PROCESS OF CHANGE IN NURSING EDUCATION
IN THE ARAB GULF REGION

A Thesis

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By

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DEDICATION

To my late father, mother, my husband Moussa and my children

Sana, Mazan, Racha, Ahmed, Nada and Lama and to the late

President of the UAE His Highness Sheikh Zayed Bin Sultan Al

Nahyan, a visionary leader and an outstanding change agent,

I dedicate this to you all.

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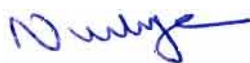
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DECLARATION

I declare that all the sources used have been indicated and acknowledged by referenced citations, the rest is my original work.

Najah Mustapha
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ABSTRACT

A three-phased, cross-sectional study was conducted in the nursing schools in two Arab Gulf countries (the UAE and Bahrain) to assess the process of change in Nursing education. The illuminative approach to evaluation using a case study design was used. Different methods were utilized to collect data, namely interviews, documentary analysis and self-administered questionnaires.

In the initial phase of the study, the directors of the Schools of Nursing were involved. A theoretical sample of a wide range of tutors, students and counselors was included. The interviews were conducted using a semi-structured interview format. Seventeen faculty members from Bahrain, and seventeen from two institutes of nursing in the UAE, namely Abu Dhabi and Sharjah, were interviewed. Students were interviewed from three academic levels of the program. Thirteen students in Bahrain and nineteen in the UAE participated in the interviews. The N-Vivo qualitative program was used to analyze the qualitative interviews.

In the second phase of the study, all faculty who taught case-based courses in Bahrain and the UAE were asked to participate in the study; 24 from the UAE and 30 from Bahrain. A 20% random sample of students from the three academic levels in the UAE and 25% from the two academic levels in Bahrain was used. Sixty-four students from the UAE and forty-six from Bahrain answered the self-administered questionnaire. The questionnaire used data extrapolated from the qualitative interviews. The SPSS (version 11) was used to analyze the self-administered questionnaire. T-test and correlation tests were employed at this stage to analyze data.

In both countries, innovation attributes, especially complexity and incompatibility with the students' and the faculty's background, were perceived by

both faculty and students as hindering the dissemination of innovation. In both countries a strong training program that tackled concerns of both old and new faculty members was lacking. Planning for a sustainable system and team approach to change was lacking in both countries to varying degrees.

Differences were noted between the UAE and Bahrain in the introduction and implementation of change. The UAE faculty perceived their involvement in the choice of a case-based curriculum as a major facilitating factor. Other factors perceived by the UAE faculty as facilitating the process of change were the planned series of workshops, involvement of the faculty in decision-making and the secondment of an external expert during the implementation of the innovation.

The Bahrain faculty perceived the leadership style of forcing change as deterring the process of change. The institutional context, the lack of planning, the lack of a common meaning of change among faculty and other stakeholders, and the lack of structured professional development program were other factors perceived as hindering change.

The study led to the development of a framework for introducing educational change in the Arab Gulf region. It is hoped that the framework would help decision-makers and leaders of educational institutions understand change better and be able to introduce and monitor change effectively. The major recommendations tackled developing a continuing staff development program, building multidisciplinary teams, planning and monitoring the change process and establishing a common meaning of change from the beginning of any change. Conducting further research on the perceptions of key political stakeholder towards change and researching the managerial practices of nursing leaders could serve as an initial step towards the validation of the suggested framework.

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CHAPTER I

INTRODUCTION

Background

Change is a common phenomenon in the Arab Gulf countries. It has touched all features of life since the discovery of oil; education, and specifically nursing education, is no exception. The Arab Gulf countries share similar concerns regarding nursing education, which has been affected in the past 20 years by the image of nursing as low-grade manual labour profession and the low social status of the nursing profession. These factors led to a decline in the number of students entering and graduating from nursing programs (Mansour, 1992; Ramazani, 1985). The shortage in locally trained nurses made the Arab Gulf countries dependent on the world market to staff health care facilities. The nursing profession was further compromised by different nursing programs introduced with different entry levels leading to multiple standards which resulted in adverse effects on the nursing services (Rifai et al., 1996).

This confusing situation was aggravated in some countries by the absence of regulation and legislation of the nursing profession (WHO, 1996). To remedy the situation, technical assistance was sought from the World Health Organization (WHO) and reputable universities, such as the American University of Beirut which played a pivotal role in introducing change in Bahrain and the United Arab Emirates (UAE). Educational nursing institutions have tried over the years to remedy the shortage, and diversified their entry levels to allow citizens of the Arab Gulf countries and at times citizens from other Arab states to join the nursing profession. This diversification has led to different nursing programs with different entry levels leading to multiple categories of practitioners with different educational backgrounds and

different levels of capability. The diversity in educational preparation of nurses in the Arab Gulf countries has led to confusion in the roles of nursing practitioners because of these varied levels of training which impacted negatively on the image of nursing, and the nursing profession (WHO, 1996).

Nursing education in the Arab Gulf region was further compromised by the medically oriented nursing curricula, lack of periodic systematic review of curricula, varying nursing standards, lack of trained faculty, and limited resources. The problem became more serious with increasing challenges facing the health care system such as the vast changes in medical sciences and technology which demanded life-long nurses who are critical thinkers and can work in diverse health care settings. The Arab Gulf countries, realizing the serious issues facing nursing, have tried to unify entry requirements and phase out all nursing programs accepting entry after only nine years of schooling. Instead, the concentration is now on Diplomas and Bachelor degrees in the nursing profession (Rifai et al., 1996).

To introduce change, the Arab Gulf countries depended mostly on World Health Organization directives involving innovative curricula, and the process of learning (WHO, 2002). The other critical element in the process of change is the Gulf Cooperation Council (GCC) nursing technical committee that sets strategies for nursing education and practice (GCC Nursing technical committee strategies for education between 2001-2005). The committee is still following up the implementation of its recommendations which revolve around three areas, namely nursing education, nursing practice and laws and legislation. The major recommendations concerning education are to stop all nursing programs which accept students from the Intermediate cycle (nine years of schooling) and below, encouraging the enrollment of citizens of the Arab Gulf countries into the nursing profession, introducing specialization programs, evaluating and developing the

nursing curricula, facilitating scholarship and transfer of Arab Gulf students between countries and developing a nursing information system in every country that identifies current needs and directions for the future and, finally, preparing regional Gulf faculty in nursing education.

Changes introduced in different countries took different routes. Bahrain changed its associate degree medically oriented curriculum into a case-based curriculum with a community focus (Nursing Curriculum Development, 1998), UAE changed its content based curriculum into the case- based curriculum (Uys,1997). Each change has evolved within a different organization that has its own mode of interaction, flow of information and unique procedures for decision-making and governance. There has, however, been no systematic analysis of what these changes entail for nursing education in the region. Specifically, questions related to the evolutionary process of the innovations, the social, political and cultural context of the educational change, the operational processes as well as the effects of these educational changes on nurse educators, learners, the teaching/learning process and the overall culture of the educational institutions shall be addressed.

Forces Shaping Nursing Education

Many pressures are exerted on nursing curricula and help to shape them. These include (a) changes in the health care delivery system based on changing health priorities and the economics of health care, (b) national education reforms and/or policies, (c) health human resource requirements and management, (d) information technology, and (e) international organizations, such as the World Health Organization (WHO) and the International Council for Nurses (ICN). The Arab Gulf countries, as part of the global community, have also been affected by these forces of change.

The escalating changes in the health care system have always necessitated a corresponding change in the nursing services and nursing curricula. The changes have never been more profound than the ones being experienced nowadays in the health care sector. Among those changes are changing demographics, the emergence of a more knowledgeable consumer, demanding quality care and partnership with the health care professionals in decisions concerning his/her care, globalization, quality care with reduced costs and shift of care towards the community with an intention to decrease morbidity and promote health (Tompkins, 2001). Rideout (2001) further claims that these changes have led to changes in the working environment in the health care facilities and to new expectations, new educational requirements and new roles of the nurse practitioners.

National reforms and policies in the nursing education domain in many countries such as the United Kingdom, the United States, Australia and New Zealand, have responded to changes in the health care environment and have not only defined levels of entry to the profession, but have also dictated the scope of practice and competencies expected at the exit from each level of specialization. The exit competencies have changed at the dawn of the 21st century in response to the changes in the health care sector (Watkins, 2000). Several competencies were cited in many scholars, commissions and nursing associations as vital in the delivery of quality nursing care.

Health human resources requirement and management is a critical factor in the development of health care services. The vast changes in the health care environment have dictated the emergence of new categories of health care specialists. The nurse practitioners emerged as a result of a decreased number of physicians in addition to the concern of cutting costs. Nurse practitioners have their own scope of practice which allows them to diagnose and prescribe medication. The

emergence of nurse practitioners has dictated the need for a new curriculum to prepare them to function in their new role.   In the Eastern Mediterranean region it is estimated that at present 60-70% of Ministry of Health budgets are allocated to health care personnel.   The continuous training and education of the health care personnel is necessitated by health care needs which are shifting focus in many countries to community care.   Changes in the delivery of health care services in such non-traditional settings pose challenges to nursing curricula to meet the needs of the consumers in the new millennium (Alwan & Hornby, 2002).

The rapid growth in information technology demands a nursing environment that fosters and supports the acquisition and development of information technology skills. Nursing institutions are required to update their current technological equipment and acquire new ones. Students should be granted access to computers along with up-to-date bases.   Nursing curricula should integrate informatics in the nursing courses in order to prepare students in the highly technological health care environment of the 21st century (Hantas, 2001).

The WHO and accrediting bodies are examples of the external authorities who periodically establish guidelines for nursing curricula and demand certain competencies to be achieved by graduates in response to changes in the health care sector. The "health for all" movement of the WHO gave a clear message to all member countries to reorient their curricula to the community, with a change in nursing roles. It calls for "nurses with a broadly based basic nursing education ... that prepares them to function in both the hospital and the community" (cited in ICN, 1996, p.14).   It also urges countries to improve nursing education because of its direct impact on the care of patients. Specifically, the ICN stated "the better the nursing education, the better the care" (1996, p. 16).

Several nursing schools and universities have reformed their curricula and reoriented them to the community. The focus on the community was achieved by creating linkages and at times partnerships with the community settings. The placement of students in the community allowed them to understand the determinants of health and address the social, economic and political forces affecting health. Hawaii school of nursing, Georgia state university's school of nursing and Michigan state university's school of nursing are a few examples of many schools of nursing which have focused their nursing programs on the community (Henry, 1996). Data on outcomes of educational innovation reveal that students who are enrolled in community programs are more comfortable with uncertainty and can be better life-long learners (WHO, 1993).

Problem Statement

Change is an integral part of nursing education. Improving and changing nursing education often helps to improve and update the quality of nursing services in harmony with the improvements in the health care facilities. Major role players in the process of change are students and nurse educators. Acknowledging the vital role of nurse educators and students towards change, and understanding their lived experiences of the change should help to facilitate the process of change. Unfortunately, little research has addressed the views of nurse educators and students during the process of change as opposed to extensive research in the arena of health and education (Harri, 1995). Any change in nursing education tends to affect several parties, namely nurse educators, students, and managers, because of the close relationship between them. These are the internal constituents of the educational institution, and therefore are likely to be the most affected by educational change.

Although the Arab Gulf countries have common cultural and religious values, they have different approaches to education in general and nursing education specifically. Nursing education has progressed in the Arab Gulf countries at different paces depending on the demands of the health care system and national development in each country. A few countries, such as Bahrain, and UAE, have tried in the past five years to go the extra mile, and change not only entry requirements, or content of courses, but to change the process of teaching-learning and the focus of the curriculum.

The purpose of this study was to analyze the process of change in nursing education in two Arab Gulf countries, highlighting the facilitating and/or impeding factors encountered during the implementation. The focus was on the way change has been introduced, the innovations in question, and perceptions of faculty and students concerning the consequences of the innovations. The study also suggested a framework for introducing educational change in nursing education in the Arab Gulf countries.

Roger's (1995) diffusion of innovation model was used to identify and analyze factors that facilitate or impede the adoption of an innovation in an educational nursing institution. This model helped to highlight the socio-economic and political factors assisting or obstructing change in the participating nursing education institutions.

The aim of the study

The aim of the study was to analyze the change process in two countries in the Arab Gulf region, namely the United Arab Emirates and Bahrain. Particularly, it aimed to:

- uncover the social, political and cultural context of the educational innovation in nursing education that led to its introduction.

- clarify the circumstances encountered in the process of change that helped or hindered innovation in nursing education in the two Arab Gulf countries.

- develop a framework and a strategy of nursing education which could guide future nursing education innovations and change in the Arab Gulf countries.

Research Objectives

1. Describe and interpret the social, political and cultural factors that led to the introduction of change in nursing education with specific reference to the nursing institution's social structure, norms, opinion leaders and change agents (within and outside the institution), and the type of decision (optional, collective and/or authority decision).

