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NURSING STUDENTS' PERCEPTIONS OF THE LEARNING ENVIRONMENT IN CASE-BASED AND TRADITIONAL LEARNING CLASSROOMS

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DECLARATION

I Ghada Sadek, declare that this study on "the Nursing Students' Perceptions of Learning Environment in Case-Based and Traditional Learning Classrooms" is my own original work and has never been submitted for any ther degree. All references used have been acknowledged using the American Psycological Association Reference System.

GHADA SADEK   DATE: 15/10/2002

ABSTRACT

This study describes the perceptions of 110 diploma nursing students regarding the learning environment in case based and traditional classrooms. The study was conducted in Sharjah and Abu Dhabi Institutes of Nursing in UAE. Sixty Level I and fifty Level II students were randomly selected from the two institutes to participate in this study. The purpose of this study was to examine nursing students' perceptions regarding the classroom learning environment in courses that are taught by case studies and those that are taught by traditional method, and to compare their perceptions toward conventional and CBL learning environments. The questionnaire used was the College and University Classroom Environment Inventory (CUCEI).

The students in the CBL class had more positive perceptions toward their learning environment on the subscales Involvement , Innovation , and Individualization . A significant difference emerged favoring traditional classroom environment on the Task orientation subscale. There was no significant difference between the participants' ratings for the case-based and traditional classroom learning environments on the subscales of Personalization, Cohesiveness, and Satisfaction.

Thus, the study results support the superiority of CBL environment regarding the students' perception of Involvement, Innovation, and individualization. Moreover, the study results indicated that students perceived class activities to be more task oriented in traditional than in case based classroom environments.

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CHAPTER 1

INTRODUCTION

Background

Evertson and Randolph (cited in McCown, Driscoll, & Roop,1996) compared two types of classroom environments, which are the work oriented classroom and the learning oriented classroom. The learning-oriented classrooms are classrooms in which the teacher values production and is directive of student activity. In a work-oriented classroom, teachers devalue learning; and are bosses who focus on students' productivity or work and not on what students learn by doing the work. Grades and other incentives motivate students in such a learning context. On the other hand, the teacher in the learning oriented classroom values learning and facilitates rather than directs student activity.

Similar views were voiced by Marshall (cited in McCown et al, 1996) in his/her description of three critical attitudes that are built in a learning context that values learning. The first critical attitude is respect for students. The second one is credibility; here students perceive teachers who manage effectively or do what they say as credible. Third in a learning oriented classroom, teachers encourage students to develop an attitude of self-accountability. Over the years, a number of nursing education institutions globally have embarked on a process of curriculum innovation aimed at creating more interactive, collaborative and learning centered classroom environments. These include inter alia Schools of Nursing at McMaster University, Canada and University of Natal, South Africa. However, most of these institutions have opted for problem-based rather than case-based learning.

In 1998, the Institutes of Nursing in the United Arab Emirates (UAE) implemented a new undergraduate curriculum that emphasizes active self-directed

learning through the case based learning method. According to Uys (1999) case-based curriculum is one in which students are given a set of complete cases for study and research in preparation for subsequent class discussion. Such learning approach is self-directed and is facilitated by the teacher. In essence a CBL curriculum is learning-centered, as well as teacher and student directed. It demands levels of active and independent learning not frequently required in conventional teaching/learning environments. The change of curriculum embarked upon by the Institutes of Nursing in the UAE presents a challenge for both the students and faculty in that initially students may resist the transition from a passive to active learning environment.

Modell (1996) identified the challenges that face faculty members and students contemplating active learning in the classroom. These are differences in expectations of faculty members and students, diversity of language within the faculty/student population, impact of past experience on building mental models, inexperience of students in problem solving, and unfamiliarity to the new learning environment. Diploma nursing students in the UAE come from a conventional education background. Moreover, they have a poor command of the English language. Thus, creating a completely alternative educational environment, innovative programs would affect the learners knowledge, skills, behavior, and attitudes (Friedman, de Bliek, Greer, Mennin, Norman, Sheps, Swanson, & Woodward, 1990).

In changing from a traditional teacher-directed and content-driven educational program, the faculty at the Institutes of Nursing in the U.A.E. had hoped to create a learning-centered environment. The expectation was that because a case-based curriculum is often seen as placing emphasis on both content and the process of learning (Uys, 1999) while at the same time providing students with an opportunity to develop the much valued skills such as problem solving, critical and analytical thinking, collaborative learning and

self-directed learning (Barrows, 1986; Kaufman, 1998), and that students would perceive their teaching/learning experiences in classrooms taught by case studies more favorably compared to those taught by lectures.

Barrows (1986) maintained that in the case-based approach to teaching and learning, sequential management problems are used, in which students decide on the informational and management alternatives through direct inquiry. He described the case-based approach as one in which students receive complete details on a case, and study and research it themselves before coming to class. The instructor, acting in a tutorial role, facilitates class discussion of the analysis of the case.

The case method is similar to what Uys (1999) refers to as the case-based curriculum, and it is the curriculum approach adopted by the Institutes of Nursing in the UAE. According to Uys a case-based curriculum is content and process based, self-directed, structures knowledge in the clinical context, and finally discussion of cases may take place in small or large groups.

Kaufman (1998) on the other hand, elaborated on the features of case based learning. He maintained that, the case method (a) fosters analytic or critical thinking, which will also develop students' confidence and skill in dealing successfully with unanticipated issues; (b) transfers much of the responsibility from the teacher to the student whose role shifts from passive absorption to active construction of meaning; (c) helps students learn higher level concepts and their application to practical situations; (d) emphasizes collaborative learning; and (e) emphasizes the value of good questions in situations where there are few single right answers

Statement of the Problem

Knowles proposed that "appropriate conditions for adults to learn effectively include a learning environment that is characterized by physical comfort, mutual trust and respect, mutual helpfulness , freedom of expression, accepting of differences, where learners accept a share of responsibility for planning the learning experience and participating actively to achieve their own goals" (cited in Camp 1996). According to Ayoade and Rothman (1970), the concept of learning environment is similar to the concept of curriculum. Therefore, these authors maintained, if the learning environment is what the students perceive then one aspect of curriculum evaluation should involve determining whether students' perceptions of the influences in that environment agree with the educational objectives.

The learning theory that recognizes the impact of the learning environment on learning is the relational model of learning. To the relational theorists the quality of learning depends upon the relationship between the learner and the learning environment including the learning task, teaching methods and assessment practices. The way the student perceives the learning environment is seen to influence the way the student studies or approaches a task, in a surface or deep manner (Cust, 1996). Thus, according to Cust, the relational theorists understand the learning process in terms of the interaction between student perceptions of the learning environment, approaches to a task, and learning outcomes. Similarly, Franson emphasized that it is the students' interpretation of the academic environment that influences the students rather than the actual academic environment. (cited in Cust,1996). Changes in the learning environment can thus influence student perception of that environment in two ways: directly as real changes in the environment; and indirectly by affecting student attitudes and values (Clarke, Feletti & Engel 1984)

Getzels and Thelen described the class as a social system in which group behavior can be predicated from the personality needs, role expectations and classroom environment (cited in Nair & Fisher, 1999). Because of its emphasis on learning-centered environments aimed at (a) structuring knowledge in clinical contexts, (b) developing an effective clinical reasoning process, (c) developing effective self-directed learning skills, and (d) increasing student motivation for learning (Barrows, 1986), case-based curriculum is rivaled only by problem-based learning with regard to its popularity in innovative education in the health professions. Little is known, however, of the students' perceptions of this interactive and participative learning environment. The aim of this study therefore, was to assess the students' perceptions of the learning environment in classes taught by the case-based approach and those taught by the traditional approach.

Significance of the Study

International research efforts have established classroom environment as a thriving field of study. Despite this there are few published studies that have been conducted in tertiary classrooms and even less in nursing education classrooms (Fisher & Parkinson, 1998). It is important to evaluate how nursing students perceive their learning environment to enhance the quality of the educational experiences received by them.

Much of the research that has been done in this area has focused mainly on the learning environment in PBL classrooms. Although PBL has many commonalties with case-based learning, the two curriculum approaches have a number of differences as well. Of particular relevance to this study is the difference in the learning environment itself. Although PBL classes are inherently small in size and students remain in the same small groups of 8-10 for the duration of the course, group size and composition may vary throughout the course in case- based learning. Furthermore, CBL case studies are more directive and focused in terms of students' activities and/or learning tasks compare to

PBL case studies. There is a dearth of empirical literature therefore on student's perceptions of their learning environment in case based learning programs in nursing. A recent report on the implementation of CBL at the Institutes of Nursing in the UAE (Gwele, 1998) indicated that although the nature of the teaching /learning process had changed from the traditional-lecture based approach to a more active-learning approach, a number administrative and educational concerns were perceived by the teachers as barriers to effective implementation of the new curriculum. These included mainly a packed time-table with very little opportunity for self-directed learning activities as well as the fact that the curriculum was still packed with a lot of content to be covered which made it difficult to allow students the time the they needed to think in the classroom.

Knowledge of aspects of the CBL teaching/learning environment is viewed positively or negatively by students would help nurse educators at classroom level review their own teaching practice.

Purpose and Objectives

The purpose of this study was to assess the perceptions and attitudes of Diploma nursing students toward the learning environment in case based and traditional classrooms. The objectives were to:

1. Examine students' perceptions regarding the classroom learning environment in courses that are taught through case based and those that are taught by traditional method.

2. Compare students' attitudes and perceptions toward conventional and CBL learning environments.

Theoretical Framework

Moos (1974) found that three general categories can be used in characterizing diverse learning environments. First, *Relationship dimensions* which identify the nature and

intensity of personal relationships within the environment and assess the extent to which

people are involved in the environment and support and help each other. Second,

Personal Development dimensions that assess basic directions along which personal

growth and self-enhancement tend to occur. Third, *Maintenance and System Change*

dimensions which involve the extent to which the environment is orderly, clear in

expectations, able to maintain control, and responsive to change (cited in Fraser,Treagust,

& Dennis, 1986). The instrument that is used in this study is the College and University

Classroom Environment Inventory (CUCEI). It includes seven scales, which are

personalization, involvement, student cohesiveness, satisfaction, Task orientation,

innovation, and individualization. The scales that cover the relationship dimension are

personalization, involvement, student cohesiveness, and satisfaction. The personalization

scale emphasize the opportunities for individual students have to interact with the

instructor and the concerned for students personal welfare. The Involvement scale

describes how much students participate actively and attentively in class discussions and

activities. Student cohesiveness: it is the extent to which students know, help, and are

friendly toward each other. Satisfaction which reflects how much students enjoy their

classes. The scale that covers the Personal Development Dimension is the task orientation

scale. This scale includes the extent to which class activities are clear and well organized.

The scales that cover the System Maintenance and System Change Dimension is

innovation and individualization scales. Innovation is how often new and different

teaching and learning activities are used. Finally, individualization: it is the extent to

which students are allowed to make decisions and are treated differentially according to

ability, interest or rate of working. Since Moos claims that, at minimum Relationship

Dimensions, Personal Development Dimensions, and Maintenance and System Change

Dimensions must be assessed to provide an adequate and reasonably complete picture of

any environment , dimensions for the CUCEI were chosen to include at least one scale in each of Moos three general categories (cited in Fraser,Treagust, & Dennis, 1986).

Hypotheses

1. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to personalization.

2. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to involvement.

3. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to cohesiveness.

4. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to satisfaction.

5. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to innovation.

6. Students will rate their CBL classroom environment more favourable compared to their ratings of the traditional classroom environment with regard to individualization.

