel are necessary for successful PBL implementation. The SACNE program needs to be cognizant to the learning needs and opinions of the clinical staff for this to be an effective, workable method for curriculum delivery in the clinical setting. The SACNE program needs to address the apparent knowledge deficit by educating the

clinical instructors in ways conducive to their preferred learning styles. There needs to be adequate resources and unconditional support from program to make it a success.

This project was merely the first step in attempting to successfully implementing PBL in the clinical setting. By reviewing this data with the SACNE program it is my hope I can work collaboratively with them in developing a plan of action in the implementation of clinically based PBL. This should happen as a direct result of enlightening them to (a) the valid and relevant clinical instructor views on potential barriers to PBL in clinical nursing, (b) the lack of instructor understanding of PBL, and (c) the importance of demonstrating to the instructors that their comments, opinions and ideas are valued and essential in making the proposed change to PBL possible.

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Appendix A

Consent Letter

Dear Participant:

I am conducting a study aimed at looking at the implementation of problem-based learning (PBL) in the clinical nursing setting. The purpose of the study is to gain an understanding as to how PBL could effectively be implemented into the clinical setting by concentrating on clinical instructor input. It is my hope that through exploring the opinions of clinical instructors that (a) an enhanced awareness of the potential barriers to PBL will surface, (b) an understanding of what PBL means to each instructor will aid in determining a starting point to education, and (c) practical research contributions will provide affirmation to the clinical instructors that their comments and opinions are essential in making a proposed change possible. All these should allow for a smooth transition to this new proposed method of instruction.

As part of the research you will be asked to participate in an interview consisting of 12 predetermined and consistent questions. The interview will be audio-taped and depending on responses and information obtained during the interview, additional questions may be asked to ensure I have completely and thoroughly understood your comments. I hope to have all data compiled and analyzed by March, 2002. Please note that all information will be handled in a professional manner. Initially, only my university professor and myself will have access to the data obtained from the interview, however as a participant in this study you will be able to review the transcripts of the interviews if you wish. When the data is released it will be done so in an anonymous and summarized manner, and made available to the SACNE program, LCC site for future dissemination to interested individuals. Participant names will not be included in any discussion of the results, however, for validity reasons the areas of expertise / clinical practice will be named in order to support the uniqueness PBL has to each clinical area. You have the right to withdraw from this study without prejudice at any time. If you agree to participate in this study please indicate so by signing the consent form provided.

I very much appreciate your assistance in this study. If you have any questions or concerns please feel free to contact me personally at 327-2565 or e-mail k.gatzky@uleth.ca or contact my research project supervisor, David Townsend at 329-2731 (office) or e-mail david.townsend@uleth.ca. If you have further questions or concerns you can contact Dr. Keith Roscoe, Chair of the faculty's Human Subjects Research Committee at 329-2446 or e-mail at keith.roscoe@uleth.ca.

Sincerely,

Karen Gatzky
University of Lethbridge

Appendix B

Consent Form

Name of Research Project: Problem-Based Learning in Clinical Nursing

Name of Investigator: Karen Gatzky

I, _____ agree to participate in this study.

Signature of Participant: _____

Date: _____

Appendix C

Interview Guide

Introduction of topic: explain why the participant was chosen and the purpose of the study as outlined in the consent letter.

Confidentiality issues. Restate the anonymity of name but not of clinical area as it is relevant to the analysis of the data. (Will review consent letter if participant expresses concern regarding disclosure of this information)

Tape recording (already checked for volume, microphone, tape, batteries)

Interview by _____ with _____ on _____ (date and time)

Start by saying "I've prepared some questions but if they do not seem to be hitting the mark, please feel free to correct me"

I will have the following interview guide in order to make notes of key points

1. Tell me what you do at the College.
2. How long have you been a clinical nursing instructor?
3. Rank in order, from the most to least time consuming, the top activities you perform in a typical clinical day.
4. From your perspective, is the clinical focus presently on the acquisition of: <ul style="list-style-type: none"> a) skill b) knowledge c) both d) neither e) unsure
5. In your own words, define PBL

<p>6a. Do you feel that PBL would be an effective teaching method in the clinical setting?</p> <ul style="list-style-type: none">a) Yesb) Noc) Unsure <p>6b. Describe</p>
<p>7a. Have you used PBL in the clinical setting.</p> <ul style="list-style-type: none">a) Yesb) No <p>7b. If yes, describe.</p>
<p>8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?</p>
<p>9. What do you think would be the role of the clinical nursing instructor in making PBL a success in the clinical setting?</p>
<p>10. With your present knowledge of PBL and your experience as a clinical instructor would you agree PBL promotes critical thinking?</p> <ul style="list-style-type: none">a) Yesb) Noc) Unsure
<p>11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?</p>
<p>12. Is there anything else you would like to add?</p>