2. Describe the nature of the innovation, that is, the attributes (relative advantage, compatibility, complexity, triability & observability), communication channels and time for the country- specific innovations that either facilitated and/or hindered the implementation of change.

3. Describe the consequences of the innovation for the teacher, the learner and the culture of the educational institution.

4. Design a framework for introducing and managing change in nursing education in the Arab Gulf region.

<u>Significance of the Study</u>

Research on the effect of change in nursing educational institutions is rare and tends often to concentrate only on the effect on students, nursing educators or the service providers, but rarely on all the internal constituents of an educational institution whose working and/or learning lives are directly touched by the change. In fact nursing education research has seldom taken into consideration the contextual factors unique to that setting. This research study attempted to address the issue of educational change taking into account the views of students, teachers and

management in an effort to illuminate concerns, ambiguities and processes encountered in the implementation of change.

In the Arab Gulf region, the situation is unique, not only because sudden continuous change has tackled every aspect of life after the discovery of oil, but also because each country in the Arab Gulf region tends to have its unique cultural and political atmosphere. Adams and Chen (1981) maintained that change is largely affected by its context and culture. Nordstrom (2001) supported Adams and Chin in the emphasis put on culture in stating that "the method in which innovations are conceived, created and accepted or rejected is different in different cultures" (p. 2). Other scholars would argue that though organizational culture is important, the perceptions of people undergoing change are critical. In an educational context, teachers and students are important factors in the process of change. Stallings and Krasavage claimed that "the innovative practices ... will not be maintained unless teachers and students remain interested and excited about their own learning" (cited in Richardson, 1998, p.5).

The results of the study illuminate the contextual factors facilitating and/or hindering change focusing on the perceptions of nurse educators and students regarding the change process. The study led to the development of a framework for introducing educational change in the Arab Gulf region. It is hoped that the framework would help decision-makers and leaders of educational institutions understand change better and be able to introduce and monitor change effectively.

Definition of Terms

Change. Crawther (1995) in Oxford Dictionary defines change as "to become or make different, to alter" (1995, p. 184). Change is a complex and dynamic process which is highly contextual and consists of 3 steps. (a) invention when new ideas are

created, (b) diffusion when the new ideas are disseminated and, (c) consequences when changes occur as a result of the adoption or rejection of the innovation.

Education is defined in Oxford Dictionary by Crawther (1995) as a "process of training and instruction, especially of children and young people in schools, colleges, etc, which is designed to give knowledge and develop skills" (1995, p. 369).

Nursing Education. It refers to a body of knowledge and skills delivered in a formal institution and aimed at graduating nurses.

Arab *Gulf Countries* refers to the countries that are members of the Gulf Cooperation Council namely; Bahrain, United Arab Emirates, Qatar, Kingdom of Saudi Arabia, Kuwait, Yemen and finally Oman. For this study, the first two countries will be covered.

Change in Nursing Education. Within the context of this study, change in nursing education refers to changing from one educational and/or curriculum approach to another. Specifically, this means the change from (a) competency-based nursing curriculum to a case-based curriculum in Bahrain, (b) content-based to a case-based curriculum in the UAE.

Socio-political and cultural factors refer to external and internal forces that affect the nursing education as a social system, such as its social structure, norms, opinion leaders and change agents, and types of decisions (optional, collective and/or authority) as perceived by nurse educators, institutional management, student counselors and learners.

CHAPTER 2

LITERATURE REVIEW

This literature review includes a discussion on literature relevant to the concept of change, barriers to change and strategies followed in implementing change. The literature review will further examine models of change, particularly the focus of each one. The review will also focus on the forces shaping nursing education, particularly the changes in the health care sector and the new paradigms of nursing practice. Efforts were made to include several studies conducted in educational institutions exploring the impact of change on teachers, learners, and the culture of the organizations. None of the studies refers to the Arab Gulf region as the researcher found no studies that addressed the effect of change in nursing curricula on the teachers or learners of this region.

Roger's (1995) diffusion of innovation model was used to highlight all the contextual issues impeding or facilitating change. Its central theme is the diffusion of innovation through communication channels over time, among the members of the social system. The framework concentrates on the perception of adopters of the nature of innovation, the importance of relationships among individuals and the innovation's influence on the adoption process in addition to the consequences of innovation.

Concept of Change

Change surrounds all people who are continuously bombarded nowadays with several new and diverse issues. The information age, globalization, downsizing, economy, violence, and anxiety, are some examples of changes surrounding and

alarming people to the point of claiming the popular saying "the only person who likes change is a baby with a wet diaper" (Hall & Hord, 2001, p.3).

Change upsets people and makes them confront the unknown, arousing unpleasant feelings of anxiety, sadness and fear, "Change is never linear, rather messy and unpredictable" (Wright, 1996, p.144). Change leads to instability in society and incapacitates the ability to predict to the point that in China, it is considered a curse on someone to say "May you live in a time of change" (Hall & Hord, 2001,p. 3). Machiavelli also claims: "there is nothing more difficult to take in hand, more perilous to conduct or more uncertain in its success than to take the lead in the introduction of a new order of things" (cited in Swansburg, 1993, p.196).

Irrespective of the negative connotations attached to change, innovation and change seem to be the only way of survival in all professions to adapt to the vast technological, social, political and economic changes, Du Gues claimed that "To cope with a changing world, any entity must develop the capability of shifting and changing - of developing new skills and attitudes" (cited in Fullan, 2000, p.43).

Change is a dynamic purposeful complex process that needs adequate resources and time. It involves the adoption of new practices and aims at making improvements. Its success depends on the style of the change facilitator, the organizational climate, the way individuals interpret the events involved in the change process, the resistance of the targeted group, and the stakeholders' involvement in the change process.

Studies conducted in the U.S., Australia and Taiwan have found that the change agent behavior usually follows one of three styles that impact on the success of the implementation. The style of the facilitators could be either as an initiator, a manager or a responder. The styles or behaviors of the facilitators are highly

correlated (0.74 or more) with implementation success. The highest success is associated with the initiators, followed by the managers (Hall & Hord, 2001).

The initiator is one who has vision, leadership and administrative qualities, like making strategies, anticipating obstacles and ways of dealing with them, in addition to the ability to make consistent firm decisions. "Initiators have several strategies in mind in anticipation of possible scenarios that could unfold" (Hall & Hord, 2001, p.136). Managers, according to Hall and Hord (2001), are skilled in the daily functioning of the school and in achieving goals. They do not initiate change, but when it takes place, it is usually accomplished efficiently. Managers "help to make it happen" (2001, p.136). The responders on the other hand are concerned only about the perceptions and concerns of the teachers. They never resolve issues with certainty, nor do they check on the work done. They are reluctant to innovate ideas, their response is usually "we have been doing most of this already, you just have a different name for it" (Hall & Hord, 2001, p.134). All studies support that teachers succeed best under the leadership of the initiators followed by managers and finally responders (Hall & Hord, 2001).

The climate in the organization is another variable that affects change. James and Jones (1974) believe that the most important variables that contribute to the change process in an organization are: (a) situational variables, like the physical features of the organization; (b) psychological features meaning the perceptions of the individuals affected by change; and (c) the general climate of the organization. (cited in Hall & Hord, 2001). The structure and the support that evolves around the change process can either make it succeed or fail. The attributes of the innovation, the process surrounding the introduction and adoption of innovation, the structure built to support it, the feedback mechanism, and the perceptions of the people affected by change all seem to affect the change process (Adams & Chen, 1981).

Boyd and Hord identified four major categories that can make the educational context open to change. The factors are "reducing isolation, increasing staff capacity, providing a caring productive environment and promoting increased quality" (cited in Hall & Hord, 2001, p.196). Under such conditions, teachers are expected to meet, discuss and reflect on their practices and try to improve them for the general benefit of students. Rosenholz, Darling-Hammond, and Lieberman claimed that the work place or context affects teachers' practices and students' outcomes (cited in Hall & Hord, 2001).

The interpretations of individuals impact on all change efforts. Each person perceives and integrates change differently in regard to previous experience. Change could be either interpreted as a threat, or as a rewarding endeavor. This interpretation is affected by lack of appropriate information about change and its consequences (Hall & Hord, 1987).

Innovations will not succeed, even if they address an urgent need, unless the personal perceptions of people involved in the process are attended to (Stew, 1996). Change of beliefs and attitudes occur over time. In an educational institution, while it is important for change to move forward, it is also essential to invite on- going dialogue with the teachers, respect their concerns and even act upon them (Rideout, 2001).

Resistance to change is another factor that affects change. It could either come because of the nature of the change or be due to misconceptions and inaccurate information about the change. Change involves getting rid of the familiar way of doing things and facing the unknown, which creates frustration and resistance. LaCovini (1993) claimed that "for many, the experience of change is like standing at the edge of a chasm and being challenged to jump to the other side - with nothing in between but fog" (cited in Lancaster, 1999, p.162).

Resistance is not considered by many change theorists to be always negative. It could be constructive. According to Hall and Hord, (2001) resistance is an indicator that the adopters know well enough of the innovation to experience personal concerns. Field believes that resistance is an indicator that the change has deviated from its original course. Furthermore, it would alert the change agents to issues that need to be addressed to make the change work. At other times, resistance could be triggered by ignorance of the innovation and its implications (cited in Ellsworth, 1999). To make the change process succeed, resistance should be anticipated, planned for and dealt with as it arises. All incidents happening during the change are important and should not be ignored. "The incident level is where the individual user's concerns and problems are or are not resolved" (Hall & Hord, 1987, p.207).

Milliary supports the human concern element in resistance and claims that "resistance is often a feature of social or human concern rather than a technical or operational issue" (cited in Timpson, 1996, p.138). Successful change seems only to occur if managers develop a "highly attuned sense of people perception, and understand the feelings of their staff, their needs and expectations"(Timpson, 1996, p.316).

One of the important studies on resistance to change is Poole's review of 32 studies on resistance. Poole identified seven categories of resistance factors from the studies. He identified them as personality and psychological factors, the type of innovation and its attributes, problems encountered during implementation, the hierarchy of the school, interpersonal communication net works and the beliefs and values of the faculty (cited in Ellsworth, 1999).

Change in the form of an innovation may be voluntary or imposed, progressive or regressive, but regardless of its nature, its adoption is mainly affected

by the perception of stakeholders involved in the change process. Innovation "cannot be assimilated unless its meaning is shared" (Marris, cited in Fullan & Stiegelbauer, 1991, p.31). For an innovation to succeed, all stakeholders in educational institutions must have a common perception of the innovation and have reached a common consensus regarding the innovation and its implication. To Fullan and Steigelbauer "Painful unclarity is experienced when unclear innovations are attempted under conditions which do not support the development of the subjective meaning of change" (1991, p.35).

Change is expected to generate new ideas, new challenges, new learning opportunities and a new meaning which is shared by all people involved. Change also triggers anxiety, frustration and sadness due to confrontation of the unknown and quitting the familiar way of doing things. The only way to go is not to avoid change, but to face it and reduce its hazards, making the most of its positive aspects. To Fullan and Steigelbauer "The answer is not in avoiding change, but in turning the tables by facing it head-on" (1991, p.345).

Facing change means confronting it within the framework of one's own perceptions and concerns. Watson claimed that: "The means used by controlling management of the organization to achieve ... goals do not facilitate the effective management of the goals since these 'means' involve human beings who have their goals ... which may not be congruent with those of the peoples managing them" (cited in Timpson, 1996, p.316).

Models of Change

Many theorists have discussed change and tackled it from different angles. Among the earliest theorists is Kurt Lewin's force field model (1951) which highlights stability in the system. Others have focused on the internal factors in the change

process like Roger's model (1995) which emphasized the diffusion of the innovation and the adaptor's perception. Hall and Hord's concerns and adoption model (2001) emphasized the adaptor's concerns throughout the implementation process. Other models have looked into other issues like resistance and strategies used to combat it (Zaltman and Duncan, 1977). The environmental conditions necessary for the change to succeed were the primary focus of Ely's conditions for change model (1990). Fullan and Stiegelbauer (1991) relate change to the decision makers at the local and national levels, unlike Havelock and Zlotolow(1995) who focused on the systemic cyclical nature of the change process. A brief review of each model is presented.

Force field model (1951):

This model originated with Kurt Lewin's (1951) work. The model identified three stages which the change agent must work on before the change becomes part of the system. The stages are (a) unfreezing, (b) moving and (c) refreezing.