7. Students will rate their TDL classroom environment more favourable compared to their ratings of the CBL classroom environment with regard to task orientation.

Definition of Major Variables

Classroom psychological learning Environment: refers to the climate or atmosphere of the class as a social group that potentially influences what students learn (Walberg, 1991)

Operational Definition: Perceptions will refer to views of students about their learning environments as measured by the CUCEI questionnaire developed by Fraser , Treagust and Dennis (1986)

Traditional classroom: It is classes whereby students are taught through traditional and didactic approaches. Courses taught via this method are organized around discrete blocks of knowledge that relate to subject areas or disciplines, e.g., anatomy and microbiology.

CBL Classroom: Students receive complete details on a case, and study and research it themselves before coming to class. The instructor, acting in a tutorial role, facilitates class discussion of the analysis of the case.

Nursing students: Students that are enrolled presently in Diploma nursing program.

Assumptions

The assumptions upon which this study will be based include:

1. Students will respond to the research questionnaire truthfully and thoughtfully.

2. The learning environment in CBL and conventional classrooms differ.

CHAPTER 2

LITERATURE REVIEW

This chapter presents the literature review of this study. First the concept of the learning environment is discussed from many perspectives. Second a review of the related research is presented. Finally this chapter presents a comparison between case based and traditional methods of learning.

Traditional Learning Classrooms

Conceptualizations. Barrows and Tamblyn (1980) classified the curriculum as either teacher-centered or subject based, student-centered and subject based, teacher-centered and problem based or student-centered and problem based. In the teacher centered learning the teacher is responsible for what and how the student is expected to learn. Young (1998) described traditional curriculum as being both subject based and teacher centered. It is the teacher that decides what information and skills the student should learn. The student is not responsible for his own education. In teacher-centered learning the teacher imposes what he/she assumes all students should know. In this curricula instructional topics and courses are organized around discrete blocks and structured packages of theoretical or practical knowledge whom the lecturer delivers complete with analysis, insight, and conclusions that students are expected to memorize and master (Barrows &Tamblyn,1980; Greich & Paraschos, 1994; Young, 1998)

Philosophical underpinnings. Traditional or teacher directed learning is based on the conservative view of educational philosophy. For the advocates of the conservative view of education the curriculum should be concentrated on cultural inheritance and the chief task of education is to follow the past philosophers and knowledge. Traditional studies believe that the best way to cope with the present is that education should serve to cultivate the intellectual virtues. Education must address perennial truths and not be

misdirected toward meeting contemporary needs. Hence according to this view knowledge includes truths and wisdom, which are permanent.

The teaching/learning process. From the conservative education's point of view, the educative process involves filling the learners' minds with facts and truth (Tanner & Tanner, 1995). The student in the classroom area is expected to be sitting as the instructor lectures, demonstrates, or discusses the topic of the class. Moreover, according Young (1998) they usually memorize facts to learn the assigned material and to master subject-based knowledge. Peters (2000) concurs with this view in stating that at the end of the teaching/learning process, the students have been expected to regurgitate this knowledge in tests and assignments.

Advantages. According to Barrows and Tamblyn (1980), teacher centered learning saves the students' agony and suffering that usually they experience when they work on their own through the subject areas. Barrows and Tamblyn (1980) described the advantages of subject based learning methods. First, the resources for learning in one specified subject or field are more easily identified and made available. Moreover, this approach seems efficient since the student applies himself/herself to the task of memorizing and/or manipulating the concepts, skills, and information that are important.

Disadvantages. Some authors (Barrows&Tamblyn, 1980; Young, 1998) maintain that this educational method has many disadvantages, however. The students are passive recipients who receive information from the teacher and/or the textbook and are usually rewarded externally since motivation is based on grades and not on personal desire or accomplishment (Barrows & Tamblyn, 1980). In fact Freire (1972) referred to this type of education as the banking type of education. According to him such an "education becomes an act of depositing, in which the students are the depositories and the teacher is the depositor" (p. 45). Moreover, the students in such curricula are not well prepared to

integrate all the information from each of their courses and apply it to real life patient problems (Young, 1998). In addition, this approach ignores the fact that students are not homogenous in educational and cultural background, knowledge and experience, nor are they homogenous in their learning abilities (Barrows & Tamblyn, 1980). In reference to nursing education, Vaughan (1990) contends that since nursing is a practice-based profession, teaching knowledge through teacher-centered methods mainly may not result in competently skilled practitioners.

Case-Based Classrooms

Conceptualisations. Gwele (1999) described a case-based curriculum as one that uses clinical cases as a context to introduce the content to be learned. Content in a case-based curriculum is learned through the inquiry process with the cases as learning method to deliver the content (Barrows, 1986; Uys,1999; Gwele, 1999). A case includes information and data, psychological, sociological, scientific, anthropological, historical, observational and technical material (Wassermann, 1994).

One obvious feature of case method is the use of instructional tool called a case. For Merseth (1991) and Greich and Paraschos (1994) cases are complex educational instruments that appear in the form of narrative. According to these authors cases are like stories that students explore interactively, as such they can direct students toward a conclusion or provide the resources and context to discuss and debates issues dynamically.

According to Denise and Bowen (1998) Case based Learning (CBL) is student-centered approach in which students learn in groups and teachers serve only as facilitators. Although it is student centered and interactive, students use previously acquired knowledge to solve problems that are similar to those that will be encountered in the future professional practice. Bonwell and Edison (1991) defined the case method as a

form of "active learning", that involves students in doing things and thinking about things they are doing (cited in Greich and Paraschos, 1994).

Philosophical underpinnings. CBL is based on Constructivist theory of learning (Florida Education Standards Commission).Constructivist theory offers a framework to adult learning theory (andragogy) and therefore self directed learning, and active learning processes such as metacognition (Peters, 2000). Constructivist epistemology challenges traditional pedagogy in that it does take into account what individual students have learned and how they have learned (Peters, 2000). Constructivism refers to the idea that learners construct knowledge for themselves each learner individually (and socially) constructs meaning as he or she learns. Learning is not understanding the "true" nature of things, nor is it remembering dimly perceived perfect ideas, but rather a personal and social construction of meaning out of the explanations which the learners construct for themselves (Hein, 1991).

For contructivists new knowledge is built on existing knowledge. Learners come to learning situations with knowledge acquired from previous experiences and that prior knowledge influences what new or modified knowledge they will construct from new learning experiences (Peters, 2001). The learning process is an active one where the learners are "doing", reflecting on and evaluating their learning experiences, and building on previous learning experiences to construct new knowledge (Yager, cited in Peters, 2000).

The teacher's role. Gwele (1999) emphasized the importance for teachers in a case-based learning curriculum to provide learners an opportunity to make meaning of their own world of nursing through active participation in their own learning, developing inquiring minds as well as awareness of the relativity of most forms of knowledge. She further asserts that the teacher's role in creating a learning centered environment involves helping students: learn how to learn, develop inquiring minds, interpret and analyze information, and critically

reflect on their meaning in the process of making learning meaningful. The role of the teacher in CBL changes from the transmitter of knowledge to that of a facilitator who guide the students' process of discovery by questioning, listening, challenging, encouraging analysis and problem solving, and helping students test the validity of their ideas through dialogue with colleagues and the teacher (Gwele, 1999; Uys, 1999). The tutor needs to ensure that students prepare the cases at home, and do not come into the class discussion hoping to pick up all the answers there (Uys, 1999). The facilitator role in CBL involves creating rich environments and activities for linking new information to prior knowledge, providing opportunities for collaborative work and problem solving, and offering students a multiplicity of authentic learning tasks in meaningful way. (Tinzmann, Jones, Fennimore, Baker, Fine & Pierce, 1990).

Unlike teacher centered learning, student -centered methodologies place emphasis on active learning (Modell, 1996). Promoting active learning in a classroom with many students requires a redefinition of the instructor role. In a passive teacher-centered environment, the instructor is a disseminator of information. The role played by the instructor in an active learning environment is that of a facilitator or student-centered learning (Modell,1996;Wassermann, 1994). Educators who do make the transition give more freedom to students and less material for notes (Wassermann, 1994).

The teaching/learning process. One of the main features of CBL environment is active learning. An active learning environment has been defined as one in which the student is engaged in the process of building and testing his own mental model from information that he or she is acquiring (Modell, 1996). In student-centered learning students learn to determine what they need to know and take responsibility for their own learning.

Because strategies that are used in processing the case are based on cooperative learning principles, which ultimately enhance students' confidence to communicate with others, students gain confidence in communicating with others as they stand and report their group's ideas (Glendon & Ulrich 1997).

Such class environment permits opportunities for all students to actively participate in discussion of the case, and it provides opportunities for students to learn important skills related to cooperative learning, communication, group roles, dealing with conflict, and receiving and providing effective feedback. Moreover, mutual respect, cooperation, and collaboration characterize such learning environment (Denise & Bowen, 1998;Young, 1998).

Christensen points out in his analysis of case discussion that student involvement develops on at least three distinct levels: At first level students explore a problem by sorting out relevant facts, developing logical conclusions and presenting them to students and instructor. On the second level students can be assigned roles in the case and take on perspectives that require them to argue for specific actions from a character point of view. Finally, on the third level students will take the initiative to become fully involved so the topics are no longer treated as abstract ideas but become central to the students sense of self- of what they would choose to do in a specific real world situation (cited in Center for Teaching and Learning, 1994).

Advantages. The case based method has several advantages. Although students learn fewer facts but they learn to think far better. Whereas the average student seldom retains facts for long, the thinking abilities are acquired for life (Wassermann, 1994). The facilitators who use the case method empower students to be active thinkers in the classroom and not passive listeners. According to some authors (Jarz, Kainz &Walpoth, 1997; Merseth, 1991) case based learning teaches important concepts and facts within the

context of authentic or real world situations. Hence these authors maintain that case based learning reduces the inert knowledge which is learned information that is difficult or impossible to apply to realistic situations. Similarly, the Center for Teaching and Learning (1994) contends that case studies also help students make connections between what they may consider as being separate disciplines. This would help students to bridge the gap between theory and practice by motivating them to think through the complex problems (Greich & Paraschos, 1994).

Wassemann (1994) identified a number of advantages to using case studies in teaching and learning. According to him/her in case based teaching students learn to communicate their ideas more effectively, clearly, and concisely. Furthermore, they are able to examine complicated issues in more critical ways. Also they become more curious and their general interest in learning is increased they are motivated to read material beyond that presented in class. They acquire knowledge and become more intelligent analyzers of data . Students increase their tolerance for ambiguity and grow their understanding of the complexities of concepts and issues. He/she further maintains that students can take such skills with them after they leave the university.

Barbara (2000) asserted that the case method of learning helps students learn through decision making and role playing situations; through interactive discussions students develop confidence in confronting problems, as well as defining, analyzing and solving them. According to Gwele (1999), working on specific preplanned tasks during the class session provides direction to students in the learning process and keeps the discussion more focused. Moreover, CBL enhances SDL because the students work on their own, read and analyse the related material, search for information on the task, and discuss their findings with other members of their group (Gwele, 1999).

Disdavantages. According to Barbara (2000) case based learning is an enjoyable experience; however, there are some disadvantages to CBL. One disadvantage of case learning is that preparing the cases may seem frustrating to the learners (Barbara, 2000). In addition, cases are not necessarily the best way to communicate large amounts of new information; therefore, they should not be seen as replacements to lectures. Hence, they are probably not always appropriate for introductory level classes where students need a good deal of background knowledge (Center for Teaching and Learning, 1994). The information supplied in the case is frequently incomplete and sometimes misleading. The problems presented are both ambiguous and complex, and generally a case has no single correct answer (Barbara, 2000). Finally, increased time is required to design and develop quality cases, and resources are needed to be collected and provided to the students to understand the case (Jarz, Kainz & Walpoth, 1997).