Thank you very much

End tape with name of participant, date, time and name

Appendix D

Interview Blueprint

Guiding Question	Theoretical Use	Relevance	Interview Question
Introduction.		To establish comfort level and clarify participant background	1. Tell me what you do at the College.
Introduction.		Establishing comfort zone.	2. How long have you been a clinical nursing instructor?
Present teaching style.	To determine where PBL would best be implemented in the current events of a typical day.	What is the clinical instructor presently doing on the nursing units?	3. Rank in order, from most to least time consuming, the top activities you perform in a typical clinical day.
Curriculum / Teaching style.	What similarities potentially exist between the present clinical instructor's method of instruction and the concepts of PBL	Since PBL is focused on knowledge and the system to obtaining acquisition of this knowledge it is important to know what the present focus in the clinical area is.	4. From your perspective, is the focus of clinical learning presently on the acquisition of: a) skill b) knowledge c) both d) neither e) unsure
Participant knowledge level.	Knowledge of PBL. Since PBL will be implemented in the SACNE program it is important the knowledge level of the employees is known.	The following questions will directly relate to PBL and therefore, if the concept is not understood the remaining questions will be irrelevant.	5. In your own words, define PBL
Feedback	Personal insight	Personal insight and attitude can often predict the degree of success and commitment of the participant. Allowing for personal opinion may illustrate my commitment in working as a team in implementing PBL in clinical setting.	6a. Do you feel that PBL would be an effective teaching method in the clinical setting? a) Yes b) No c) Unsure 6a. Describe

	Further delving into the participant's knowledge of PBL-only reworded to capture potential experience.	Possible expansion of ideas as stated above	7a. Have you used PBL in the clinical setting? a) Yes b) No 7b. If yes, describe
Feedback.	Insight into effective implementation techniques.	Any potential resource into making PBL a success in the clinical setting is worth looking into.	8. What resources do you feel should be available to you for the successful implementation of PBL within the clinical setting?
Feedback.	Insight into effective implementation techniques.	Allowing personal input as to the role will both limit potential unforeseen important issues and give the participant opportunity to voice opinion that would directly affect their job.	9. What do you feel should be the role of the clinical nursing instructor in making PBL a success in the clinical setting?
Opinion	PBL is supported by the literature as promoting critical thinking and thus enhancing clinical decision making skills.	Is the participant's response consistent with that of the literature or does the participant disagree for reasons that need to be explored at a latter date?	10. With your present knowledge of PBL and your experience as a clinical instructor would you agree with the statement that PBL promotes critical thinking? a) Yes b) No c) Unsure
Opinion/feedback	Adult learners need to be taught with methods they express as being helpful or most conducive to learning.	This will aide in the successful implementation by providing teaching methods the clinical instructions find most useful.	11. What method of educational instruction would best prepare you to implement PBL in the clinical setting?
Conclusion	Give the participant the last word.	Gives opportunity for the participant to voice questions or comments that may have surfaced as a result of the interview in its entirety.	12. Is there anything else you would like to add? Thank you for your time!

Thank-you for your time!

Appendix E

Timelines

Activity	Time Allowed	Due Date
1. Refinement of research proposal and human subject approval	September 14-December 31, 2001	December 31, 2001
2. Receive acceptance /permission by all stakeholders.	September 14-December 31, 2001	December 31, 2001
3. Selection of interviewees/participants.	September 24-December 31, 2001	December 31, 2001
4. Obtain acceptance from selected participants and set interview date and time.	January 2-4, 2002	January 4, 2002
5. Conduct interview's	January 7-28, 2002	January 28, 2002
6. Interpretation and analysis of interview's	January 28- February 28, 2002	February 28, 2002
7. Review of data with tenured SACNE employees.	March, 2002	March 31, 2002
8. Develop a consensus of how to use the interview data to successfully implement PBL, knowing the pros and cons as a result of the clinical instructors feedback.	April, 2002	April 30, 2002
9. Develop a plan of action.	April, 2002	April 30, 2002
10. Presentation of all data to the SACNE program for the purpose of aiding in the implementation of PBL in the clinical setting.	May, 2002	Ongoing after initial implementation.