The unfreezing stage: this stage starts when the change agent unfreezes forces that maintain the status quo and stirs things in the system. This is accomplished by using three tactics, namely introducing disconfirmation, inducing guilt and anxiety and providing psychological support. Disconfirmation is a type of confrontation with new evidence in the form of information or experience. The confrontation makes individuals uneasy about their situation, thus raising the tension within the system. The third tactic is providing psychological support and a climate of trust and acceptance. At this stage, goals are planned, followed by an analysis of the driving and restraining forces. An attempt is made to increase the driving forces and minimize the restraining ones. The restraining forces are usually related to group

norms, organizational culture or personal defenses. Kemp (1986) claimed that opposing forces need to be identified and resistance needs to be overcome for the change to succeed. Chalmers, Bramadat and Andrusyszyn (1998) claimed that in nursing, nurses need to understand the forces that constrain or drive the health care system as a whole, in addition to policies driving or impeding change.

The moving stage: In the moving stage, the change agents plan and implement appropriate strategies, for the change to succeed. The stage covers the implementation of technological, cultural, affective, behavioral and cognitive changes. Whenever possible, change should be implemented gradually, allowing individuals to assimilate change slowly. The change process is monitored and resistance is overcome as it arises.

The re-freezing stage: Change is introduced to the system. This is the stage where assessment of the change is made, and the change is incorporated into the system and institutionalized. This stage comes slowly, and involves adjustments of the individuals to change, and refers to attitude, lives and work habits of people. They must "surrender their present selves and put themselves in jeopardy of becoming part of an emergent system. This process usually requires the surrender of personal control, the toleration of uncertainty, and the development of a new culture at the collective level and a new self at the individual level" (Quinn, Spreitzer & Brown, 2000, P. 147).

Lewin's model seems to correspond to Fullan's (2000) model of change. Fullan described change as made up of three processes namely, initiation, implementation and institutionalization. Initiation corresponds to Lewin's unfreezing stage and depends on the relevance of change, readiness of staff, and availability of resources. The second stage is the implementation stage that corresponds to Lewin's moving stage and is influenced by characteristics of change, internal and

external factors. The third stage corresponds to the re-freezing stage and is achieved by incorporating change into classrooms, and in the form of policies.

Lewin's model has stayed for centuries as the backbone of all change theories. Hendry (1996) claimed that "Scratch any account of creating and managing change and the idea that change is a three-stage process which necessarily begins with a process of unfreezing will not be far below the surface" (cited in Weick & Quinn, 1999, p.362). Marshak (1993) further claimed that Lewin's theory rests on five assumptions. The assumptions are (a) It is a linear theory; progression is from unfreezing to refreezing state, (b) It is goal-oriented, moving towards a specific state, (c) It lies on a progressive assumption; movement is towards a better state, (d) It requires a case of disequilibrium, and (e) Change is managed by people outside the system (cited in Weick & Quinn, 1999).

Zaltman and Duncan's strategies for change model (1977):

This model focuses on the resistance triggered by change. Since change disturbs the current situation, Machiavelli once said "whenever his enemies have the ability to attack the innovator, they do so with the passion of partisans, while the others defend him sluggishly, so that the innovator and his party alike are vulnerable" (Cited in Rogers, 1995, p.1). The resistance identified by Zaltman and Duncan (1977) could come from (a) cultural and traditional values, (b) organizational structure and climate, (c) social system and norms, and (d) individual psychological factors.

Cultural and traditional barriers are connected with cultural beliefs and values, which are in turn related to religious issues, in addition to ethnocentrism, saving face and incompatibility. Ethnocentrism evokes resistance when either the client system or the change agent perceives his innovation to be superior. Saving face stems from the change agent's overemphasis on the inferiority of the current practices and the

negative consequences evoked by them. Adopters then resist the innovation and cling to their current practices. The last cultural barrier cited as the most common cause of cultural resistance relates to incompatibility of the innovation with present cultural traits.

Organizational barriers are other forms of barriers and are related to: threat to power and influence, organizational structure, behavior of top-level administrators, the overall climate for change in the organization and technological barriers to resistance. Threat to power takes place when the organizational structure is disturbed and a group of people are given more power than before, thus creating a new structure and threatening the present one. The organizational structure evokes resistance at times if the change agent has not improved communication channels and coordination between all parts of the system. Redefinition of roles and responsibilities becomes important for the innovation to succeed.

The behavior of top-level administrators is crucial and should exhibit full support for the innovation and supply the necessary resources The climate of the organization refers to the perceived need of the adopters to change and the perceived ability of the organization to succeed. The climate for change in the organization is related to the need for change and openness to change. Technological barriers take place when the client system lacks the ability to apply the innovation with its technological resources.

Zaltman and Duncan, (1977) believe that the social systems are a mere collection of individuals sharing common values and norms. Social barriers refer to group solidarity, rejection of outsiders, conformity to norms, conflict and group introspection. Group solidarity is exhibited when an innovation is perceived to pose difficulties to some members in the system. Rejection of outsiders is another barrier and results from the belief that outsiders cannot produce an innovation which is

better than the current practices. Conformity to norms is related to the desire of members in the system to resist any innovation which is incompatible with their cultural norms. The change agent needs to modify the innovation to meet the need satisfied by the norm.

Conflict may be an important barrier to change and may result in pulling people in the system in different directions. Some people may support the innovation, while others may refuse it. The best approach recommended by Zaltman and Duncan (1977) is to develop a neutral position between all parties by involving representatives of all groups in the change process. The final social barrier is introspection, which refers to self awareness. The clients may resist an innovation by their subconscious rationalization given as to why the innovation cannot work in a place.

Psychological barriers are other forms of barriers, which happen only within the individual. Psychological barriers are related to one's own perception, desire for homeostasis, conformity and commitment, in addition to personality factors. Perception is a personal way of looking at the innovation and will affect the way people look and support the innovation, if it is in line with their views. Homeostasis is the desire to establish stability and comfort Conformity and commitment are related to professional commitment and resistance to all things opposing what one believes to be alien to one's professional role. Finally, personality factors are related to the personality of each individual and may be related to low risk tolerance, lack of creativity, inability to tolerate ambiguity and low achievement motivation.

Elys' conditions for change model (1990):

Ely (1990), contrary to Zaltman and Duncan, was the first researcher to emphasize and stress the role of environmental conditions for the successful

adoption of an innovation. He identified eight environmental conditions that are considered essential conditions to promote change and validated them through various educational and cultural settings.

The first four conditions are(a) dissatisfaction with the present situation,(b) the people implementing the innovation must have the necessary knowledge and skills to implement it successfully. Ely (1990) notes " without the specific knowledge and skills to bring about the change, the individual is helpless" (p.300), (c) accessibility of resources that help the innovation to succeed, and(d) availability of enough time, "implementers must have time to learn, adapt, integrate and reflect on what they are doing" (p.300). Other conditions conducive to successful change are (e) rewards for the participants involved in change, (f) encouragement of participation in the change process through shared decision making and communication among all parties involved. Ely (1990) claims that "each person feels that he or she has had an opportunity to comment on innovations that will directly affect his or her work" (p.301). Ely further elaborated on the process of decision making by claiming that it is "shared decision making, communication among all parties involved and representation where individual participation is difficult"(p.301). Other important conditions are support for innovation by key decision-makers through (g) commitment and (h) the presence of leaders who are always there to support the adopters of change Ely (1990) observed that the adopters of the change do not want "blind commitment, but firm and visible evidence that there is endorsement and continuing support for implementation". (p.301)

In support of Ely's model, Haryono, cited in Ellsworth (1999) investigated higher education improvement programs in Indonesia. He surveyed the participants in a course reconstruction workshop to assess the presence of Ely's conditions, which he found to be present in varying degrees. The presence of the conditions

had a positive effect on implementation and confirmed the universality and stability of Ely's conditions across cultures.

Other researchers have used Ely's model in conjunction with other models to study a certain situation. Riley found that using more than one model in   research, helps to clarify issues and yields "greater insight" (cited in Ellsworth, 1999, p.75).

Fullan and Steigelbauer's new meaning of educational change model (1991):

Although the environment and the characteristics of the innovation are very important in the change process, one cannot ignore the role played by the change agent who is supposed to assess, plan, monitor and evaluate the change process. Fullan and Stiegelbauer (1991) focused on seven stakeholders whose basic responsibility is to build coalition within and between groups. The stakeholders are considered to be the teacher, the principal, the student, the district administrator, the consultant, the parent and community, and the government. The authors discussed the characteristics and the limitations linked to each level, in addition to the specific roles and guidelines to be followed by each change agent.

Fullan and Stiegelbauer (1991) claimed that educational change at its roots is a personal experience, which ultimately can succeed or fail depending on the teachers' perceptions and concerns. "Change is a highly personal experience- each and every one of the teachers who will be affected by change must have the opportunity to work through his experience in a way in which the rewards at least equal the cost" (1991, p.127). Furthermore, Fullan and Stiegelbauer (1991) claimed that "educational change depends on what teachers do and think" (p.117).

The next change agent is the principal who prepares the climate of the school for the change by balancing the interests and needs of the teachers with other decision

makers and stakeholders outside the school community. The student is another change agent rarely addressed in change models, yet he is the focus of all change efforts. The students can reject all change efforts with which they are uncomfortable or find undesirable. As the authors say, the student should be treated as "'someone whose opinion mattered in the introduction and implementation of reform in schools" (Fullan and Stiegelbauer, 1991, p.170).

The district administrator has to implement the right change. To Fullan and Stiegelbauer(1991), the district administrator is usually the "critical source of initiating specific innovations" (p.197). The consultant could be external or internal to the school community. He provides continuous support throughout all the stages of the implementation process and works with other stakeholders to institutionalize change.

The authors also believed in parent and community involvement because they are usually present in school boards and provide the school's funding in the form of taxes or tuition fees. Providing them with relevant information will help in making them decrease upheavals and guide the implementation process.

The role played by the government as the last change agency is "to enlarge the problem-solving arena and to provide the kinds of pressure and support that force and reinforce local districts to pursue continuous improvements" (Fullan and Stiegelbauer, 1991, p.288). The authors believed that meaningful change can only be achieved through cooperating with other change agents and establishing areas of common concern and interest. Both Fullan and Stiegelbauer (1991) stressed the value of professional development, which they claimed to be universally neglected. "If there is any single factor crucial to change, it is professional development" (p. 289).

The C-R-E-A-T-E-R change model (1995):

Havelock and Zlotolow (1995) have looked at change in a different way and believed that change is a process that involves the whole system and goes through seven planned stages which can be presented in a circle exemplified by (creater). The process is cyclical; any new change introduced would direct the change agent back to previous stages. Havelock and Zlotolow (1995) addressed the whole system as a change unit, and considered the ethics involved in the change process, stressing the importance of getting the approval of all those involved in the change process.

The stages could be summarized as:

Stage 0: Care (There is something wrong).

Stage 1: Relate (Who and what make the whole system?).

Stage 2: Examine (What are the current problems and potentials?).

Stage 3: Acquire (What human and material resources are available?).

Stage 4: Try (What solutions work and how to adapt them?).

Stage 5: Extend (How to spread the innovation?).

Stage 6: Renew (Develop a potential to self renew the system)

The first stage is the foundation and corresponds with Ely's (1990) dissatisfaction with the present situation. The need is felt that something is wrong, and the ideas are shared among members of the system; the more individuals show concern at this stage; the faster the change takes place. The second stage is concerned with "building relation to (sic) and among clients". (Havelock & Zlotolow, 1995, p.59) and helps to build collaboration among members of the system and other external stakeholders who are important to the system. It is the diagnostic stage where problems and opportunities are identified in their context, with an attempt to understand the relationship between all parts of the system. The authors

warn of several pitfalls at this stage, namely wasting time or presenting problems in a threatening way to the clients in the system, or moving from one problem to another without understanding the full picture. The third stage is concerned with arranging adequate resources, including planning for professional development.

The fourth stage is the stage of trying to find possible solutions to the problems. Solutions are suggested through brainstorming sessions that involve all members in the client system. Alternatives are compared in relation to cost, and requirements for staff. The change agent works with the clients in weighing the practicality and benefits of the solutions in its context and its potential of being accepted by all members. The fifth stage is concerned with giving opportunity to the clients to readapt the innovation if obstacles are expected or in the presence of political constraints. Finally the sixth stage is to put the innovation to trial. That would allow members to examine the innovation carefully and then decide to adopt or not to adopt. The implementation is evaluated on an ongoing basis. This stage is found in the center of the model and helps to start another cycle of the model. The sixth stage is not exactly a stage; it is an end point and a new beginning". (Havelock & Zlotolow, 1995, p. 168).

Havelock and Zlotolow (1995) stages coincide with Kurt Lewin "unfreeze-move-refreeze" concept of the social stages where stage 0 & 1 correspond to the unfreeze -stage, introducing the change happens between stages 2-5 and refreezing or creating a new stable stage happens in stage 6. The most important thing about the "creator" model is the interrelationship and the linkage between the different stages and its movement from one stage to another in a non-linear fashion. Each individual adopter moves at his own pace, but passes through all the stages in "sequence without skipping any" (p. 131). Another interesting thing is that it looks at

the adopting system as a whole, unlike the concerns-based model which looks at the individual as the unit of analysis.