The Concept of Learning Environment

Woolfolk (2001) described classroom environments as multidimensional, full of simultaneous activities, fast paste and immediate, unpredictable public, and affected by the history of students and teachers actions. Therefore, productive classroom activity requires students' cooperation.

The classroom psychological or social environment refers to the climate or atmosphere of the class as a social group that potentially influences what students learn (Walberg, 1991). Getzels and Thelen described the class as a social system in which group behavior can be predicated from the personality needs, role expectations and classroom environment (cited in Nair & Fisher, 1999). An approach that investigates respondents' perceptions and or views regarding the classroom is referred to as the perceptual approach to the study of classroom environment.

Since the classroom environment refers to the less tangible aspects of the context of teaching and learning, it is often inferred by asking students to perceive and rate the psychosocial characteristics of their classroom through sets of questions. These questions typically concern the affective and social relations among the class members, the efficient completion of learning tasks, as well as the implicit and explicit system of rules and organization of the class (Rivera & Ganaden, 2001).

Since this study examines the perceptions of students toward the classroom learning environment, it is important to explore how the perceptual approach defines classroom environment. The perceptual approach defines classroom environment in terms of the shared perceptions of the students and sometimes of teachers' perceptions in that environment (Fraser, 1986). It is suggested that perceptual measures of classroom environments have the advantages that they

> " are more economical than classroom observation techniques which involve the expense of trained outside observers… they are based on students' experiences over many lessons, while observational data usually are restricted to a very small number of lessons … they involve the pooled judgements of all students in a class, where as observation techniques typically involve only a single observer… students' perceptions, because they are determinants of student behavior more so than the real situation can be more important than observed behaviors… perceptual measures of classroom environment typically have been found to account for considerably more variance in student learning outcomes than have directly observed variables"
> (Fraser, 1986, p.3).

In other words, the perceptual approach in defining classroom environments has the advantage of seeing the classroom through the eyes of the actual participants and allowing one to discover information about attributes of the classroom in a manner more economical than observational methods (Fraser, 1986).

Thus, the goals of effective classroom management are to make ample time for learning; improve the quality of time use by keeping students actively engaged; make sure participation structures are clear straight forward., and consistently signaled; and encourage student self management, self control, and responsibility (Woolfolk ,2001)

Noddings (1992,1995) has written about the need to create caring educational environments where students take more responsibility for governing their classroom. One approach to developing this kind of caring and mutually trusting community is David and Roger Johnson's three Cs of school and classroom management. Johnson and Johnson's (cited in Woolfolk, 2001) three Cs for safe and productive schools are cooperative community, constructive conflict resolution, and civic values. Classroom management begins by establishing a community based on cooperative learning. At the heart of the community is the idea of positive interdependence-individuals working together to achieve mutual goals. Constructive conflict resolution is essential in the community because conflicts are inevitable and necessary for learning. The last C is civic values-the understandings and beliefs that hold the community together. Values are learned through direct teaching, modeling, group discussions, and the sharing of concerns.

Teachers can maintain a good environment for learning by encouraging engagement. The format of a lesson affects student involvement. In general, as teacher supervision increases, students' engaged time also increases. When the task provides continuous cues for the student about what to do next, involvement will be greater. Activities with clear steps are likely to be more absorbing, because one step leads naturally to the next. Making work requirements clear and specific, providing needed materials and monitoring activities all add to engagement (Johnson & Johnson, cited in Woolfolk 2001).

Quinn (1995) described the characteristics of effective learning community. The ideal environment for small group and experiential learning is that which is termed a ' learning community'. This is characterized by a climate of acceptance, support, and trust, where each member of the team acknowledges that he or she is still learning and where the needs of students are recognized. In a learning-community approach negotiation is

typical whereby students can determine what they want to learn and the means by which this will be achieved and evaluated.

Review of Related Research

Research on classroom environment as a criterion variable has focused mainly on (a) comparisons between teachers' and learners' perceptions of actual and ideal classroom environment (Bartholomay, 1996; Nair & Fisher, 1999) , (b) students' perceptions of the classroom environment in interactive classroom (Booth, 1997; Engel and Hendricson 1994; Fisher & Parkinson, 1998; Kaufman & Mann, 1996), and (c) relationship between students' attitudes towards the learned subject and perceptions of the classroom environment (Henderson, Fisher, & Fraser, 1998; Rivera & Ganaden (2001).

Evidence exists that students and teachers do not always agree on their perceptions of the actual and ideal classroom environment (Bartholomay, 1996; Nair & Fisher,1999). For instance, Bartholomay (1996) conducted a study to identify characteristics of the actual classroom environments as perceived by students enrolled in developmental courses in Virginia Community College and by their instructors. Furthermore, the purpose of the study was to investigate the characteristics of the ideal classroom environments as perceived by the students, and to identify needed changes in classroom environments. Data were collected by giving the Adult Classroom Environment Scale (ACES). Both the actual and the ideal forms of the scale were administered. The instrument explores seven elements of classroom environment, which are involvement, affiliation, teacher support, task orientation, personal goal attainment, organization, clarity, and student influence. The related hypothesis of the study was the following: There will be a significant difference in the students' perceptions of the actual classroom social environment and their instructor's perceptions of the actual classroom social environment. The hypothesis was supported on all subscales except one, Personal Goal Attainment. Examination of the order of the

subscales for students' perceptions of the ideal classroom environment and instructors' views of the actual classroom environment indicated agreement on several subscales. Both students and instructors selected Teacher Support and Organization and Clarity as the two most prevalent elements in the ideal classroom social environment. The students ranked the remaining five subscales for their view of the ideal classroom environment as follows: Involvement, Affiliation, Personal Goal Attainment, Task Orientation, and Student Influence. The instructors ranked Task Orientation and Affiliation higher than Involvement. Differences between the students' and instructors' ranking of Task Orientation throughout this study suggest the need for further investigation.

Bartholomay (1996) hypothesized study that there would be a significant difference in students' perception of the ideal classroom social environment and the instructors' perception of the actual classroom social environment. This hypothesis was supported on all subscales except Affiliation.The results indicated that the students viewed an ideal classroom with significantly more Involvement, Personal Goal Attainment, and Student Influence than the instructors visualized in the actual environment. However, students viewed an ideal environment as one with less Teacher Support, Task Orientation, and Organization and Clarity than instructors reported in their view of the actual environment. There was no significant difference indicated for Affiliation.

In addition to comparing students' views of the ideal environment with the instructors' views of the actual environment, a comparison of students' actual and ideal perceptions of the classroom environment was made. The researcher (Bartholomay, 1996) hypothesized that there would be a significant difference in students' perceptions of the ideal and actual classroom social environment. The hypothesis was supported on all subscales, except Task Orientation. Students indicated a preference for significantly more

Involvement, Affiliation, Teacher Support, Personal Goal Attainment, Organization and Clarity, and Student Influence than they saw in their actual classroom environment. The only element which they indicated no preference for increasing was Task Orientation.

Comparing the students' views with the instructors' views indicated students' need for an ideal classroom environment in which teachers increased attention to every element except Task Orientation. Students preferred ideal classroom environments in which they could be actively involved in the learning process. They indicated a preference for interactional activities with other students and with their instructors. Students expressed interest in opportunities for exploring personal interests in relation to the course, relating their courses to their own experiences, and having opportunities to be partners with the teacher in planning for class activities to support the concepts of the course. They indicated their need for self-direction in the classroom community similar to that which they, as adults, experienced in their daily lives (Bartholomay, 1996).

Similar to the study by Bartholomay (1996), Nair and Fisher (1999) conducted a study to modify and validate a new form of the Colleges and Universities Classroom Environment Inventory (CUCEI), and to then use it to compare students' and instructors' actual and preferred perceptions of their science classroom learning environments at the tertiary level of education. At the tertiary level, students were generally more in agreement to what was expected in their preferred classroom environment. All seven scales were statistically significant at this level. This suggest that tertiary level students perceived a greater degree of difference between their actual and preferred environments forms of the CUCEI for students in their tertiary level of study.

Perception based on the gender of students was furthermore investigated. All female students perceived differences in all the scales between the actual and preferred environments. However, statistically significant differences were observed in only five of

the seven scales in male students' perceptions. The scales being Personalisation, Student Cohesiveness, Task Orientation, Cooperation and Individualisation. However, both male and female students appeared to have a varied perception of the degree of cooperation in their actual classroom. Both groups were generally in agreement about what their preferred classroom should be like. Female students appeared to want less of a decision making role in the classroom. Female students also indicated a greater preference for cooperation than the male students in their classrooms did. Both males and females perceived their environment almost identically. Though female and male students did not perceive any difference in the level of cooperation in their actual classroom environment, female students indicated that they preferred greater cooperation in their preferred classroom environment. This was the only scale that showed a significant difference in the preferred form. Another interesting feature of the results was that both male and female students were in agreement that there was hardly any difference in the way they were treated by their instructors as measured by the Equity scale.

With respect to age of students, the results of the study by Nair and Fisher (1999) revealed that older students preferred a more positive environment. Statistically significant differences were however only found in four of the seven scales. The four scales were Personalisation, Task Orientation, Individualisation and Innovation. Mature students seemed also to prefer greater innovation in the teaching approaches at the tertiary level. Mature students also indicated that they were treated equally and that they did not perceive any difference in equity. The standard deviations also indicate that mature students were in general agreement in their perceptions of their actual classroom environment, and of their preferred classroom environment.

When the classroom environments of the mature students were compared with those that have come fresh from the senior secondary schools, two out of the four

statistically significant scales were perceived more favourably by the mature students. Mature students perceived the scales of Task Orientation and Equity more favourably whereas those below 19 years of age perceived the scales of Personalisation and Individualisation more favourably. Though both mature and younger students preferred a more positive classroom environment, the younger students had a greater preference for a more positive environment. Younger students also perceived their classes to be less equitable than did the mature students. When the preferred environments were compared, younger students had a greater preference for changes in the four scales namely Personalisation, Student Cohesiveness, Cooperation and Equity (Nair & Fisher, 1999).

The study furthermore investigated instructors' perceptions of their classrooms. The preferred scores were generally higher than the actual scores with the exception of the Task Orientation scale. This suggests that instructors would prefer less structured classes. When a comparison of perceptions were made between instructors and students, tertiary instructors clearly perceived their environment more favorably in only three of the seven scales; Personalization, Student Cohesiveness and Task Orientation. A possible explanation could be that at the tertiary level, instructors more take into consideration the student preferences and seem to be accommodating to the changes that students undergo in their environment after transition. The pattern observed in this research that is, instructors perceiving their classroom more positively, was less apparent at the tertiary level. Both male and female students however, perceived their classroom environment similarly when they moved from one level to the next.

A number of researchers (Booth, 1997; Fisher & Parkinson, 1998) went further than examining the actual and ideal classroom environment. These authors sought to change the classroom environment such that there was more student interaction than normally is the case in a traditional learning environment. In this regard, Fisher and

Parkinson (1998) described the first use of a classroom environment questionnaire with a class in an undergraduate nursing education program. The purpose of the study was to create a learning environment in which mutual sharing and support prevailed. The questionnaire used was the Colleges and Universities classroom Environment Inventory (CUCEI) and it was used to obtain practical and useful information about the learning environment in two different classes. Collaborative changes were made in the classes to improve the classroom environment. The first class had nearly 3 weeks to experience the new strategies. The actual version of the instrument was then repeated (CUCEI posttest actual), and the class means were calculated. The results indicated a change in the students' perceptions of involvement, task orientation, and student cohesiveness toward that preferred by the students. The other dimensions on the scale were not notably affected by the changes. In addition, positive student behaviors were noted. The class was more attentive, interested, and motivated and students were prepared to help each other. Furthermore, the group was more cohesive and cooperative. With the second class, it was found that not only had the specific dimensions of Satisfaction, Task orientation, and Innovation improved, but also there was a general improvement in the other dimensions. This observation would suggest that an improvement in one dimension could have a positive effect on the other dimensions within the classroom environment. Thus, the classroom environment could be improved and changed with feedback from students. Fisher and Parkinson reported that establishing a learning environment that is based on mutual sharing and support would empower the students and help them assume control over their learning situation.