Begum and White tend to agree with both authors on this nonlinear problem-solving approach and its application to nursing. They claim that the nursing profession is a non linear system and that "changes in one component of the system have non-proportional effects on other parts of the system" (cited in Menix, 2000, p.285).

Furthermore, Havelock and Zlotolow (1995) stressed the use of rewards, provision of the necessary resources, continuous feedback, building in continuing adaptation and flexibility to adapt to changes as they arise during the implementation phase. They stressed the importance of the relationship inside the system, between the client and the change agent. The relationship should be characterized by openness, realistic expectations, and confrontation of differences, minimum threat and, above all, involvement of all parties concerned.

Foley has validated the stages proposed by Havelock and Zlotolow . He examined schools which succeeded in implementing change and found the change process similar to the one outlined by the authors (cited in Ellsworth, 1999).

The concerns-based adoption model(1987):

The scholars who advocated this model are Hall and Hord. It is a model which tracks innovation at the individual level. It is based on the belief that individuals as adopters experience several concerns and feelings as they move through different levels of use of the innovation as it is implemented. The model proposes monitoring implementation through three diagnostic tools namely (a) the stages of concern, (b) the levels of use and (c) innovation configuration.

The stages of concerns focus on seven categories of concerns that individual adopters experience as the innovation is implemented. They are grouped into 3

groups namely self concerns which include awareness, informational and personal concerns and take place in stages (0), (1) and (2). Task concerns, which include management concerns, are referred to as the third stage. Impact concerns revolve around consequence concerns, collaboration and refocusing concerns and take place in stages (4), (5) and (6). At stage (0) or the awareness stage, the individual is not involved in the innovation but knows that innovation exists. Stage (1) is the informational concerns stage, which occurs when individuals start learning about the characteristics of the innovation, its requirements and effects. In Stage (2) personal concerns evolve when the person starts experiencing uncertainty about meeting the demands of the innovation and his expected role in the organization. At Stage (3) management concerns surface. These refer to the administrative support of the innovation and utilization of resources.

Impact concerns are divided into three stages, namely Stage (4) or the consequence stage, refers to the stage when the teachers starts wondering about the effect of the innovation on the students. Stage(5) is referred to as the collaboration stage where individual adopters seek collaboration and participation with other members in the system. Stage (6) is referred to as the refocusing stage and takes place when the individual adopters start thinking of improving the innovation and exploring alternatives to it. The stages of concern can be assessed and monitored through several techniques, namely one-legged interview which is a brief encounter with teachers, asking them about their concerns using open ended statements and finally administering the stages of concern questionnaire.

Levels of use are the second diagnostic tool and help to map the adopters' behavioral progress during the implementation process. They address behaviors and depict how people act with respect to the innovation. According to Hall and Hord (2001), the levels of use divide people into nonusers and users depending on their

status with respect to the innovation. Three nonuser and five user levels were identified. The nonusers are divided into three types, namely nonusers at zero level where individuals are hardly involved in the innovation and are not interested in becoming involved. Level (1) is the orientation state where the users try to get information regarding the innovation and its requirements. Level (2) is the preparation state where users start getting ready to use the innovation.

The users go through five levels which are a continuation from the previous nonuse level. They start with level (3) or mechanical level where the user is interested in the tasks required to implement the innovation with little time spent on reflection. At Level (4a) or routine level, users get used to the innovation but do not exert any effort to improve its consequences. Level (4b) or refinement level takes place when the users start to adapt the innovation in an attempt to enhance its benefits for the clients. At Level (5) or integration level, users start participating and collaborating with others to improve the innovation outcomes on the clients. Finally level (6), or renewal level, refers to the level at which users evaluate the innovation and start considering major alternatives and changes that would make the innovation better for themselves and their clients.

The third diagnostic tool does not relate to time as do the stages of concerns and levels of use. It tries to see the innovation as it is implemented. It helps in clarifying the innovation to the different parties and decreasing the confusion which accompanies change. It is an interactive process among all concerned. Hall and Hord (2001) advocated the development of an innovation configuration checklist prior to implementation. It is a tool which contains in one column the innovation's key components and in another column the developer's ideal implementation of each component. The major benefit of the tool is the "consensus-building that it encourages" (p.53). They further claimed that "it is better to begin with the best

possible estimate of a shared vision rather than starting with conflicting conceptions" (p.53).

Principles of Change

Hall and Hord (2001) believed in 12 principles of change which are the following:

Change Principle one: Change is a process, not an event. Change is not an outcome or an event to be evaluated at the end of the year. It is an ongoing process, which needs to be evaluated at different phases. It is not an announcement made by a leader, followed by a workshop and then evaluated at one point of time.

Changes in education take around three to five years to be fully implemented. In changing, people experience unpleasant feelings like grief and sadness, which result from quitting what people know and facing the unknown. The implication for change as a process is that the whole plan will be strategic in nature with resources made available to monitor progress and support teachers during the change process. Data will be gathered on a yearly basis to assist planners and detect resistance, and policies will be placed on site to support the implementation process.

Change as an event will only have a short term focus, whereby an educational activity will be offered to teachers before the school begins, followed by an evaluation at the end of the year with no support offered to teachers during the implementation process. If no differences are found between the beginning and end, people assume then that the innovation did not work, when in fact they should blame the implementation process.

Change principle 2: There are significant differences between development and implementation of an innovation.

Development and implementation are two complementary entities. Development entails all the steps involved in creating, designing and testing an innovation, while implementation includes all the steps of how to use the innovation. The style of the change facilitator needs to be different at each stage. On the development side, he needs to be very dynamic, with a public relations background and political skills, in addition to the ability to formulate policies. On the implementation side, the facilitator needs to have patience and endurance to work with the ability to support the teachers daily while implementing the innovation.

Change principle 3: To Hall and Hord (2001), an organization does not change until the individuals change. "Successful change starts and ends at the individual level" (p.7). Change in an organization is only successful if each individual adopts the innovation fully. Change should target the individuals within an organization as well as the organization as a whole. The change facilitator needs to understand that individuals vary in the way they adapt to change. Some adapt directly, others are slow in picking up the innovation and some others avoid change and don't make an effort to grasp or adopt it. Understanding differences between individuals makes the change facilitator plan ways and means of individualizing his approach.

Change principle 4: Innovations come in different sizes. Innovations can be product innovations, such as new assessment techniques and new books. Process innovations could manifest as counseling techniques and different teaching procedures.

Innovations can be simple, such as redesigning the content of one course depending on a new edition, or a more complicated one, which involves a major change in the role of principals, teachers and schools.

Change principle 5: Interventions are the key actions for the success of the change process. Interventions are not only activities or workshops conducted throughout the process. Usually the number of critical incidents that happen throughout implementation will be the determining factor in success. Interventions like the one-legged interviews which are short encounters between a principal and teachers and could help in highlighting teachers' concerns. The encounters take few minutes and are unplanned events which focus on the way the teacher feels about an innovation. "Teachers are more successful with change in schools where there are more one legged interviews". (Hall & Hord, 2001, p.10).

Change principle 6: Although both top-down and bottom-up change can succeed, a horizontal perspective is best. The 'top' refers to principals and other decision-makers while the teachers are at the 'bottom'. Both top-down and bottom-up approaches are not successful in maintaining change. The top maintains strict control on change, the bottom does not have the time or the ideas to initiate change. Both teachers and directors will view each other with hostility because of the absence of trust and respect, or the correct knowledge of the amount of work done on either side. Teachers say, " they have no idea what life is like in the classroom " (Hall & Hord, 2001, p.11). The people at the top claim that teachers cannot comprehend the pressures imposed on them and the need for the change to succeed. Teachers and directors should be viewed on the same level, with a horizontal interaction between the two parties. "Meaningful change is not going to be possible until people at all points come to understand the whole system and ... trust members at other points" (Hall & Hord, 2001, p.12).

Change principle 7: The leadership of the manager is essential to the long-term success of any change. Administrators are vital to change since their support helps to maintain and keep change going. Teachers, at times, can start and sustain

an innovation, but if administrators do not fully support it and provide the necessary resources, it will fail. "If administrators do not engage in ongoing active support, the change effort will die" (Hall & Hord, 2001, p.13).

Change principle 8: Authority decisions can work and are important in the change process. Although commands and authority decisions are top-down strategies, they can succeed if they are not limited to the announcement of the change. They should be accompanied and supported by training, support and coaching of teachers and communication. "When a mandate is accompanied by continuing communication, ongoing training, on site coaching, and time for implementation, it can operate quite well" (Hall & Hord, 2001, p. 14).

Change principle 9: The school is the primary and major unit for change. The school is a unit of education at the district level. Support for the school staff and principal could come from outside, but it is the school's staff and leaders who will "make or break any change effort" (Hall & Hord, 2001, p. 14).

Change principle 10: Facilitating change is essentially a team effort. The change process is a dynamic process that involves administrators, teachers, principals and other decision-makers. No change will succeed if collaboration is absent among those involved in change. "All must help to facilitate the change process" (Hall & Hord, 2001, p.15).

Change principle 11: Appropriate interventions reduce the anxiety and frustrations induced by change. Many people involved in the change process are frightened of change, since it brings sadness and pain. The feelings are due to giving up the familiar way of doing things and trying to learn new things. If change is facilitated well by decision-makers and change facilitators then "change can be fun" (Hall & Hord, 2001, p.15).

Change principle 12: Both Hall and Hord (2001) claim that the context and climate of the school influence the process of change. The work place culture has a very important impact on the process of change.

Strategies for Change.

The strategies followed up in introducing change could affect its course and duration. Strategies identified by Chin and Benne (1985) remain the corner stone in all educational innovations. These authors identified three types of strategies namely (a) the empirical- rational strategy, (b) the power coercive strategy, and (c) the normative-re-educative strategy.

1. The empirical-rational strategy is based on the belief in the rationality of the human beings who follow goals that achieve personal profit and provide them with incentives. Change is triggered by people in power and aims at satisfying the self-interest of people. Proponents of this strategy believe that rational change that brings profit to the organization or individuals will be embraced.

2. The power- coercive strategy is based on the belief that change is best triggered by legitimate authority using a top- down approach and imposing sanctions to ensure compliance. It uses political, economic and moral power to introduce change. The changes introduced through this strategy are not necessarily oppressive, depending on the process followed in introducing change. Legislation and policies are examples of such a strategy. They are usually introduced by the government and have served in structuring and organizing many changes introduced in education and other sectors in society.

3. The normative- reeducative strategy believes in the power of socio-cultural norms and the attitudes of individuals towards change. For change to succeed, individuals need to form new attitudes, skills and values relevant to the new innovation. To Chen and Benne (1985), individuals need to change their "normative orientations to old patterns and develop commitments to new ones" (p.23). As this strategy is implemented, individuals in the process of change, change their habits, values, knowledge, attitudes and perceptions. The strategy takes into account the social and cultural issues surrounding change. The normative-re-educative strategy acknowledges the important role played by each member in the change process. Change moves from the bottom to the top, and is triggered by the people themselves.

The first two strategies may be effective in changing behavior for a while but they have several problems. Both are top-down strategies and are activated mostly in the presence of an authority. Furthermore, since change is imposed, people do not feel part of the change process and the change effort will probably dwindle as time goes by. The last strategy is likely to be the most successful. It provides for training the staff, supporting them, encouraging participation and dialogue and creating the proper climate for change.

Nevertheless, the strategies outlined above do not necessarily operate as single strategies. Normative-reductive strategies are mostly effective when combined with power- coercive strategies, where political authority seems to enhance and maintain the change.

Nickols (2004) claims that a fourth strategy should be considered, which is the environmental – adaptive strategy. This strategy claims that people have the ability

to adapt to new circumstances, provided that the organization arranges a smooth transition. Change is based on building a new culture and helping people make a successful transition from the old organization to the new one. This is suited most when radical change is called for and can be useful for short time frames or longer ones. One major consideration here is availability of suitable new people to start the new organization and the careful selection of people from the old organization. In choosing a strategy for implementing change, several considerations should be taken into consideration, namely, degree of change, anticipated degree of resistance, population, time frame and expertise. Generally speaking, no single strategy can serve an institution at all times. A combination of strategies is sometimes necessary, to enhance collegiality and ownership.