Booth (1997) conducted a similar study with fifth year dental students at the University of Western Australia's School of Oral Health. He/She evaluated a change from formal lectures to raised student- teacher interaction in one learning environment. The

purpose of the change in classroom environment was to improve staff- student interaction by introducing a number of group activities, such as posing the students questions during each lecture, on matters that they have been previously taught in their course. The students were requested to write down the answers and then share their answers in group of two or three. The group then reported to the whole class. Thus new strategies were introduced to elicit student responses and to elicit student participation in the class.

The instrument used to measure the perceptions of the changed psychosocial teaching environment was the College and University Classroom Environment Inventory (CUCEI). Booth (1997) found that the students' ratings of the actual perceptions of all the learning environment scales improved during the implementation of the raised teacher-student interaction strategy. Comparing the results of the teacher's perceptions with those of the students before and after the teaching module suggested that the students rated more highly their cohesion and the individualization and innovation of the teacher than the teacher did. The teacher believed that their task orientation was higher than the students did. It was therefore concluded that an improvement in the learning environment had resulted from an increase in teacher-student interaction.

Another study that indicated that teaching/learning process makes a difference in how the students perceive the learning environment was that conducted by Kaufman and Mann (1996). These authors used the Learning Environment Questionnaire (LEQ) at Dalhousie University Faculty of Medicine to compare the attitudes of students in new problem based learning (PBL) medical curriculum and in the previous conventional curriculum. The authors hypothesized that the PBL students would have more favorable attitudes toward their learning environment. It was found that students in PBL curriculum reported more positive attitudes about academic enthusiasm, authoritarianism, interest, and intellectual maturity than did students in the conventional classroom. However,

students in the conventional classoom were more positive about student-interaction than students in PBL. Kaufman and Mann (1996) suggested that this finding could be a result to cliques that tend to form in PBL class. It was therefore concluded that implementing innovative teaching strategies would improve students' perception of the learning environment.

Some studies investigated the relation between students' perception of the learning environment and attitudes toward the learned subject. Henderson, Fisher, and Fraser (1998) measured students' perceptions of aspects of their learning environment in senior environmental science classrooms by means of Environmental Science Learning Environment Inventory (ESLEI). This study reports the first use of classroom learning environment questionnaires involving students in senior high school Environmental Science classes. The study had three objectives. The first objective was to measure students' perceptions of aspects of their learning environment in senior Environmental Science classrooms by means of the *Environmental Science Learning Environment Inventory* (ESLEI). The second objective was to investigate associations between students' perceptions of their classroom learning environment and students' attitudinal outcomes. The third objective was to investigate differences in student perceptions based on the students' sex and whether or not they were currently studying another science course. The sample composed of 100 Environmental Science students in two of the seven senior secondary colleges (grades 11 and 12) in Tasmania, Australia and three of the independent schools which offer senior secondary courses.

Students' perceptions of their learning environment were measured using the 35-item *Environmental Science Learning Environment Inventory* (ESLEI). Each of the 35 items in the ESLEI is assigned to one of five scales: Student Cohesion, Integration, Involvement, Material Environment, and Task Orientation, and each scale has seven items.

In this course, teachers are encouraged to use class discussions to promote an understanding of values amongst students. With this in mind, a ten-item *Attitude to Class Discussions* scale was devised to evaluate students' opinions of such discussions. Student attitudes also were assessed with a seven-item *Attitude to This Class* scale .Using the scales of the ESLEI as independent variables, associations were computed with two outcome variables: attitude to the class and attitude to class discussions.

In order to investigate associations between students' perceptions of learning environment and students' attitudinal outcomes, the data were analyzed using both simple and multiple correlation analyses. The multiple correlation (R) data reported indicate statistically significant ($p<0.01$) associations between students' perceptions on the set of learning environment scales and attitudinal outcomes. Simple correlation (r) figures indicate that three scales of the ESLEI, namely, Student Cohesion, Involvement, and Task Orientation, were significantly related to student attitudinal outcomes.

Another study that focused on the relation between students' perception of the learning environment and their attitudes toward the related subject was conducted by Rivera and Ganaden (2001) in Philippines. The research design was a descriptive research employing the survey form. The survey used three scales to gather data on the students and teachers' perceptions of their third year high school chemistry classroom environments. The instruments that were used in the study were the learning environment scale (LES), attitude toward chemistry scale (ATCS), and the chemistry achievement test (CAT) to assess students' achievement in chemistry. The LES include 7 factors or variables which are Teacher Support, Students' Interest, Student Participation, Fairness and Clarity of Rules and Tasks in the Classroom, Teacher Encouragement, Classroom Ventilation, and Classroom Space. The ATCS includes two attitude factors which are Liking for and Competence in Chemistry and Perceptions and Beliefs about Chemistry.

The results of the study revealed that for all that twelve involved schools the classroom environment was perceived to be high in teacher support, fairness and clarity of rules and tasks in the classroom, teacher encouragement, and classroom space. The classroom environment was perceived moderate in students' interest and classroom ventilation, but low in student participation. The lowest rating for participation can be explained by the fact that Filipinos are generally shy. Second, there are psychosocial variations in the chemistry classroom environment as perceived by the students, from school to school to school. School 6 has the most positive or favorable classroom environment. Such finding suggests that if ventilation is good, students tend to participate more in class recitations and discussions, there is less boredom when there is teacher encouragement. Third, the private school had a significantly better or more positive classroom environment than the public schools with respect to teacher encouragement, participation, classroom ventilation, and classroom space. Fourth, the two attitude factors (Liking for and Competence in Chemistry and perceptions and beliefs about chemistry) were found to be significantly correlated. This suggests that the more positive perceptions and beliefs about chemistry the students have, the more positive is their liking for and competence in chemistry, and vice versa. Furthermore, all the seven classroom environment factors were found to be significantly and positively related with both attitude factors. This suggests that the classroom environment factors are directly related to attitude toward chemistry, i.e., the more favorable the classroom environment is, the more positive are the attitudes toward chemistry. Moreover, the results revealed that all the correlation between classroom environment factors and achievement were found to be positive and significant except Classroom Space. This implies that LES Factors are directly related to chemistry achievement, i.e., the more favorable the chemistry environment is, the higher the chemistry achievement, and vice versa. Finally, it was

found that of the nine independent variables (7 classroom environment factors + 2 attitude factors), Students' interest, teacher support, Fairness and Clarity of Rule and Tasks in the classroom, Student Participation, and perceptions and beliefs about chemistry are predictors of chemistry achievement. Thus the results of this study indicated that classroom environment factors are directly related to attitude toward chemistry. The more favorable the classroom environment the more positive were attitudes toward chemistry. These findings have a practical implication that would encourage teachers to be more sensitive to the affective needs of their students.

Other studies investigated students' perception toward their learning environment among different academic levels. On one hand, Chiew (1997) measured the perceptions of students toward traditional classroom environment in Secondary 1 and Secondary 2 classes. On the other hand, Clarke, Feletti, and Engel (1984) used the Medical School Learning Environment Survey (MSLES) to measure students' perceptions of new implemented curriculum (PBL) at the University of Newcastle medical school in all five years of the program.

Chiew (1997) reported the latest study conducted in Singapore to determine the perceptions of students in secondary one and secondary two normal technical classes. Eight secondary schools provided a sample of 481 Normal (Technical) students and 76 normal (Academic) students making a total of 557 students. Of these, 274 students were from secondary one classes and 283 from secondary two classes. The sample comprised 345 male and 212 female students. All the students were taught by traditional method. The classroom environment was assessed with a modified version of my class inventory (MCI). The MCI used in this study measured 5 classroom climate scales of cohesion, competition, friction, task orientation and satisfaction. Each scale comprised five items making all together 25 items. Comparisons of students' perceptions were examined by

level, stream, and gender. Research findings suggested that a positive classroom environment enhances and motivates student learning. The results of this study indicated that students' perceptions of classroom climate in both secondary one and secondary two are quite similar. The Results of students from both levels indicated that they enjoyed a positive classroom climate with a rather high level of cohesion and satisfaction and a low degree of friction among students. However, one significant finding emerged for task orientation for both secondary one and two classes. Students perceived their classroom environments as not very task oriented and this is even less so in secondary two classes. These findings suggested that as students move up in their education level they become less task oriented.

With regard to students' perception by stream, both the Normal Technical and Normal Academic students did not feel any considerable differences by virtue of coming from different streams. In fact, the direction of perception was similar except that the Normal Academic students appeared to be slightly more cohesive and happy with their classrooms (Chiew, 1997).

The implication of this study revealed that the dimensions of cohesion and satisfaction dominate students' perceptions and this is a positive aspect. Teachers would have to consider making conscious efforts to foster a sense of cohesion and bonding among all their students, irrespective of the type of classes they teach in. The finding that task orientation ranked lowest among the five climate scales indicate that school and teachers need to use consistent and pragmatic approaches when managing learning activities in the classroom (Chiew, 1997).

On the other hand Clarke, Feletti, and Engel (1984) used the Medical School Learning Environment Survey (MSLES) to measure students' perceptions of new implemented curriculum (PBL) at the University of Newcastle medical school. Students

in all five years of the program were surveyed. The questionnaire includes seven subscales. Theses are Flexibility, Student-student interaction, Emotional Climate, Supportivrnrss, Meaningful learning experience, Organization, and Breadth of interest. It was found that at the beginning the students initially gave very positive ratings, which declined across classes. Thus, Clarke et al concluded that while students' high expectation might be met initially, it may be difficult to meet them over the entire curriculum.

Some studies were done on perception and attitude of students toward case based learning (CBL) method(Engel & Hendricson,1994; Peplow, 1998; Thomas 1992). Engel and Hendricson evaluated the learning experiences of 93 dental students who underwent a set of case-based seminars that emphasize problem solving and decision making in dental general practice through a ten item Likert scale questionnaire. Students reported that the Orthodontic Case Analysis Seminars were more effective than lectures, prepared them better for future practice. Students who participated in Engel and Hendrickson' study recommended that case studies be expanded in dental school curriculum.

Similar results were found by Thomas (1992) who evaluated students' perceptions of a second-year family medicine course that was taught using simulated patient cases. Students participated in Thomas study reported most favorably on the clinical relevance of the topics, working with their fellow students as professionals-in-training in a non threatening atmosphere; in contrast to their basic science courses which did not give them patient contact and mainly encouraged separation and competition.

Peplow (1998) also investigated attitudes and examination performance of female and male medical students in an active case-based learning programme in anatomy. An active case-based project learning programme in anatomy was run for second year medical students in 1995 and 1996, and each was more student centered and less teacher-centered than had been used in previous years. The design of the programme run in 1996

encouraged the students more towards independent learning and deep understanding. The purpose of the study was to measure the extent to which the female and male students perceived the initial discussion sessions to develop deep learning skills, and in addition to determine the performance of female and male students on the CBP and the essay components of the written examination. The results show that the female students viewed the initial discussion sessions as developing deep learning skills to a much greater extent than did the male students. Also the female students performed better than the male on the CBP component relative to the essay component in the examination. Thus, gender differences are important in regard to a number of issues including the growth of case based curricula, admission policies, the increasing proportions of female students in medical schools and future career structure (Peplow, 1998).