Forces shaping nursing education globally

Historically, changes happening in the health care sector have always impacted on nursing education and nursing services. Nursing education can be traced back to the first schools of Nursing established in London during the era of Florence Nightingale. Nursing training at that time emphasized skills, practice and procedures rather than knowledge. Nursing Schools were dominated by hospital directors, namely physicians, who stressed practice based on procedure and rules. As the health care sector diversified, and demanded more specialization and expertise, nursing education moved to the tertiary sector. The aim of university education was to prepare professional nurses with emphasis on autonomous reasoning, focused on individualized, contextual care. (Daly, 1998; Hasida, Yagil & Spitzer, 1999)

During the 1980s and 1990s, nurses became more involved in the community and assumed new roles as advocators and managers of patient care, and thus

requiring necessarily skills of "collaboration, cooperation and conflict resolution" (Hasida et al., 1999, p.1433). The current period of nursing education stresses critical appraisal and literature research strategies to provide evidence-based practice. At present, with the vast developments in the health care sector, nurse educators are challenged by the need to do more than help students recall facts. They are challenged to help students develop skills that will make them life long-learners (Tompkins, 2001).

McBride's (1999) new paradigm of nursing practice includes, among many, an outcome- based practice, with a stress on promotion of self care and quality of life, provision of primary care and managing life -style changes. Commissions also played a role in the concurrent shaping of nursing curricula, and indicating directions for the future. The Pew Health Professions Commission developed recommendations for change in health profession education and advocated the development of policies which would fit the health care work force in the United States. The Pew Health Professions Commission identified twenty one vital competencies for nursing in the 21st century which mostly overlapped with McBride's, but included, in addition, an emphasis on ethical behavior in professional relationships, a personal ethic of social responsibility, the need to be a life long learner, and helping others to learn (O'Neil & Pew, 1998). Associations also played a role in shaping nursing curricula by identifying and revising entry and exit competencies for different nursing programs in response to changes in the health services. Such associations are the Nebraska nurses' association and the Nebraska Board of Nursing who amended McBride's competencies and added to them assessment and teaching skills in addition to emphasis on personal attributes such as, flexibility and creativity (cited in Lindeman, 2000).

Health human resource requirements have dictated new health care specialists to meet the needs of the changing environment in the health care sector. Advanced practice nurses have emerged in response to the decreased number of physicians and the shortage of medical practitioners in acute care settings, in addition to the concern of cutting costs in hospitals. Nurse practitioners took over physician-related functions, such as diagnosing patients and writing prescriptions, which dictated new curricula to prepare such a category of health professionals (Dychkowski, 2000)

In addition to the new roles undertaken by nurse professionals, there is a shift towards preparing nurses at the baccalaureate level and advanced levels of practice. The National Advisory Council on Nurse Education and Practice (NACNEP) recommends that at least two thirds of the future nursing workforce should be at a baccalaureate level to meet the health care needs and challenges of the future (Dychkowski, 2000). To Dychkowski, academic nursing institutions are currently challenged to prepare "skilled nurses to function in the new health care delivery model" (2000, p.5). The presence of a professional nursing work force in the health facilities is helpful because of the need for cooperation and collaboration between the different health professionals caring for the patient. At present, in the health care setting there is a tendency to work in a multi- disciplinary team and make decisions affecting patient care. The approach demands new skills and attitudes to be developed in the nurse professionals to allow them to succeed in this role (Alwan & Hornby, 2002).

The shift nowadays from hospital care settings to community settings has dictated a different type of preparation of nurses for the future, who will have to have special skills to meet the needs of patients in non-traditional settings and to be able to promote health, prevent disease and manage complex disease illness. "A shift in

educational activities is needed to increase the focus on community problems and priorities, using problem-solving techniques to provide health workers with the necessary skills to engage directly at this level" (Alwan & Hornby, 2002, p.58).

In the new millennium, nursing education programs need to respond to all the changes in the health sector by embracing a body of knowledge and skills that can prepare nurses adequately for the future, away from the empirical pragmatic model towards a humanistic caring model. At present, the outcome -based curricula, competency- based curriculum, problem- based learning and professional portfolios are all a shift of focus from the teacher to the student, from content to process with a stress on the critical thinking abilities of students (Hasida et al, 1999). Content-based curricula cannot keep pace with vast political, economic, technological and social changes. Educators need to emphasize the process - oriented learning that will assist learners to be "critical thinkers, information managers, and problem solvers as well as life-long, self-directed learners who continually base their professional practice on critical appraisal of evidence and collaboration with clients and colleagues" (Carpio, 2001, p.325).

Nurses nowadays work in a complex environment where technological and medical sciences are progressing rapidly. No nursing curriculum could keep up with the changes happening in the health care sector. Nurse Educators, trying to keep up with the fast changes taking place in biomedical sciences, are constantly increasing content, which is considered nowadays by the National League of Nursing (NLN) as a problematic issue (2003). Tanner (1998) supports NLN views on content and claims further that "it is my observation that nurse educators feel enormous pressure from both students and colleagues to cover the content ... little is gained, or retained, in the long run as nurse educators try to cover ever-increasing amounts of content" (pp. 383-384).

The constant addition of content to nursing curricula has resulted in additive curricula (Diekelmann, 1992) with more content added and little if any removed. As a result, several nurse educators resorted to conventional pedagogies, trying to cover an increasing amount of content through a structured classroom environment. Emphasis on context diverted nurse educators from emphasizing interactive learning methodologies. To Paul, nurse educators tend to think more about content rather than methodology followed in covering the content (cited in Ironside, 2004). Ironside (2004), being concerned about the approach, claims that "it is not only the amount of content that is an issue, but also how we, as teachers, think about content and the purpose it serves within our programs and courses" (p.6).

Traditionally, didactic conventional teaching methods were followed by teachers and led to rote learning. Under that conventional pedagogy model, teachers were the sole experts and students the passive recipients of knowledge. These methods would not equip learners with the skills necessary to operate in the complex health sector today where they must become self directed life-long learners. This has necessitated a shift in educational methodologies, with several schools of nursing trying to make teaching student-centered rather than teacher-centered as was the case under the conventional model. NLN (2003) calls for reform in nursing curricula and claims that "All levels of nursing education, undergraduate and graduate, are obligated to challenge their long-held traditions, design evidence-based curricula that are flexible, responsive to students' needs, collaborative and integrate current technology" (p.1).

Self- directed Learning (SDL) is not new in the arena of education. Knowles (1975) claimed that all adults are self learners and capable of being autonomous and independent. The teacher's role is to help students acquire self-directed learning skills. To Knowles, SDL is: "is a process in which individuals take the

initiative with or without the help of others, in diagnosing their needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes" (1975, p.18).

The progression to self-directed learning is not easy. Hewitt-Taylor (2002) claims that the shift can only succeed if the teacher becomes a facilitator and the teaching-learning process is focused on the student. Facilitation has the potential to succeed if teachers are knowledgeable about their courses and the techniques of facilitation. This change to facilitation demands ongoing professional developmental activities to help teachers quit their authoritarian role and become facilitators (Dolmans et al., 2002).

Nursing, however, like other professions is based on a solid body of knowledge which needs to be accomplished by the nursing students to meet the requirements of official boards and accrediting authorities. Carper identified four ways of knowing in nursing, namely aesthetic, ethical, personal and empirical. According to her "in order to provide ethical care that is grounded in a social justice frame, nurses must use not only empirical and hermeneutic knowledge but also critical knowledge to challenge the status quo, to advocate for and ... support individuals, families and communities ... to become empowered for their own health" (cited in Tompkins, 2001, p.8).

Ethical practice requires nurses to be engaged in personal knowledge, part of which is curiosity. To Freire (1998), curiosity "is what makes me question, know, act, ask again, recognize" (p.81) and he further claimed that curiosity is the "corner stone of learning and growth" (p.79). Through the process of personal knowing, people become self-conscious of their needs and tend to reflect on their actions. Schon (1983) regards the process of "reflection-in action" as "central to the art by which

practitioners ... deal ... with situations of uncertainty, instability, uniqueness and value conflict" (p.50). Reflection on action is as important as reflection-in-action, and takes place after the action is taken (Schon, 1983).

The shift in nursing to personal, ethical and esthetic knowing has moved nursing away from the objective hierarchical curriculum of the last century. Outcomes in the old curriculum were achieved by solely observable behaviors. To, Loving and Wilson (2000), the nursing curriculum in the past was framed in such a way that "faculty teach, students learn" (p.70). Bevis (2000), advocated a new approach to nursing education based on a caring, emancipatory and liberatory approach where teaching becomes more than transferring knowledge. To Bevis (2000), teachers are challenged to "provide the climate, the structure and the dialogue that promote praxis" (p.173) which would allow students to expand their horizons and engage them in an endless journey of critical thinking. Teachers are also required by Bevis (2000) to "be caring and to model the authentic, humanistic connections that are the foundation of the nurse- patient relationship" (p.15).

Nursing education in the 21st century advocates a critical praxis, which can help individuals examine all rules and theories that were accepted in the past without question. It will help nurses to self reflect and can "facilitate freedom for individuals and it allows one to question what is knowledge, how we know, and who provides the evidence (Wilson, 1995, p.574).

In addition to self-reflection, nurses are expected to be trained to think critically before they deliver care (Tompkins, 2001). Critical thinking involves logical reasoning, being aware of the assumptions underlying actions, the context of the delivery of care, questioning the universal truths and laws and looking at things in an alternative way and with a critical open mind (Rideout, 2001). Nowadays the focus of the most nursing curricula should be on the learner, and the teacher as a facilitator

of the learning process. " Prominent among these changes is ... a model that focuses on learners and the creation of a climate for life-long learning, the cancellation of a traditional student evaluation tools and the integration of areas of learning through projects and themes" (Hasida et al. 1999, p.1433). Students under the critical thinking model can "excel on their own ... go beyond what is currently known" (Facione, 1998, p.11).

To prepare nurses to be critical thinkers and reflective practitioners, new teaching methodologies should emerge which help to reshape the teacher and student roles in the classroom. Heidegger (1968) claimed that the task of the teacher is not to teach but to " let learn". In such a setting, " there is never a place ... for the authority of the know-it-all" (cited in Rideout, 2001, p.14). Moccia (2000) claimed further that content is not important, the process is "there ought be no list of what to teach because education for the new age is not about content, it is about soul, it is about process" (p. xi).

In directing the process of teaching, nurse educators need to respect the diversified views of students. Using strategies such as cooperation and collaboration will allow students to speak and to listen, and to report each other's points of views. Upon graduating, nurses will be able to listen and conduct therapeutic relationships with their patients, in addition to developing a partnership with patients aimed towards health and wellness (Rideout, 2001).

Research on change in nursing education

Change in nursing education has been introduced differently in different countries. Irrespective of the method introduced, educational change tends to affect all stakeholders especially nurse educators and students. There are many factors that are considered to be vital in the change process, namely the nature of the

change, context of change, which refers to resource allocation, organizational structure and the management style, perceptions of individuals involved in the process and the time perspective (Davis, 1991). The meaning of change and the perceptions of individuals affected by change are of paramount importance in understanding the change process and predicting its success. "It is the individual's perception of the situation that is being considered ... This is what affects many changes and the whole ethos of change within an organization" (Davis, 1991, p.113).

Change in nursing education has taken many forms. In England, project 2000 amalgamated nursing and midwifery schools and linked them to higher education. The change was initiated by the profession and governmental policy. Several studies addressed the impact of this change on nurse educators. McHale studied 11 schools of nursing and focused on the unsatisfying and satisfying aspects of change from the perspective of nurse educators. The major unsatisfying factors identified were lack of autonomy, excessive paper work, meetings, fewer contact hours with students in the clinical areas, and poor relationships with the staff in the clinical areas. The satisfying aspects were related to teaching, autonomy and student contact (cited in Crotty & Butterworth, 1992).

The perceptions of nurse educators and the meaning of educational innovation were undertaken by another qualitative and naturalistic study that took place in one college of nursing after the introduction of project 2000 in the U.K. Semi-structured interviews with a purposeful sample of 50 nurse educators were conducted, along with participants' observations and documentary analysis. The changes experienced by the nurse educators were classified under the personal, organizational and professional domains. Under the personal domain, staff were overwhelmed with feelings of loss and grief due to quitting their old role. Many were

frightened of the change and of losing their jobs and had adopted a low profile attitude.

Under the organizational domain, teachers felt alienated with a new college philosophy imposed on them. The whole organizational structure was substituted by another one which was new and seemed complicated to the staff. Lines of communication also became an issue which resulted in a sense of loss of control and power. In regard to the professional domain, staff expressed discontent and insecurity due to the introduction of short term contracts, reorganization of teaching teams with senior lecturers leading them. This led to feelings of uncertainty because of the change in accountability and reporting mechanisms. "Ambivalence and uncertainty is a feature of most educational change, where the staff seeks to attach meaning to new structures and events, often employing the conceptual frameworks of reassuringly familiar reality" (Stew, 1996, p.587).