Nevertheless, there seems to be some support for interactive learning environments, such as those found in CBL classrooms. Vaughan conducted a study examining student nurses' attitudes toward 10 teaching/learning methods (lecture, discussion, seminar, case study, teaching aids, experiential learning, discovery learning, games, projects, and role-play) using an instrument based on a semantic differential scale. He/she found that nursing students preferred being taught through teaching/learning methodologies that are learner- centered; and that the lecture method was the one least preferred by the students. There was no significant difference when comparing findings against certain variables such as gender, age, and sex. Thus, the findings suggested the group to be homogenous in terms of the variables of interest in Vaughan's study and that students were more positively predisposed towards student-centered teaching/learning methodologies.

CHAPTER 3

METHODS AND PROCEDURES

Study Design

This was a comparative descriptive survey involving first and second year nursing students, hereafter refered to as Level I and Level II students respectively. The participants were registered in a three-year diploma program at the Ministry of Health Institutes of Nursing in the UAE.

Sample and Setting

The setting for this study was in the ministry of health Sharjah and Abu Dhabi Institutes of nursing in UAE. The sample was a probable randomized sample that included first and second year Diploma-nursing students. Randomization was achieved by means of the Table of Random Numbers. Fifty percent (50%) of the students from each first year and second year class in Sharjah and Abu Dhabi Institutes for Nursing were randomly selected for inclusion in the study. Sample size was 110 students including 60 Level I students and 50 Level II students. Third level Diploma nursing students were not included in the study since all the courses that are learned at this level are case based.

Instrument

The questionnaire that was used in the study is the College and University Classroom Environment Inventory (CUCEI) designed by Fraser, Treagust, and Dennis (1986). The dimensions chosen for the CUCEI provided coverage of Moose's three general categories of the learning environment dimensions: relationship, personal development, and system maintenance and system change. The CUCEI consists of seven sub-scales. The seven sub-scales are personalization: the opportunities individual students have to interact with the instructor and the concerned for students personal welfare. Second involvement- how much students participate actively and attentively in class

discussions and activities. Third student cohesiveness: it is the extent to which students know, help, and are friendly toward each other. Fourth satisfaction which reflects how much students enjoy their classes. Fifth task orientation: it is the extent to which class activities are clear and well organized. Sixth, innovation: it is how often new and different teaching and learning activities are used. Finally individualization: it is the extent to which students are allowed to make decisions and are treated differently.

In all, the CUCEI consists of a total of 49 four-point items. There are seven items to each of the seven sub-scales. Each item has four responses (strongly agree, agree, disagree), and polarity is reversed for approximately half of the items.

Reliability and Validity

The alpha coefficient for CUCEI ranged from 0.7 to 0.9 for the actual form and from 0.63 to 0.82 for the preferred form. The scale has satisfactory discriminate validity (using the mean correlation of a scale with the other six scales as a convenient index) (Fraser ,Treagust & Dennis, 1986). No psychometric testing of the instrument was done for the current study. It was deemed that the psychometric properties of the instrument as reported were good enough to ensure confidence in its reliability and validity.

Data Collection

The questionnaires were distributed to Level I and Level II students that were enrolled in a case based curriculum. Each student received the questionnaire as well as verbal and written instructions on how to complete it. Socio-demographic characteristics of the respondents were assessed as part of the questionnaire. The students were asked to complete the questionnaires at home and to bring with them the next day.

All participating students were asked to answer the versions of the questionnaire (perceptions of actual leaning environment) The actual version was answered twice, once

toward the classes that are taught by lectures. Second time students were asked to answer the questionnaire toward classes that are taught by the case-based method.

Ethical Considerations

Consent for this study was obtained from the Director of the Institutes, from the academic committee at the Institutes, and from the participating students. In order to maintain anonymity, respondents were asked not to write their names on the questionnaire. A written consent was obtained at the time of data collection. Explanations regarding the purpose of the study were included in the letter requesting students' consent to participate in the study.

Data Analysis

Data were analyzed using SPSS. Descriptive statistic of socio-demographic characteristics and all measures were computed. A frequency analysis was used to determine the means and standard deviation for each item .Mean Ratings on CUCEI items and subscales by students' perception in case based and traditional classrooms were calculated. The paired t test was used to determine whether a significant difference at a p value of 0.05 existed between the students' ratings of their traditional learning environment compared to their ratings of their case-based learning environment. A T test for independent samples was used to determine how Level I students rate their learning environments differently than Level II.

Limitations

The findings from this study will have limited generalizability because the institutes of nursing are the only nursing institutes that adopted case based approach in the Gulf. The study was conducted in the Ministry of Health Institutes of Nursing. Thus, the study is generalized to the MOH institutes and not to other institutes. Moreover, the study was done on two out of four Institutes of Nursing. This fact will decrease the generalizability of the study.

CHAPTER 4

RESULTS

Introduction

This chapter presents the results of nursing students' perceptions of their classroom learning environment in case-based and traditional classrooms. The results describe the sample characteristics, the participants' ratings of their learning environments on the College and University Classroom Inventory (CUCEI) in case based and traditional classrooms. Moreover the participants' responses to the CUCEI scales were analyzed at each academic level (Level I &Level II) and between academic levels. The chapter, thus presents overall group results as well as results within and between academic levels.

Sample Characteristics

The number of participants that participated in this study was 110. Demographic data were obtained for all the participants in this study. These included age, sex, marital status and the academic level. Analysis of demographic data revealed that all the participants were females (100%), 17-25 years of age. The marital status of the participants revealed that two were married (1.8%) and 108 (98.2%) were single. Hence the majority of the participants were single. All participants ranged in age from 17-25 with a mean of 19.5. As for the academic level, 60 participants (57.7%) were in Level I and 50 were in Level II (42.3%). A more concise demographic profile is presented in Table 1

Table 1. Demographic Profile of Participants

Demographic variables	N (%)	Minimum	Maximum	Mean
No of participants	110			
Age		17	25	19.5
Academic Level Level I Level II	60(57.7%) 50(42.3%)	1	2	
Gender Female	110(100%)			

The Overall Participants' Ratings of their Learning Environments

Generally, students' ratings of their learning environments were good. See Table 2 below. The overall mean score was 23.84. In terms of the CUCEI subscales, however, cohesiveness was rated the highest with a mean score of 28.00(SD=5.44), whereas innovation was the lowest rated classroom environment variable with a mean score of 19.47 (SD = 4.78).

Table 2: Descriptive Profile for the Overall Participants' Ratings (N=110) of their Learning Environments

Learning Environment	Minimum	Maximum	Mean	Standard Deviation
Personalization	13	35	26.13	5.01
Involvement	9	35	23.51	4.65
Cohesiveness	11	35	28.00	5.44
Satisfaction	8	35	24.02	6.21
Task orientation	12	35	26.15	4.42
Innovation	7	32	19.47	4.78
Individualization	8	32	19.60	5.16

Participants' Ratings of their Learning Environment by Teaching/learning Method

Table 3 below depicts data on mean ratings of the classroom environment by teaching/learning method. Perusal of this Table would reveal that the variables of the learning environment that were rated more favorably by the participants in case-based learning compared to traditional learning classrooms were Involvement, Innovation, and Individualization. On the other hand, Personalization, Satisfaction and Task orientation were rated higher in traditional than case-based classes. Such a comparative profile of mean ratings is presented in Figure1.

Table 3: Participants' Comparative Descriptive Profile by Classroom Type

Variable	CUCEI Profile in CBL		CUCEI profile in Traditional	
	Mean	SD	Mean	SD
Personalization	26.03	5.47	26.24	4.52
Involvement	24.57	4.32	22.45	4.75
Cohesive-ness	28.21	5.32	27.80	5.58
Satisfaction	23.64	5.98	24.41	6.43
Task Orientation	25.55	4.28	26.75	4.50
Innovation	20.39	4.61	18.55	4.78
Individualization	20.19	5.50	19.01	4.75
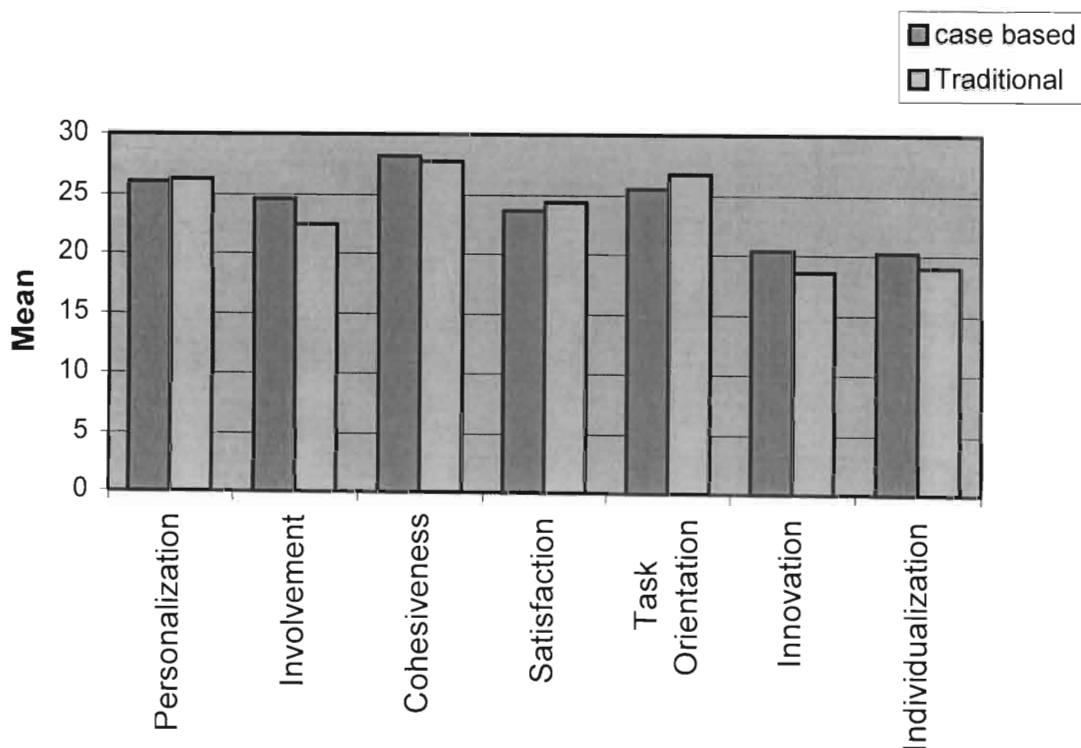
Figure1.Overall Participants Profile in Case Based and Traditional Classrooms

The paired t test was used to determine whether a significant difference at a p value of 0.05 existed between the students' ratings of their traditional learning environment compared to their ratings of the case-based learning environment. Results of the t test are displayed in Table 4.

Table 4. Variations in Environment Ratings by Teaching/Learning Method (N =110)

		Mean	SD	Mean Dif.	T	Df	Sig.
Pair 1	Personalization 1	26.03	5.47	-.2091	-.400	109	.69
	Personalization 2	26.24	4.52				
Pair2	Involvement 1	24.57	4.32	2.1273	4.47	109	.000
	Involvement 2	22.45	4.75				
Pair 3	Cohesiveness 1	28.21	5.32	.4091	1.21	109	.23
	Cohesiveness 2	27.80	5.58				
Pair 4	Satisfaction 1	23.64	5.98	-.7727	-1.23	109	.22
	Satisfaction 2	24.41	6.43				
Pair 5	Task Orientation 1	25.55	4.28	-1.2000	-2.47	109	.015
	Task Orientation 2	26.75	4.50				
Pair6	Innovation 1	20.40	4.61	1.8455	3.62	109	.000
	Innovation 2	18.55	4.78				
Pair7	Individualization1	20.19	5.50	1.1818	2.28	109	.025
	Individualization 2	19.01	4.75				

1 CBE
2 Traditional

The paired samples T test indicated that there was no statistical difference between the participants' ratings of the case-based and traditional classroom learning environments on the CUCEI scale regarding the subscales of Personalization, Cohesiveness, and Satisfaction (p>. 05). However, the students reported more positive perceptions toward case-based classroom environment regarding the subscales of Involvement (p<0.01), Innovation (p<0.01), and Individualization (p<0.05). A significant difference (p<0.05) emerged favoring traditional classroom environment on the Task orientation subscale.

In view of the fact that the CUCEI scale yields ordinal data, and that the paired t-test is more appropriate for interval and ratio data, further analysis of data using the Wilcoxon Signed Ranks Test was performed. The results of this test are displayed in Table 5.

Table 5: Ranks of CUCEI scales in CBE and Traditional Classrooms

LEARNING ENVIRONMENT VARIABLES		N	Mean Rank	Sum of Ranks	Z	Sig.
Personalization- Traditional Personalization- CBE	Negative Ranks	53	45.38	2405.00	-.46	.64
	Positive Ranks	42	51.31	2155.00		
	Ties	15				
	Total	110				
Involvement-Traditional Involvement-CBE	Negative Ranks	68	57.91	3938.00	-4.16	.00
	Positive Ranks	35	40.51	1418.00		
	Ties	7				
	Total	110				
Cohesiveness-Traditional Cohesiveness-CBE	Negative Ranks	46	46.27	2128.50	-1.33	.19
	Positive Ranks	39	39.14	1526.50		
	Ties	25				
	Total	110				
Satisfaction-Traditional Satisfaction-CBE	Negative Ranks	42	47.60	1999.00	-1.36	.17
	Positive Ranks	55	50.07	2754.00		
	Ties	13				
	Total	110				
Task Orientation-Traditional Task Orientation-CBE	Negative Ranks	38	42.92	1631.00	-2.28	.02
	Positive Ranks	56	50.61	2834.00		
	Ties	16				
	Total	110				
Innovation-Traditional Innovation-CBE	Negative Ranks	59	58.24	3436.00	-3.14	.002
	Positive Ranks	41	39.37	1614.00		
	Ties	10				
	Total	110				
Individualization-Traditional Individualization-CBE	Negative Ranks	58	51.32	2976.50	-1.56	.12
	Positive Ranks	42	49.37	2073.50		
	Ties	10				
	Total	110				

Negative Ranks ⇨ No. of cases of which the value of CBL > TDL
Positive Ranks ⇨ No. of cases of which the value of TDL > CBL
Tie ⇨ TDL = CBL

The results of Wilcoxon Signed-Rank test indicated that the distribution of scores on the Involvement and Innovation variables in case based classroom environment were

different from their correspondent variables in traditional classroom environment (< 0.01) based on positive ranks (value in case based exceeded that in traditional). However, the distribution of Task orientation variable in traditional classroom environment is different (p<. 05) from its related variable in case based classroom environment based on negative ranks (value in traditional exceeded that in case based). Moreover, the results of this test indicated that there were no significant differences in the distribution of scores on the variables Personalization, Cohesiveness, Satisfaction and Individualization between the case- based and traditional classroom environments' ratings.

Thus, the results of Wilcoxon test are almost similar to those of the paired t-test. In both tests there was no significant difference between the participants' rating of the case based and traditional classroom-learning environment regarding the subscales of Personalization, Cohesiveness, and Satisfaction. Moreover the results of both tests suggested that the students reported more positive perceptions toward case based classroom environment on the Involvement and Innovation subscales (p< .01), and more favorable perception toward traditional classroom environment on the Task orientation subscale. However there was a slight difference between the results of the two tests on the individualization subscale whereby the paired sample T test revealed significant difference (p<. 05) favoring the case based classroom environment. For the Wilcoxon, no significant differences were found in students' ratings of the TDL and CBL classroom environments on Individualization (p=. 119).

Variations in Students' Ratings of their Classroom Environments by Teaching/Learning Method and Level of Study

A T test for independent samples was used to determine how Level I students rate their learning environments differently than Level II. Comparison of Level I and Level II

ratings of the case-based learning environment is displayed in Table 6 whereas the ratings of the traditional classroom environment appear in Table 8.

The results that are displayed in Table 6 indicated that Level I students rated case based learning environments more favorably compared to Level II regarding the scales of personalization, satisfaction, innovation and individualization. On the other hand Level II mean ratings were higher in the cohesiveness scale. For Involvement and task orientation scales, both levels mean ratings were almost similar.

Table 6. Comparison of Level I (n = 60) and Level II (n = 50) CUCEI Mean ratings in Case Based Classroom Environments

Variables / Academic Level		Mean	Std. Deviation	T	Mean Difference	Sig(2-tailed)	Df
Personalization	1	28.03	4.36	4.47	4.41	.000	90
	2	23.62	5.73				
Involvement	1	24.83	4.76	.69	.57	.49	108
	2	24.26	3.75				
Cohesiveness	1	27.05	5.94	-2.65	-2.55	.01	104.62
	2	29.60	4.10				
Satisfaction	1	24.52	5.95	1.71	1.94	.09	108
	2	22.58	5.91				
Task Orientation	1	25.53	4.48	-.03	-2.6	.97	108
	2	25.56	4.07				
Innovation	1	21.98	4.57	4.27	3.50	.000	108
	2	18.48	3.90				
Individualization	1	22.62	4.43	5.77	5.34	.000	108
	2	17.28	5.27				

The results of independent samples t test revealed that Level I students reported significantly more positive perceptions toward case based classroom environments than Level II students regarding the scales of Personalization, Innovation, and Individualization (p<0.01). On the other hand, Level II students reported significantly more positive perception toward case based classroom environments regarding the subscale of Cohesiveness (p<. 05). There was no significant difference between Level I and Level II responses regarding the subscales of Involvement, Satisfaction, and Task orientation.

In view of the fact that the CUCEI scale yields ordinal data and that the independent samples t-test is more appropriate for interval and ratio data, further analysis of data to compare Level I and Level II results using the Mann Whitney-U test was performed. The results of this test are displayed in Tables 7 and 8.

Table 7. Mann -Whitney U Test by Academic Level in Case Based Classroom Environments

Variables / Academic Level		N	Mean Rank	Sum of Ranks	Z	Asymp.Sig(2-tailed)
Personalization	1	60	67.03	4021.50	-4.16	.00
CBE	2	50	41.67	2083.50		
	Total	110				
Involvement	1	60	57.63	3457.50	-.77	.44
CBE	2	50	52.95	2647.50		
	Total	110				
Cohesiveness	1	60	49.74	29874.50	-2.08	.04
CBE	2	50	62.41	3120.50		
	Total	110				
Satisfaction	1	60	60.13	3608.00	-1.67	.09
CBE	2	50	49.94	2497.00		
	Total	110				
Task Orientation	1	60	55.41	3324.50	-.03	.97
CBE	2	50	55.61	2780.50		
	Total	110				
Innovation	1	60	66.53	3992.00	-3.98	.000
CBE	2	50	42.26	2113.00		
	Total	110				
Individualization	1	60	69.04	4142.50	-4.89	.000
CBE	2	50	39.25	1962.50		
	Total	110				

The results of the Mann- Whitney test suggested that there was a significant difference (p<0.05) between Level I and Level II regarding the variables Personalization, Cohesiveness, Innovation, and Individualization with respect to CBE classroom environment. Level I students reported significantly more positive perceptions toward case based classroom environments than Level II students regarding the variables of Personalization, Innovation, and Individualization (p<0.01). On the other hand, Level II students reported significantly more positive perception toward case based classroom environments regarding scale of Cohesiveness (p<. 05). There was no significant

difference between Level I and Level II responses regarding the subscales of

Involvement, Satisfaction, and Task orientation. Thus, both Mann Whitney test and

independent sample t test yielded the same results in case based classroom environments

by academic level.

With regard to traditional classroom environments, an independent samples t test

was also used to determine how Level I students rate their learning environments

differently than Level II students. Comparison of Level I and level II ratings of the

traditional learning environment is displayed in Table 8.

Table 8. Comparison of Level I (n = 60) and Level II (n = 50) CUCEI Mean ratings in Traditional Classroom Environments

Variable / Academic Level		Mean	Std. Deviation	T	Mean Difference	Sig(2-tailed)	Df
Personalization	1	26.72	4.72	1.22	1.06	.22	108
	2	25.66	4.25				
Involvement	1	23.20	5.21	1.84	1.66	.07	108
	2	21.54	4.00				
Cohesiveness	1	26.82	6.11	-2.10	-2.16	.04	107
	2	28.98	4.67				
Satisfaction	1	25.33	6.98	1.66	2.03	.099	108
	2	23.30	5.57				
Task Orientation	1	27.13	4.49	.99	.85	.32	108
	2	26.28	4.51				
Innovation	1	19.58	4.88	2.56	2.28	.01	108
	2	17.30	4.39				
Individualization	1	20.30	4.55	3.26	2.84	.002	108
	2	17.46	4.56				

Level I students reported significantly more positive perception toward traditional

classroom environments than Level II students regarding the subscales of Innovation (T =

2.57, df = 108, p = .012) and Individualization (T = 3.26, df = 108, p = .002). On the other

hand, Level II students reported significantly more positive perception toward traditional

classroom environments regarding subscale of Cohesiveness (T = -2.10, df = 107.25, p =

.038). There was no significant difference between Level I and Level II responses

regarding the scales of Personalization (T = 1.22, df = 108, p = .22), Involvement (T = 1.85, df = 108, p = .07), Satisfaction (T = 1.66, df = 108, p = .099), and Task orientation (T = .99, df = 108, p .32).

In addition to the T test, the Mann Whitney Test was used to analyze Level I and Level II results, which are displayed in Table 9. The Mann Whitney U test results indicated that Level I students perceived the traditional classroom environments significantly more favorably than Level II regarding the subscales of Involvement, Satisfaction, Innovation, and Individualization (p<0.05). There was a difference between T test and Mann Whitney U test in traditional learning environments. The Mann Whitney U test revealed more significant positive ratings for the subscales of Satisfaction and Involvement in Level I. On the other hand the independent samples T test had revealed more significant positive ratings for the scale of Cohesiveness in Level II.

Table 9. Mann -Whitney U Test by Academic Level in Traditional Classroom Environments

Variables / Academic Level		N	Mean Rank	Sum of Ranks	Z	Sig.
Personalization	1	60	58.93	3536.00	-1.24	.215
Traditional	2	50	51.38	2569.00		
	Total	110				
Involvement	1	60	61.23	3674.00	-1.24	.038
Traditional	2	50	48.62	2431.00		
	Total	110				
Cohesiveness	1	60	50.53	3032.00	-1.76	.073
Traditional	2	50	61.46	3073.00		
	Total	110				
Satisfaction	1	60	61.29	3677.50	-2.09	.037
Traditional	2	50	48.55	2427.50		
	Total	110				
Task Orientation	1	60	58.63	3518.00	-1.13	.257
Traditional	2	50	51.74	2587.00		
	Total	110				
Innovation	1	60	63.17	3790.50	-20772	.006
Traditional	2	50	46.29	2314.50		
	Total	110				
Individualization	1	60	64.52	3871.00	-3.257	.001
Traditional	2	50	44.68	2234.00		
	Total	110				

Summary of Salient Findings

Hypotheses 2, 5 and 6 had predicted favorable perceptions for case-based learning environments compared to traditional learning environments. The results of the study support these hypotheses. Therefore the hypotheses that stated that students would rate their CBL classroom environments more favorable compared to their ratings of traditional classroom environment with regard to involvement, innovation and individualization were retained.