The changes in the nurse educator's role following links with higher education was further explored by another national qualitative case study conducted by the English Board for Nursing, Midwifery and Health Visiting between 1991 and 1994. Multiple data collection methods were used, including a modified Delphi survey which involved random sampling, focus group interviews and a series of telephone interviews. The sample was made up of 600 nurse teachers and midwife educators in addition to other groups such as specialists nurse teachers, higher education lecturers, health service managers and clinical nurses. The positive aspects of integration with higher education were perceived to be increased academic status, access to resources and professional development opportunities. The concerns of nurse educators were related to job security, teaching a large group of students, lack of proper planning, and leaving the clinical areas. The integration was regarded as a

frightful experience "It was a nightmare to begin with ... It was frightening ... there were so many, we felt intimidated" (Carlisle, Kirk & Leuker, 1996, p.768).

Organizational and curriculum changes can place pressure on nurse educators and other members working in the institution undergoing change. The British National Health Service Organization merged two teaching hospitals within the same health authority, mandating a change in college structure, and a new curriculum for the nurses. The curriculum implemented demanded a change in teaching methods in the college and clinical areas. A phenomenological study was carried out to study the effect of change on students and teachers. The study included 67 participants, representing students, clinical teachers, nurse teachers, and an education manager, a director of nurse education and support staff. An open-ended questionnaire followed by a Delphi-survey and an individual and focused interview followed. Findings revealed concerns over a hierarchical gap between managers and those who are managed, deficient flow of information, poor planning, lack of direction, unrealistic goals and fear of the unknown (Davis, 1991).

All the fore-mentioned studies on nurse educators undergoing change yielded similar findings namely, fear of the unknown, lack of planning, lack of autonomy and security and feelings of being left out, in addition to stress. One study addressing the concerns of nurse educators in South Africa concentrated on the concerns of nurse educators as they implemented a new nursing program. Using the concerns- based adoption model as the theoretical framework, Gwele (1996) conducted a comparative cross-sectional descriptive study to measure the concerns of nurse educators in four nursing colleges after the implementation of a comprehensive basic nursing program (CBNP) in South Africa. The MANOVA was statistically employed to measure the differences between colleges with low and high stages of concern in relation to the time of adoption, impact of training on stages of concern and the

perceived level of experience with the CBNP. Results showed significant statistical differences between early and late adopters in regard to low stages of concern. No significant difference was found in relation to high levels of concern. The concerns of inexperienced nurse educators, were significantly higher than those of experienced nurse educators, on both lower and higher levels of concern.

The cross-sectional study was followed by a longitudinal study for 18 months conducted by the same author in 1997 at the University of Natal, to monitor the staff concerns after the implementation of a Problem Based Learning (PBL) program. Personal concerns were most intense during the study. The study revealed that during the first six months, the highest stage of concern was the awareness stage, followed in the next six months by personal consequences and refocusing concerns. After 18 months, though personal concerns were still intense, impact concerns were high. The concerns of the staff were related to inadequate staff support, lack of unity, presence of stress and lack of time for academic research. In spite of all the concerns, staff believed that the program had helped them to grow personally and professionally.

Students' concerns and perceptions are as important as the nurse educators. Students tend to feel left out if change is imposed on them. Loving and Wilson (2000) reported the effect of an educational change on students. The authors reported on a study undertaken in a faculty of nursing, in which curricular innovation centered on infusing critical thinking strategies into the courses, after preparing the faculty for the change through educational workshops. Students resisted the change since they "perceived they were guinea pigs in a faculty effort to get out of teaching" (Loving & Wilson, 2000, p.74). The resistance was overcome later by preparing students through workshops and then introducing a critical thinking course into the first year.

Examining students' perceptions in educational institutions can highlight several important issues for the change agent. A radical change took place at the national level in the Finnish health education in 1987, to shift the curriculum from a medical focus towards a human scientific model. A longitudinal study was conducted to examine students' perception after 6, 18 and 30 months in the new curriculum. A total sample of 158 students, selected by stratified sampling from 6 specialties in nursing, were chosen. Results were analyzed by one-way analysis of variance and showed the disappearance of the medical technical model and replacement by a caring model based on the promotion of human health and professionalism which was congruent with the new curriculum (Manninen, 1998).

In nursing, collaboration and appropriate planning and negotiation between nurse educators and service providers, is mandatory when educational institutions introduce change to the clinical areas. Failure to do this will result in ambiguity and dissatisfaction in both parties. Hallett (1997) studied the implementation of one component of "project 2000" which was the learning opportunities offered to novice students in the community. He/she conducted 15 semi- structured interviews with a purposive sample of first line community nurse managers in three demonstration districts to identify their concerns. Concerns were mainly related to conflicting responsibilities related to the increased responsibility and burden on staff, violation of clients' privacy and lack of guidance from the colleges of nursing regarding the extent of student participation and the aims of the community placement introduced into the diploma course. For the managers "meeting the educational needs of students whilst protecting nursing staff from the pressures created by those needs and safeguarding the quality of the service provided ... could create serious dilemmas" (Hallet, 1997, p.840). Managers claimed their experience would be more meaningful for second and third year nursing students; they were uncertain

regarding the amount of experience and the extent of nursing care participation required by students. Students were expected to develop an independent approach to nursing and negotiate their experience, which was quite new to the community nurses and they were not prepared for it.

Changes are not always negative. A success story based on partnership can be reported from Hawaii. In Hawaii, consistent with changes in health care reform, nursing education responded to the changes by accepting partnership in a multi-professional approach to community care in a community- based project. Medical students, nursing students, social and public health workers cooperated in giving care in three poor community centers. The nursing school, in response to change, developed an inquiry-based learning strategy, specifically tutorials, with clinical placement in the community. Clinical supervision was done by the nursing faculty, who held joint appointment by the University and the community. All students started establishing relationships through working in health social contexts. The outcomes were excellent for all the categories of students and the communities (Oneha, Sloat, Shoultz & Tse, 1998).

The traditional pedagogies and methodologies applied in the classrooms still pose serious concerns to nurse educators and students because they do not encourage the students to develop self-directed learning skills. Nurse educators are trying to introduce new interactive methodologies into the classroom with reported success from both teachers and students. A study done in several schools of nursing attempted to explore the personal experiences of teachers with narrative pedagogy and the way it affected the students' critical thinking processes. The data was collected through telephonic interviews with the teachers. Teachers in the study covered content by allowing students to narrate their personal experiences with their patients and encouraging students to think and ask questions. As a result of the new

pedagogy, the discourse increased between teachers and the students covering more content and stimulating thinking (Diekelmann, 2004).

Despite emphasis on facilitation in nursing education nowadays, nurse educators are still worried about content. Most of the changes taking place in nursing curricula nowadays have "focused on addition or re-arrangement of content within the curriculum rather than on significant paradigm shift" (NLN, 2003, p.1). Schaefer and Zygmont (2003) studied 187 faculty members teaching in baccalaureate nursing programs and found that the major obstacle to faculty is the "curriculum mandate" (p.224). The content which needs to be covered prevents faculty from creating a student-centered learning environment.

Students, as major partners in the teaching-learning process, did not seem enthusiastic about the new student-centered pedagogies. McCarthy (1995) in a literature review of preferable teaching-learning methods for students, found that students preferred conventional traditional lectures. Similar findings were witnessed by Burnard and Morrison (1992) in an exploratory study carried out in the United Kingdom. A questionnaire was distributed to a convenience sample of 110 students and 47 lecturers. Findings regarding students were concurrent with McCarthy's literature reviews. Lecturers, on the other hand, preferred a more student-centered approach.

Several studies were conducted to establish the perception of teachers and students about self-directed learning (SDL). Hewitt-Taylor (2002) conducted a two-phased qualitative study with 28 students and 8 teachers involved in a post-registration (E.N.B 415) course chosen from seven universities in the United Kingdom. Several methods were used in collecting data, namely semi-structured interviews, observation of tutors and students, and lesson observation. Findings indicated that groups did not have the same understanding of the meaning of SDL.

Almost half the students defined SDL as learning alone. Both tutors and students felt that though SDL is important, it should not be the only methodology followed in teaching the course. Teachers believed that students would only accept SDL if it was used in conjunction with traditional lectures. They also believed that students did not take responsibility in SDL sessions. Both parties were not sure that there was mutual respect between them.

Other studies reported the faculty's and students' concerns with SDL. Lunyk-Child et al. (2001) conducted focused group interviews with 47 teachers and 17 students enrolled in a nursing program at McMaster University. They investigated the facilitating and hindering factors of SDL. The findings showed that students undergo a transformation process as novices in problem-based curriculum. They experience anxiety and fear at the beginning and progress slowly until they develop confidence and skills for life-long learning. Faculty, on the other hand, expressed their concern over the implementation strategies followed in SDL classes. Furthermore, students expressed the need for proper introduction sessions and faculty expressed the need for continuous staff developmental activities targeted at sharpening the facilitation skills among faculty.

The concern of faculty over the implementation strategies followed in initiating SDL. seems to be prevalent among other studies. In a study of 38 public universities and 28 private universities in California., using telephonic interviews, Paul, Elder and Bartell (2003) found that the majority of teachers were not able to define critical thinking, and claimed that students lacked "intellectual standards" (p.3). They found that teachers could not describe how their teaching methodologies could initiate the students' critical thinking. Faculty members were not sure of ways of giving content while initiating critical thinking among students.

In contrast to the previous findings, other researchers found that students favored student-centered approaches in a study that covered 68 nursing and 71 social work Finnish students using self administered questionnaire. The results confirmed that the majority of students expressed their satisfaction with student centered approaches (Turunen, Taskinen, Voutilainen, Tossavainen & Sinkhonen, 1997).

Perhaps a summative clause would be the computer search done by O'Shea (2003) regarding self-directed learning. The search involved Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE and other world wide nursing information data bases. Findings indicated that self-directed learning needs commitment from faculty and students to succeed. Students' preferences and readiness for self-directed learning is very important along with the proper implementation of the principles of SDL. Success of SDL can only be achieved if teachers receive ongoing staff development targeted at reinforcing the major principles underpinning SDL.

CONCEPTUAL FRAMEWORK

Roger's Diffusion of Innovation

Diffusion of an innovation can be traced back to rural sociology research which started in the 1940s. To Rogers, diffusion is not a single step, but a process that occurs over time (1995). Rogers defined diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p.5). It is a type of social change which introduces changes in the "structure and function of a social system" (p.6). Communication, on the other hand, is defined by Rogers as "a process in which participants create and share information with one another in order to reach a mutual understanding" (p.6). The

main elements in the diffusion process of new ideas are an innovation, which is communicated through certain channels, over time, among the members of a social system.

The Innovation.

Innovation is defined as "an idea, practice, or object that is perceived as new by an individual or another unit of adoption" (Rogers, 1995, p.11). The characteristics of an innovation define its rate of adoption. To Rogers, these characteristics or attributes are all-important because they show that the perception of potential adopters is dependent on a variety of attributes, and not just one. The attributes are (a) relative advantage, (b) compatibility, (c) complexity, (d) triability, and (e) observability.

(a) Relative advantage. Rogers (1995) defined relative advantage as the "degree to which an innovation is perceived as being better than the idea it supersedes" (p. 212). Several factors can attract potential adopters towards an innovation, namely its economic profitability, social prestige and convenience. The nature of the innovation and the characteristics of the potential adopters determine which dimension of relative advantage is most important. The critical element in the adoption process is the perception of potential adopters of the innovation related to its advantage and not its objective advantage. "The relative advantage of an innovation, as perceived by members of a social system, is positively related to its rate of adoption" (Rogers, 1995, p.216).

(b) Compatibility is defined by Rogers (1995) as the "degree to which an innovation is perceived as consistent with the existing values, past

experiences and needs of potential adopters" (p.224). The compatibility of an innovation, as perceived by potential adopters, affects its rate of innovation. The perception of the compatibility of an innovation is usually in line with cultural values and beliefs, past history, with previous innovation and clients' needs. All are important considerations in the acceptance of an innovation, and help to speed the process or slow it down. Adoption is usually best when innovation is introduced gradually, starting with a highly compatible innovation that would make people enthusiastic about its adoption and then gradually introducing the less compatible parts (Rogers, 1995).

(c) Complexity is defined as the "degree to which an innovation is perceived as difficult to understand and use" (Rogers, 1995, p.16). The more complex an innovation is perceived to be the less is its rate of adoption. The perception of individuals of the extent of complexity of an innovation tends to affect its rate of adoption. When an innovation requires new skills and complicated tasks, the adoption process slows down. The simpler the innovation is perceived to be, the higher is the adoption process.

(d) Triability is the "degree to which an innovation may be experimented with on a limited basis" (Rogers, 1995, p.243). The gradual introduction of an innovation helps in the diffusion process and is positively related to the rate of adoption. Individuals allowed to experience innovation gradually, tend to feel more confident about it, and embrace it more readily. "Trying-

out an innovation is a way to give meaning to an innovation, to find out how it works under one's own conditions" (Rogers, 1995, p.243).

(e) Observability. is the "degree to which the results of an innovation are visible to others" (Rogers, 1995, 244). When individuals see others applying the innovation, uncertainty decreases. It also stimulates them to explore the innovation further, ask for more information and enhances communication between members of a social system.

In addition to attributes, Rogers (1995) claims that there are three intrinsic elements of an innovation. These three elements are namely, form, function and meaning, which tend to affect its adoption rate as well. Form is related to the "observable physical appearance ... of an innovation" (p.423). Function is the "contribution made by an innovation to the way of life of individuals or to the social system" (p.423). Meaning refers to the "subjective and frequently unconscious perception of an innovation by members of a social system" (p.423). In the introduction of an innovation, many change agents concentrate their efforts on the form and function of the innovation rather than its meaning.

Communication Channels.

To Rogers (1995), communication is a "process in which participants create and share information with one another in order to reach a mutual understanding" (p.6). A communication channel is defined by Rogers as the "means by which messages get from one individual to another" (p.18). Among the communication channels, mass media channels are considered the most useful to create awareness among potential adopters. Interpersonal channels are the most effective and efficient channels to promote communication between two or more individuals. These

channels allow adoption to be faster, and change attitudes towards an innovation through the personal contact taking place between individuals of similar socio-economic status and education. Personal contact could be through initiation and subjective evaluation of colleagues who have adopted the innovation.

Time.

Time is another critical variable in the diffusion process. It is involved in three different ways: (a) the innovation-decision process; (b) innovativeness and adopter categories; (c) the rate of adoption of potential adopters in the institution.

(a) The innovation-decision process is defined by Rogers (1995) as the "process through which an individual... passes from first knowledge of an innovation to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation ... and to confirmation of this decision" (p.20). It is a mental process that aims at seeking information to decrease uncertainty. It is divided into five main steps, namely knowledge, persuasion, decision, implementation and persuasion.

- Knowledge takes place when the individual gets information about the innovation.
- Persuasion occurs when the individual starts developing an attitude towards the innovation.
- Decision happens when the individual becomes involved in activities that will help to decide whether to adopt or reject an innovation. He starts to weigh the advantages and disadvantages of the innovation. The information about the innovation is usually taken from close peers with whom he is closely associated.
- Implementation takes place when an individual starts applying the innovation.

- Confirmation is the stage where the individual, or other decision making unit, seeks further information to back up his decision and further convince him/them.

At this stage, however, the individual may also decide to abandon the innovation.

The goal of the innovation-decision process can either be adoption or rejection. This decision can be changed at any stage depending on the new input of information. Dissatisfaction with the innovation, or its replacement with a new idea, may lead to discontinuance of the innovation, which usually occurs in the confirmation stage. The steps usually go through a time ordered sequences. Exceptions occur, Individuals may adopt a decision and then start forming an attitude towards it.

(b) Innovativeness is defined by Rogers as "the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than the other members of a system" (1995, p.22). On the basis of innovativeness, five **adopter categories** have been identified and tend to have different characteristics among them. The categories can be classified as: (a) innovators, (b) early adopters, (c) early majority, (d) late majority, and (e) laggards.

1. *Innovators:* Represent 2.5% of all individuals in an organization. They thrive on new ideas and love venture and are daring in nature. They tend to have relationships with other innovators outside the realm of the organization. Innovators control financial resources, and are able to cope with the uncertainties involved in introducing the innovation. Their major role involves the introduction of an innovation into the system.

2. *Early Adopters:* They make up 13.5% of individuals in an organization. They are considered as the leaders and senior members in an organization. Other individuals in the system look up to them for advice and information regarding the innovation. They are considered the pioneers in adopting an innovation and share their experiences with their peers. They enjoy a high degree of respect and esteem among their peers. Research on the characteristics of early adopters has shown that early adopters tend to have more formal education and are of higher socio-economic status than late adopters. Their personalities are unique in that they have greater empathy and are open to ideas. They are considered more rational and intelligent than others, with a flexibility towards change and uncertainty. Their communication behavior is more open and tends to have more exposure to others than late adopters. They are very important in enhancing the speed of an innovation to the point of a critical mass, where enough individuals adopt the innovation and the rate of adoption becomes self-sustaining.

3. *Early majority:* These constitute around 34% (one third) of individuals in an organization. They tend to adopt an innovation willingly before the average people. They are not leaders. Their unique position in the organization helps to connect between early adopters and those individuals adopting late.

4. *Late majority:* They form 34% (one third) of individuals in an organization. They accept innovation unwillingly and with a skeptical air. The pressure of peers is a decisive factor in pushing the late majority towards adopting an innovation.

5. *Laggards:* They form 16% of all individuals in a system. They are considered the most traditional group in the organization. They value their past

experiences and are resistant to change. They tend to have few contacts with their peers and are the last to adopt an innovation.

(c) Rate of adoption is defined as "the relative speed with which an innovation is adopted by members of a social system" (Rogers, 1995, p.22). The distribution follows an S-shaped curve. The curve shows that at the beginning of an innovation only few adopters adopt it, then the curve starts to climb up as more people adopt it until it reaches a point where it levels off. The period of rapid expansion occurs when all social factors combine and the individuals in a social system embrace the innovation, resulting in a dramatic growth.

Most innovations tend to have the S curve, but have variations among them. The rate of adoption tends to vary between innovations. Some innovations diffuse rapidly, others slowly.

Social Systems

Social systems refers to a 'set of interrelated units that are engaged in joint problem-solving to accomplish a common goal" (Rogers, 1995,p.23). The social system affects diffusion in different way, namely (a) Social structure, (b) System norms, (c) Opinion leaders and change agents, (d) Types of innovation-decisions

(a) *Social structure* refers to the formal and informal structure and communication patterns which impede or facilitate diffusion. The hierarchy in the organization defines the flow of information and allows the predictability of the future of diffusion.

(b) *System Norms* are defined as "the established behavior patterns for the members of a social system" (Rogers, 1995, p.26). The systems' norms

serve as a standard for the expected behavior of individuals in an organization. They allow individuals either to embrace the innovation if it is in congruence with their norms or reject it.

(c) **Opinion leaders and change agents** are important in the social system. Opinion leadership is "the degree to which an individual is able to influence other individuals' attitudes or overt behavior informally in a desired way" (Rogers, 1995, p.27). They facilitate communication between different individuals in an organization. They act as role models through their competence, expertise and conformity to social norms.

Change agents, on the other hand, tend to influence individuals' innovation decisions depending on the directions of the change agency. Usually, change agents come from outside the organization and use opinion leaders to facilitate the introduction of an innovation, slow it down or prevent its dissemination. Their role is to diagnose problems, create an interest in change and stabilize the adoption of an innovation.

(d) **Types of innovation- decision**: These are the last factor in the social system, and refer to the decision to adopt or reject an innovation which can be (1) optional, (2) collective, (3) authority.

1. Optional decisions are decisions made by individual members, independent of the decision of other members of a social system. Decisions are affected by the norms in the organization and the interpersonal network operating.

2. Collective decisions are made by all individuals in the social system. Consensus is reached among individuals regarding innovation.

3.   Authority is a decision imposed by people who have power and a special status. Individuals do not have the freedom to choose the innovation which is imposed on them.

The fastest rate of adoption happens in authority decisions. Some innovations may be introduced as optional decisions then changed to authority decisions; others may be introduced by authority, then become collective decision. These decisions are referred to as contingent decisions.

Consequences of innovation are defined by Rogers (1995) as the "changes that occur to an individual or to a social system as a result of the adoption or rejection of an innovation" (p.405). Consequences can be classified as: (a) Desirable vs. undesirable consequences, (b) Direct vs. indirect consequences, (c) Anticipated vs. unanticipated consequences.

Desirable consequences are the "functional effects of an innovation for an individual or for a social system" (p.412). It is usually rare to have only desirable effects of an innovation. Most of the times, innovation tend to have both desirable and undesirable consequences. A word of caution here is that at times consequences may be desirable to the organization, but not to individuals and the reverse is also true.

Direct consequences are the changes that happen as indirect response to an innovation, while indirect consequences occur as the result of the direct consequences.

Anticipated consequences are the "changes brought about by an innovation that are recognized and intended by the members of a social system" (Rogers, 1995, p.419). Unanticipated consequences are neither recognized, nor expected changes.

Rogers' innovation diffusion model was chosen by the researcher because it focuses on the process of change as it diffuses among adopters. The model centers

on the perceptions of individuals about the conditions which may facilitate or hinder the diffusion of innovation. The theory provides a conceptual paradigm which tackles the change process starting with the attributes of the innovation, communication channels, time and the social system. To Rogers (1995), how individuals perceive an innovation determines its success or failure. According to him, such perceptions relate mainly to innovation characteristics, type of innovation decision, dynamics of social interactions, the change agent, opinion leaders and the social and cultural institutional norms and values. The model fitted well with the illuminative approach which concentrates on the process of change, the perceptions of individuals regarding the change process and the impact of the whole socio political milieu, with its institutional policies and managerial practices on the process of change.

CHAPTER 3

THE STUDY SETTING

This chapter presents a description of the context of change in the two Arab Gulf countries that were included in this study. The description focuses on the development of nursing education in each country. It should be noted that the section on the UAE is largely based on the researcher's first hand knowledge of the development of nursing education in that country. As a Director General of the UAE Institutes of Nursing, the researcher was, and continues to be, part of this context from inception to the present. Nevertheless, where appropriate, reference to the work of others is acknowledged in the text.

The Development of Nursing Education at the Institutes of Nursing in the UAE

Nursing education has taken major strides in the Emirates in the last decade. Historically, the first School of Nursing was established in 1970 under the auspices of the Directorate of Defense medical services. In 1972, the Institute of nursing in Abu Dhabi was established under the umbrella of the Ministry of Health. Dubai school of nursing emerged in 1980 and was established by the Dubai department of health and medical services. All three parties started with an Assistant Nursing Program and then added the diploma program at a later stage.

In the late nineties two other parties joined namely the Higher Colleges of Technology and Sharjah University. The former offered a higher diploma in nursing and the latter a bachelor's degree. For the purpose of this research, the researcher will concentrate on the history of nursing education at the Institutes of Nursing (Ashkir, Bekhazi, Ruhayel & Madi, 2002).

The first Institute of Nursing was founded in Abu Dhabi in 1972, established by a law passed by his Highness Sheikh Zayed, the president of the country. This law, being one of the first presidential rulings of the time highlighted the importance,

which was placed upon the Nursing profession from the beginning (Kronfol, 1994). The Institute began in Abu Dhabi with an 18 months program, for those who had completed primary education. Graduates of the program were considered 'assistant nurses'. The assistant nursing program was followed by a technical nursing program lasting three years and open to those who had completed the intermediate cycle. It consisted of many separate courses, which followed the different medical specializations.

In 1982, the faculty members and administration of the Institutes worked in co-operation with the American University of Beirut towards the improvement and development of the academic curriculum. The change came along with the need of Emirati society for qualified technicians, who were knowledgeable in the different nursing fields and able to prevent disease and promote health. The co-operation with the American University of Beirut resulted initially in the establishment of a nursing program very similar to the high school nursing program followed in other Arab countries. Graduates who successfully completed 3 years of training after the ninth academic standard were awarded a Technical Nursing Certificate (Kronfol, 1994).

In the Public education in UAE, students in the eighties were allowed to stream off into different vocations at the end of the intermediate cycle (9 years of schooling). In 1982,the educational streams were Science, Arts, Religion, Commerce, Agriculture and Technical. The Ministry of Education accepted in 1982 to add nursing as another stream and recognize graduates as holding a secondary in Nursing (Kronfol & Athique, 1986). The program graduated students at the age of 17,a young age which did not prepare students to cope with the complexities of health care. Furthermore, the program lacked general education and science courses, which are the foundation of nursing education (WHO, 1996).

The establishment of a Nursing Diploma curriculum was finally realized at the beginning of the academic year 1986/1987, for those applicants who had successfully completed secondary school. The Diploma program helped to strengthen the academic standing of the institute, as well as the profession of nursing in general. During the period 1987 to 1993, three peripheral institutes were opened under the management of Abu Dhabi institute of nursing namely Sharjah, Fujeirah and Al-Ain institutes of nursing (Kronfol, 1994).

In 1998, a complete re-evaluation of the curriculum was carried out under the supervision of nursing program experts specialized in curriculum development. As a result of these consultations, it was decided to initiate a case-based curriculum, with special emphasis on the family and society in general (Uys, 1997). This type of curriculum attempts to improve the analytical capabilities of the students and to develop their critical thinking skills through an educational process, which concentrates upon small groups, and independent learning. The role of the teacher is confined to directing and overseeing discussion, as well as clarifying and correcting information covered in class. The clinical training portion of the nursing program was redeveloped to encompass case-based learning in order to coincide with, and to reinforce, the other educational aspects of the program. These developments have resulted in the preparation of nurses capable of undertaking the care of patients with competence in the various health care facilities and embodying the desire for continuing their professional development.