Hypotheses 1, 2, and 4 stated that the students would rate their CBL classroom environments favorable compared to their ratings of traditional classroom environment with regard to personalization, cohesiveness and satisfaction. No evidence was found to support this claim. Hence, these hypotheses were rejected.

Lastly, it was hypothesized that students will rate traditional classroom environments more favorable compared to their ratings of the CBL environments with regard to task orientation. This hypothesis was retained based on the results of this study.

CHAPTER 5

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

This study investigated nursing students' perception of the classroom learning environment in case based and traditional classroom. The discussion section will follow the same sequence as the results were presented.

Overall Participants Rating of the Learning Environment

All four of the relationship dimension (personalization, involvement, cohesiveness, and satisfaction variables) were generally rated high by the participants in the study (See Table 2). Cohesiveness was rated the highest (Mean = 26.13, SD = 5.01). The fact that nursing students rated cohesiveness the highest indicated that students knew, helped, and were friendly toward each other. On the other hand, both innovation (Mean = 19.47, SD = 4.78) and individualization (Mean = 19.60, SD = 5.16) were rated the lowest compared to the other scales. This would mean that although the learners perceived their learning environment positively with regard to relationships and personal development ; however, they did not see it as highly amenable to the introduction of new and varied teaching learning activities. The fact that the timetable of case based and traditional courses at the Institutes is squeezed would restrain the feasibility of implementing various innovative learning methods.

Participants Rating of their Learning Environment by Teaching/Learning Method

The participants rated the scales of involvement, innovation, and individualization more favorable in case-based classroom environments (See Table 3).

Firstly, with regard to high ratings on the involvement scale, the results indicated that learners in CBL classrooms felt that they were more actively involved in the teaching learning process in CBL classrooms than they were in the traditional classrooms. Such result is related to the nature of case based learning environment. A case based learning is

a student-centered approach in which students learn in-groups. CBL is a form of "active learning" that involves students in doing things and thinking about things they are doing (Bonwell & Edison, cited in Greich & Paraschos, 2000).

Secondly, with regard to system maintenance and system change dimension of the CUCEI scale, both innovation and individualization were rated higher in CBL classrooms than in TDL classrooms. This is not surprising since literature attests to the fact that in CBL the tutor plans and implements innovative teaching strategies. For instance according to Glendon and Ulrich (1997) class discussion in CBL environments is facilitated and interaction is increased through cooperative learning strategies such as round table, think, pair and share, and pass the problem. The findings of this study are consistent with Vaughan (1990). He/she found that nursing students preferred being taught through teaching/learning methodologies that are learner-centered.

Thirdly, it is indicated from the results of the individualization variable that students in CBL environment felt freer to make decisions regarding the way they preferred to be taught and that they were treated differently according to ability and interest than they were in traditional classroom environments. This view is supported by Barrows and Tamblyn (1980) in stating that, unlike the traditional method of teaching, student centered learning considers the fact that students are not homogenous in educational and cultural background, knowledge and experience, nor are they homogenous in their learning abilities. This would explain why individualization was rated higher in case-based classroom environments.

The studies that indicated that teaching/learning process makes a difference in how the students perceive the learning environment were those conducted by Fisher and Parkinson (1998), Kaufman and Mann (1996), and Booth (1997). The findings of this study are consistent with the findings of Parkinson (1998) and Booth (1997) regarding

all the subscales of the CUCEI except the Task Orientation scale. Booth and Fisher and Parkinson wanted to change the classroom environment such that there was more student interaction than normally is the case in a traditional learning environment, and to create a learning environment in which mutual sharing and support prevailed. The results indicated a change in the students' perceptions of involvement, task orientation, and student cohesiveness toward that preferred by the students. Booth conducted a similar study with fifth year dental students at the University of Western Australia's School of Oral Health. Booth found that the students' ratings of the actual perceptions of all the learning environment scales improved during the implementation of the raised teacher-student interaction strategy. Moreover, Kaufman and Mann (1996)used the Learning Environment Questionnaire (LEQ) at Dalhousie University Faculty of Medicine to compare the attitudes of students in new problem based learning (PBL) medical curriculum and in the previous conventional curriculum. It was found that students in PBL curriculum reported more positive attitudes about their learning environment than did students in conventional class. Therefore, the study findings indicated that implementing innovative teaching strategies such as the case based methods would improve students' perception of the learning environment.

Task orientation, however, was rated higher in traditional than case based classes with a mean score of 26.75 in traditional classes and a mean score of 25.5 in case based classes. Students perceived class activities to be more clear and organized in traditional than in case based classroom environments. According to Barrows and Tamblyn (1980), teacher-centered learning saves the students from the agony and suffering that they usually experience when they work on their own through the subject areas. Since traditional learning environment was measured in subject based learning such as anatomy and microbiology, task orientation was rated higher in traditional learning environments.

Barrows and Tamblyn described the advantages of subject-based learning methods. First, the resources for learning in one specified subject or field are more easily identified and made available. Moreover, this approach seems efficient since the student applies himself/herself to the task of memorizing and/or manipulating the concepts, skills, and information that are important. This characteristic of subject based learning would explain the fact that student rated task orientation higher in the traditional learning environments.

Variations in Students' Rating of Their Classroom Environment by Teaching/ Learning Method and Level of Study

Level I students' ratings of the classroom environment were high although lower than those of Level II ratings. Level I students' ratings on cohesion were high for both learning environments with a mean score of 27.5 for CBL and 26.82 for TDL.

Level I students reported significantly more positive perceptions toward case based classroom environments than did Level II students regarding the scales of personalization, innovation, and individualization (see Table 6). These results indicated that the psychosocial learning environment in CBL classrooms might have emphasized better opportunities to interact with the instructor and concern for students' personal welfare. Moreover, Level I students perceived the classroom teaching techniques and assignments in CBL classes to be more innovative than Level II students did. It would seem that students felt in CBL classrooms they were allowed to make decisions about the teaching/learning process and could have been treated differently according to ability and interest. Hence the high ratings on the innovation and individualization scales. These findings are similar to Clarke et al (1984) findings who used the Medical School Learning Environment Survey (MSLES) to measure students' perceptions of new implemented curriculum (PBL) at the University of Newcastle medical school. Students in all five years of the program were surveyed. They found that at the beginning the students initially gave very positive ratings, which declined across classes. Thus, Clarke et al concluded that

while students' high expectation might be met initially, it might be difficult to meet them over the entire curriculum. The fact that Level II students rated cohesiveness higher than Level I can be attributed to the fact that Level II students had had more time in the same classrooms and therefore could have been more familiar and friendly towards each other. Consequently they could have helped each other in the learning process. On the other hand Level I students had not had as much time as the Level II students in the same classroom. After all, this was the first year of study at the Institutes of Nursing.

With regard to traditional classroom learning environments, Level I students rated innovation and individualization variables significantly higher than Level II students (see Table 8). This indicates that as students move up in their education level they felt less free to make decisions regarding the way they preferred to be taught in the traditional learning environment. Moreover, the results might mean that as students move up in their education level they would perceive the teaching strategies that are followed in traditional classroom environment to be less innovative. On the other hand, Level II students rated cohesiveness higher than level I students in traditional classroom environments. The results obtained from the Mann Whitney U test (See Table 9) suggest that as students move up in their education level they become less satisfied and involved with the traditional learning environment. Such results might mean that as students move up in their education level they become more cohesive in traditional classroom environment; and they develop less favorable perception toward traditional classroom environments regarding the variables innovation and individualization.

The findings of this study are not consistent with Chiew's (1997) results. Chiew reported on a study conducted in Singapore to determine the perceptions of students in secondary one and secondary two normal technical classes. All the students were taught by traditional method. The results of this study indicated that students' perceptions of

classroom climate in both secondary one and secondary two are quite similar. The Results of students from both levels indicated that they enjoyed a positive classroom climate with a rather high level of cohesion and satisfaction and a low degree of friction among students. However, one significant finding emerged for task orientation for both secondary one and two classes. Students perceived their classroom environments as not very task oriented and this is even less so in secondary two classes. These findings suggested that as students move up in their education level they become less task oriented.

Conclusion

In conclusion, the results of this study indicated that nursing students rated their CBL classroom environment more favourable compared to their ratings of the traditional classroom environments with regard to involvement, innovation, and individualization. On the other hand, nursing students rated task orientation more favourable in tradiditional classroom environment compared to their rating in CBL classroom environment. Thus, the teaching/learning methods that are implemented in CBL environments are more innovative than those implemented in traditional classrooms. Moreover, changing the teaching-learning method from traditional to CBL methods could have made the students more involved in class discussion and activities. Furthermore, the results suggested that as students moved up in their education level they would develop less favorable perception toward CBL environment regarding personalization, innovation, and individualization, on one hand. On the other hand, they become more cohesive in CBL as well as traditional classroom environment. These results suggest that while the students' high expectations of CBL are met initially, it might not be met over the entire years. With regard to traditional classroom environments, the results indicate that as students move up in their education level they develop less favorable perception toward traditional classroom environments regarding the variables innovation and individualization. Thus, as students

move up in their education level they develop less favorable perception of the learning environment regarding innovation and individualization in both the traditional and the case method. It would appear therefore, that unless teachers are constantly aware of the need to maintain students' interest through a variety of teaching strategies in CBL classrooms, even that which was initially regarded as a novel experience, might be in danger of becoming routine and non-challenging over time.

Reccommendations

Since the results of the study did not support the first hypothesis on the CUCEI scales of Personalization, Cohesiveness, and Satisfaction, it is recommended to:

1. Nurse educators should strive to utilize a variety of teaching strategies in case-based learning classrooms if they are to maintain students' enthusiasm and feelings of being challenged.

2. Group cohesiveness takes time and should be nurtured very early in learning environments that depend on collaborative learning for effectiveness, including CBL environments.

3. Use of case based learning should be encouraged in nursing education as a teaching methodology since the students become more involved in the teaching process, the teaching methods are more innovative, and students are better treated uniquely according to ability and rate of working. The fact that students are more task oriented in traditional learning recommends implementing CBL in nursing education since nurses should be prepared to be self directed rather than task oriented.

4. Conduct a research in the future about the actual and preferred classroom learning environment. The purpose of such research would be to change and improve the learning environment according to the students' feedback.

REFERENCES

Ayoade, F., & Rothman, A. (1970). The development of a learning environment: A questionnaire for use in curriculum evaluation. Journal of Medical Education, **45**, 754-757.

Barbara, S. (2000). The case method of learning, Latin American and Iberian studies, University of California. http://gisp.ucsb.edu/lais/casemethod.htm

Barrows, H.S. (1986). A taxonomy of problem-based learning methods. Medical Education, **20**, 481-486.

Barrows, H. S., & Tamblyn, R. M. (1980). Problem-based learning: An approach to medical education. New York: Springer

Bartholomay, A.C. (1996). Students and teachers as partners in the classroom community: A study of classroom social environment. VCCA Journal, **10** (1), 32-38

Booth, D. (1997). Evaluation of a change in teaching methods using the college and university classroom environment inventory (CUCEI). In Pospisil,R. and Willcoxson, L. (Eds), Learning Through Teaching , p44-49. Proceeding of the 6th Annual Teaching Learning Forum, Mudroch University, Perth: Mudroch University.

Camp,G. (1996). Problem based learning: a paradigm shift or a passing fad? MEO; **1**(2). http://www.utmb.edu/meo/f0000003.htm#f000000

Center for Teaching and Learning. (1994). Teaching with case studies. Speaking of Teaching: Stanford University Newsletter on Teaching, **5**(2), 1-4.

Clarke, R. M., Feletti, G.I., & Engel, C.E. (1984). Student perceptions of the learning environment in a new medical school. Medical Education, **18**, 321-325.

Chiew, R. S.(1997). Normal technical students ' perceptions of their classroom environments. React, 1 http://eduweb.nte.edu.sg/react/1997/1/4.htm

Cust, J. (1996) .A relational view of learning: Implications for nurse education. Nurse Education Today, **16**, 256-266.

Denise, M. & Bowen, M. S. (1998). Integrating case-based instruction into dental hygiene curricula. Journal of Dental Education, **62**(3), 253-256.

Engel, F. & Hendricson, W. D. (1994). A case based learning model in orthodontics. Journal of Dental Education, **58**(10), 762-767.

Fisher, D., & Parkinson, B. (1998). Improving nursing education classroom environments. Journal of Nursing Education, **37**(5), 232-236.

Fraser, B. J. (1986). Classroom environment. London: Croom Helm

Fraser, B. J, Treagust, D., & Dennis, N. (1986). Development of an instrument for assessing classroom psychosocial environment at universities and colleges. Studies in Higher Education, **11**(1), 43-54.

Fraser, B. J., Anderson, G. J., & Walberg, H. J. (1982). Assessment of learning environments: Manual for learning environment inventory my class inventory (MCI) (Third version). Bentley, Australia: Western Australian Institute of Technology

Freire, P. (1972). Pedagogy of the oppressed, New York: Herder& Herder

Friedman, C., de Bliek, R., Greer, D. S., Mennin, S, Norman, G. R., Sheps, C. G., Swanson, D. B & Woodward, C. A. (1990). Charting the Winds of Change: Evaluating Innovative Medical Curricula. Academic Medicine, **65**, 8-12.

Florida Education Standards Comission. (2000). Case-based learning. Tutorial Library, 2000. http://www.steps.uwf.edu/steps/library/tutorial/casebasedlearning.cfm

Glendon, K., & Ulrich, D. (1997). Unfolding cases: An experiential learning model. Nurse Educator, **22** (4), 15-18.

Greich, D.G, & Paraschos, P. E. (1994). Reinventing international affairs education. active learning, the case method, and case studies.
http://www.georgetown.edu/sfs/programs/isd/files/cases/reinvent.htm

Gwele, N. S. (1998). Implementing a case-based curriculum in a three-year diploma program in nursing: A pre-implementation analysis of teachers' conceptions about teaching and their concerns regarding the new curriculum. Abu: Dhabi, UAE: School of Nursing, Ministry of Health.

Gwele, N. S. (1999). A handbook for teachers in nursing education: a guide to facilitating and monitoring the implementation of a case-based curriculum, Abu Dhabi, UAE: School of Nursing, Ministry of Health.

Henderson, D. G., Fisher, D. L. & Fraser, B. J. (1998). Learning environment and student attitudes in environmental science classrooms. Proceedings Western Australian Institute for Educational Research Forum .
http://cleo.murdoch.edu.au/waier/forums/1998/henderson.html

Hein, G. E. (1991). Constructivist learning theory. Massachusetts, USA: Institute for Inquiry,Lesley College.

Jarz, E. M., Kainz, G. A., & Walpoth, G. (1997). Multimedia-based case studies in education: Design, development, and evaluation of multimedia based case studies. Journal of Educational Multimedia and Hypermedia, **6** (1), 23-46

Kaufman, D. M. (1998) Problem-based learning. Communique, **8**(2)
http://ncehr-cnerh.org/english/communique2/PBLearning.html

Kaufman, D. M, & Mann, K. V. (1996). Comparing students' attitudes in problem-based learning and conventional curricula. Academic Medicine, **71**(10), 1096-1099.

McCown, R., Driscoll, M., & Roop, P. G. (1996). Educational psychology: A learning centered approach to classroom practice. London: Allyn & Bacon.

Merseth, K. (1991). The early history of case based instruction: Insights for teacher education today. Journal of Teacher Education, **42**(4), 243-249

Modell, K. (1996). Preparing students to participate in an active learning environment. Advances in Physiology Education, **15**(1), S69-S77.

Nair, C. S., & Fisher, D. L. (1999). A learning environment study of tertiary classrooms. Proceedings Western Australian Institute for Educational Research Forum 1999. http://cleo.murdoch.edu.au/waier/forums/1999/nair.html

Peplow, P. (1998). Attitudes and examination performance of female and male medical students in active case-based learning programme in anatomy. Medical Teacher, **20**(4), 349-355.

Peters, M. (2000). Does constructivist epistemology have place in nurse education? Journal of Nursing Education, **39** (4), 166-172.

Quinn, F. (1995). The principles and practice of nurse education. London: Starley Thornes.

Rivera, T. C. & Ganaden, M. F,. (2001). Classroom psychosocial environment. International Online Journal of Science and Mathematic Education, **1**, 1-16 http://www.ismed.upd.edu.ph/online/articles/psycho/intro.htm

Tanner, D., & Tanner, L. N. (1995). Curriculum development : Theory into practice. New York: Macmillan.

Thomas, R. E. (1992). Teaching medicine with cases: student and teacher opinion, Medical Education, **26**,200-207

Tinzmann, M. B., Jones, B. F., Fennimore, T. F., Bakker, J., Fine, C., & Pierce, J. (1990). What is the collaborative classroom? NCREL, Oak Brook http://www.ncrel.org/sdrd/areas/rpl-esys/collab.htm

Uys, L. (1999). Case-based curricula in nursing education. Unpublished Manuscript, Durban: University of Natal.

Vaughan, J. A. (1990). Student nurse attitudes to teaching/learning methods. Journal of Advanced Nursing, **15**,925-933.

Walberg, H. J. (1991). Improving school science in advanced and developing countries. Review of Educational Research, **61**, 25-69.

Wassermann . S. (1994). Introduction to case method teaching A guide to the galaxy, New York: Teachers College Columbia University

Woolfolk, A. (2001). Educational psychology (8th ed), Boston: Allyn and Bacon.

Young, N. A. (1998) Problem-based learning: Using cases to drive the learning process. Journal of Dental Education, **62**(3), 235-241.

APPENDIX A

COVER PAGE

Dear Students

I am conducting a study on nursing students' perception of the classroom learning environment in case-based and traditional courses. Your kind and sincere participation will be of a great help to the success of this study. I would like to reassure you that the data collection is an anonymous process and the identity of participants will not be revealed under any circumstances. I furthermore reassure the participants that all responses shall be treated with utmost confidentiality. The data collected from the study will be accessible to the researcher and his/her supervisor only. The results of the study will be accessible to public upon request.
You may feel free to contact me for any question or clarification you may require regarding this questionnaire.

Ghada Sadek
Institute of Nursing Sharjah
Po Box 3500
Sharjah UAE

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APPENDIX B

DEMOGRAPHIC DATA

Student number:_____

Enter your age in years in the box provided:

Enter your Nationality in the box provided

Circle the answer of the following questions

1.What is your marital status?

| Married | Single | Divorced |

2.What level of the diploma-nursing program is you presently in?

| Level I | Level II | Level III |

APPENDIX C

**COLLEGE AND UNIVERSITY CLASSROOM
ENVIRONMENT INVENTORY (CUCEI)**

STUDENT ACTUAL FORM

DIRECTIONS:

The purpose of the questionnaire is to find out your opinions about **THIS CLASS**.

This form of the questionnaire assesses your opinion about what this class is **ACTUALLY LIKE**. Please indicate your opinion about each questionnaire statement by circling:

SD -   Strongly Disagree
D -   Disagree
A -   Agree
SA -   Strongly Agree

Appendix C: CUCEI (continued)

1. The instructor considers students' feelings.	SD	D	A	SA
2. The instructor talks rather than listens.	SD	D	A	SA
3. The class is made up of individuals who do not know each other well.	SD	D	A	SA
4. The students look forward to coming to the class.	SD	D	A	SA
5. Students know exactly what has to be done in this class.	SD	D	A	SA
6. New ideas are seldom tried out in this class.	SD	D	A	SA
7. All students in the class are expected to do the same work, in the same way and in the same time.	SD	D	A	SA
8. The instructor talks individually students.	SD	D	A	SA
9. Students put effort into what they do in this class.	SD	D	A	SA
10. Each student knows the other members of the class by their first names.	SD	D	A	SA
11. Students are dissatisfied with what is done in the class.	SD	D	A	SA
12. Getting a certain amount of work done is important in this class.	SD	D	A	SA
13. New and different ways if teaching are seldom used in this class.	SD	D	A	SA
14. Students are generally allowed to work at their own pace.	SD	D	A	SA
15. The instructor goes out of his/her way to help students.	SD	D	A	SA
16. Students "clockwatch" in this class.	SD	D	A	SA
17. Friendships are rare among students in this class.	SD	D	A	SA
18. After the class, students have a sense of satisfaction.	SD	D	A	SA
19. The group often gets sidetracked instead of sticking to the point.	SD	D	A	SA
20. The instructor thinks up innovative activities for students to do in class.	SD	D	A	SA
21. Students have a say in how class time is spent.	SD	D	A	SA
22. The instructor helps each students who is having trouble with the work.	SD	D	A	SA
23. Students in this class pay attention to what others are saying.	SD	D	A	SA
24. Students don't have much chance to get to know each other in this class.	SD	D	A	SA
25. This class is a waste of time.	SD	D	A	SA
26. This is a disorganised class.	SD	D	A	SA
27. Teaching approaches in this class are characterised by innovation and variety.	SD	D	A	SA
28. Students are allowed to choose activities and how they will work.	SD	D	A	SA

Appendix C: (continued)

29. The instructor seldom moves around the classroom to talk with Students.	SD	D	A	SA
30. Students seldom present their work to the class.	SD	D	A	SA
31. It takes a long to get to know everybody by his/her first name in the class.	SD	D	A	SA
32. This class is boring.	SD	D	A	SA
33. Class assignments are clear so everyone knows what to do.	SD	D	A	SA
34. The seating in this class is arranged the same way each week.	SD	D	A	SA
35. Teaching approaches allow students to proceed at their own pace.	SD	D	A	SA
36. The instructor isn't interested in students' problems.	SD	D	A	SA
37. There are opportunities for students to express opinions in this class.	SD	D	A	SA
38. Students in this class get to know each other well.	SD	D	A	SA
39. Students enjoy going to this class.	SD	D	A	SA
40. This class seldom starts on time.	SD	D	A	SA
41. The lecturer often thinks of unusual class activities.	SD	D	A	SA
42. There is little opportunity for a student to pursue his/her particular interest in this class.	SD	D	A	SA
43. The instructor is unfriendly and inconsiderate towards students.	SD	D	A	SA
44. The instructor dominates class discussions.	SD	D	A	SA
45. Students in this class aren't very interested in getting to know other students.	SD	D	A	SA
46. Classes are interesting.	SD	D	A	SA
47. Activities in this class are clearly and carefully planned.	SD	D	A	SA
48. Students seem to do the same type of activities every class.	SD	D	A	SA
49. It is the instructor who decides what will be done in this class.	SD	D	A	SA

Thank you, you have completed all of the questions now.   Please check that you have an answer for each question.