The Social System

The organizational hierarchy. The institutes of nursing in Abu Dhabi operate under the umbrella of the Ministry of Health. They are governed by a Board of Directors and chaired by the Undersecretary of Health. The board is comprised of senior officials in the Ministry of Health, Ministry of Finance and the Directors of the

Medical Directorate of each Emirate that has an Institute of Nursing. It is worthwhile noting that apart from the Director General of the Institutes, the only other nursing representative in the board is the director of the department of Nursing. The board is supposed to meet every three months as stipulated by the bylaws of the institutes of nursing but for various reasons the board met only twice in the past five years.

The board has the responsibility of approving policies and procedures regarding faculty and student recruitment and retention. It has also the responsibility of approving the annual budget and ensuring the smooth operation of the institutes of Nursing. The board maintained an inactive role during the management time of the American university of Beirut between 1982 and 1996. In 1996 the Ministry of Health terminated the contract with the American university of Beirut to allow the higher colleges of technology (National colleges run by the Minister of higher Education) to manage the institutes of nursing. The decision was revoked at the end of the year because the colleges accept only Emirati nationals and very few of them wanted to join Nursing.

At this time of turmoil and change, feelings of job insecurity prevailed among faculty members. The bylaws of the institutes were restructured and a new board with broader responsibility was appointed. The management of the institutes felt time was right to introduce change, in the absence of complete governance and the presence of serious issues related to the curriculum. Change was initiated with the approval of the undersecretary of health who approved the visits of the consultants and provided the necessary budget.

According to the present organizational chart at the institutes of nursing, the Director General of the institutes reports directly to the undersecretary of health regarding operational issues related to students and faculty (Appendix 1). The Director of Technical Affairs, Director of Curriculum Planning and Academic Affairs

and the Director of the Administrative Affairs report to the Director General of the institutes. All are stationed in the Abu Dhabi institute of nursing which also administers the other institutes. The Director of Technical Affairs supervises all issues in the branch institutes in accordance with their directors. The Director of curriculum planning and academic affairs supervises all academic and clinical issues in the institutes. Two professors who were seconded from the University of Natal occupied this position at the time of change. The position was vacant for three years between 2000 and 2003 during which time the academic coordinator became the sole person responsible for the orientation of novice faculty members and the authority in matters related to classroom facilitation in the case-based curriculum.

System norms. Norms are defined by as "the established behavior patterns for the members of a social system" (Rogers, 1995, p.26). The faculty members at the Institutes of Nursing come from Jordan, Lebanon and Egypt. They are heterophilous in terms of their socio-economic and educational background. On the other hand, they share similar cultural and traditional values because of their Arabic origin.

Role of opinion leaders and change agents. Opinion leadership is defined as "the degree to which an individual is able to influence other individual's attitudes or overt behavior informally in a desired way with relative frequency"(Rogers, 1995, p.27). The Director General initiated change through contacts with the University of Natal and the undersecretary of health. The Director General had served in the Institutes for 22 years. Before assuming the position of the director, the incumbent had been an academic coordinator for 14 years.

Types of innovation decision. Change in the Emirates was initiated by authority in response to a need expressed by faculty members. The change agent who facilitated the introduction of innovation was a consultant who conducted a

series of workshops over a year. The authority decision was followed by a collective decision when the consultant gave the faculty the opportunity to choose their curriculum. These observations are based on data obtained from the interviews as will be evident in the results section of this report.

The Process of Change at the Institutes of Nursing

Planning for change started in the academic year 1997 – 1998. A consultant from the University of Natal was contacted. Upon the request of the consultant, feasibility studies were conducted in each institute prior to her arrival. Upon her arrival, two workshops were held with the faculty members in addition to representatives from the service and the Department of nursing, in the Ministry of Health (a Department that sets strategies for the delivery of nursing services in the country). The objectives of the workshops were to explore the reasons for change in the health services and educational institutions and elaborate on the types of curricula and the teaching-learning experiences needed for each type. Faculty members chose the case-based curriculum and the macro curriculum was drafted. In December of the same year, a WHO consultant helped the faculty members in designing the conceptual framework. The fourth workshop was conducted by the University of Natal consultant towards the end of the academic year and focused on the basic principles of the case-based curriculum and its teaching strategies in the classroom and the clinical areas. The change involved the whole philosophy of the institutes and the curriculum changed from a traditional medical- oriented curriculum to a case-based one. (Uys, 1997).

In 1998 – 1999 another consultant from the University of Natal was seconded during her sabbatical leave to monitor the implementation phase. She was recruited as a curriculum consultant and focused on preparing and supporting faculty members and students. A series of educational preparatory workshops were

conducted for both parties paying special attention to classroom observation, and monitoring cases offered in level I and the preparation of cases for level II. At this time, the curriculum committee started functioning under the chair of this external consultant. The committee handled all issues that came from the academic departments that were reactivated at that time with wider terms of reference. In 2003, the curriculum committee was restructured to accommodate all the directors of the branches, a faculty representative and one elected support person from one of the branches.

In supporting the process of change, the consultant developed a teachers' guide on the facilitation and monitoring the implementation of the case-based curriculum. The guide tackled major concepts in a case-based curriculum, such as orienting new faculty members and dealing with faculty members' concerns during the implementation process. She suggested the appointment of a support person to be is elected by the faculty members and properly trained to observe classes and offer support. The support person in Abu Dhabi, was nominated in the consultant's presence but never assumed the role owing to the overwhelming responsibility she had in coordinating cases for maternal and child health for level I and level II. In the absence of this support person and the departure of the consultant, in Abu Dhabi, orientation of new faculty members and monitoring the implementation of the case-based curriculum through classroom observation became the responsibility of the academic coordinator who held a position of authority as she was also responsible for staff performance evaluation.

In the academic year 1999 – 2000 another professor was seconded from the same university for a period of six months. The major emphasis during this period was on the introduction of new methodologies in clinical evaluation and offering further support to faculty members and students. For the next two years, no further

support was sought. A new institute of nursing was opened in the year 2001 – 2002 in Ras Al Khaimah, and several new faculty members joined faculty at the Institutes of Nursing at the UAE. During this period, the effort of the faculty was mostly given to revision of cases and the evaluation process for all courses. Modifications in the foundation courses took place in 2002, namely the Introduction of fundamentals of nursing as a specific course in level I to solve the issue of skills' incompetence among students witnessed in Level II and introducing a didactic course in Preventive and Promotive Nursing in the first semester that has three sections, namely introduction to psychology and sociology, community Health and introduction to the nursing profession. The change in the courses took place because faculty felt that students needed to know about the nursing profession from the beginning. Introductory psychology and sociology were included to expose students to major principles that could allow them to grasp and understand the psychosocial effects on health. Community health is a revised course of the previously called Primary health care.

In the absence of an expert at the institutes, the Director General of the institutes became the chairperson of the curriculum committee. The academic departments were reestablished into six academic departments that included the adult nursing department, the maternal and child health department, the preventive-promotive nursing department, the mental health and career preparation department (includes research, management, professional issues), the general science department and the English department. Each department handled at least two courses. The Adult nursing Department for instance, included four courses, NCA101, NCA202, NCA301and high risk nursing. Each Department was constituted of all faculty members teaching the courses at the five institutes of nursing with a minimum of ten faculty members in each Department.

The role of the academic Departments was to follow on the performance of students, revise the evaluation scheme of each course and its teaching plan, and suggest modifications in the objectives and teaching methodology of the courses. Preparing and finalizing examinations became the responsibility of the departments instead of the academic coordinator as was done previously. The chairpersons of the academic departments were expected to report serious issues such as suggestions to replace cases or modify the evaluation scheme to the academic coordinator. The clinical issues were handled by the central clinical committee, which was constituted of the clinical coordinators of the five institutes of nursing.

The structure perpetuated the disintegration of the theoretical and clinical components of the courses. In May 2003 and based on feedback obtained from faculty members in the five braches of the institutes of nursing, concerning inability to discuss effectively or take decisions due to the size of the department, the curriculum committee decided to change the structure of the academic departments into subject departments. Subject departments were constituted of all faculty members teaching the theoretical and practical components of each course. Subject departments were chaired by course coordinators who became the sole representatives in front of the curriculum committee. This change was perceived positively by faculty members as emerged in the data obtained from the faculty members' interviews as will be evident in the results section of this report.

Nursing Regulation

Most regulatory initiatives give attention to the establishment of a regulatory body through a nursing practice act, the setting up of registration system as well as the development and monitoring of educational, practice, discipline and conduct standards (WHO-EMRO, 2002). Within the UAE, the only institution that embarked

on this complex road in a relatively comprehensive way was the Ministry of Health through the Federal Department of Nursing.

This Department was only established in February 29, 1992 (Ministerial Decree,1992) and also had a clear responsibility for service delivery at that time. According to Rifai and v.d. Merwe (2002), the Department established a registration system and a database of all nurses and midwives registering with the Department and prepared a draft Nursing Practice Act in collaboration with other stakeholders. The Department also developed a significant number of directional documents and initiatives to guide and develop nursing practice and nursing education in health care facilities. This nursing education related mostly to raising the standard of in service education and the establishment and monitoring of mandatory competencies for nurses.

Over the years, the members of the Institutes of Nursing and of the Department served in committees of one another, and both institutions were key role players in the negotiations to establish the first Nursing Degree program at Sharjah University, Sharjah, UAE. There is currently no official body to regulate nursing education per se, although the Ministry of Higher Education and Scientific Research accredits Universities and formal programs in the UAE according to generic standards as developed by the Ministry.

The Development of Nursing Education in Bahrain

Nursing education started in Bahrain in 1959 with the opening of the first School of Nursing. Students were accepted from the intermediate cycle (9 years of schooling) and study for 4 years to get a general nursing diploma equivalent to a high school nursing diploma.

In 1976, the nursing school became part of the College of Health Sciences and limited entry to high school students and started the Associate Degree program.

In the following years, one-year post basic programs were initiated in the college: The midwifery program was started in 1977, the psychiatric nursing program in 1982, community health nursing program in 1983, the cardiac care nursing program in 1994 and in 2001 the emergency nursing program began. A Bachelor of Nursing Degree bridging program was implemented in 1984. The major curriculum changes took place in 1981, through a UNICEF consultant who changed the curriculum to a competency-based curriculum. The curriculum stayed the same till 1997, although several minor changes were taking place on a yearly basis, affecting courses and teaching methodologies (Suwaileh, 2002).

The College of Health Sciences is the only institution in the country responsible for preparing nurses. It is funded and administered by the Ministry of Health. Over the past four decades the school has reformed its curriculum and moved from a content- oriented traditional medical model in the late seventies to a process- oriented case- based curriculum in the late nineties (Suwaileh, 2002).

Change started in the Nursing division of the College of Health Sciences in Bahrain in 1998. Planning for change was spearheaded by the nursing development committee (NDC), which initiated change in 1997. Between 1997 and 1998 several workshops were held with faculty members, nursing leaders and other service personnel. The workshops addressed the competencies of the nursing graduates, the conceptual framework of the proposed curriculum in addition to the macro and micro curriculum. In 1998, a consultant arrived and conducted orientation workshops with faculty members and prepared them for the change.

The revision of curricula taking place over the years has been partly due to the fact that Bahrain has always acted as a leader in nursing education in the Arab Gulf region. It is the only country that had its nursing division at the College of Health Sciences designated as a WHO collaborating center for nursing development. One

of its mandates as a WHO collaborating center is the development of nursing education in the region. It is worthwhile noting that the nursing division at the College of Health Sciences is also currently the regional nursing information database.

Several agents played a pivotal role in the development of nursing in general and nursing education in specifically in Bahrain. The directorate of training at the Ministry of Health played a major role in providing advanced training to Bahraini nurses outside the country by facilitating their studying abroad. A second agent was the establishment of the Bahrain Nursing Society in January 1991, and it became a member in the I.C.N in 1993. The society is represented in the Ministry of Health licensure committee and has provided several courses and workshops for nurses in the service. (Suwaileh, 2002). A third influence is the Nursing Development Committee (NDC), which has been instrumental in supporting change in nursing education.

The Social System

Organizational chart in Bahrain. Nursing faculty members at the College of Health Sciences in Bahrain in each level of academic study report to the level coordinators who report to the head of the nursing program, and then to the chairperson of the nursing division. The nursing division has seven heads namely the head of the bachelor degree program, the head of the associate degree program and five heads of the post basic specialty programs. The chairperson of the nursing division reports directly to the associate dean of the College of Health Sciences. The dean chairs the academic council, which has as its members; the associate dean and the chairpersons of nursing, integrated science and the allied health divisions. The dean also chairs the faculty council, which has as its members; the associate dean, the chairpersons and the heads of programs/ departments of the three divisions namely nursing, integrated science and allied health (Appendix 2).

Social norms. Faculty in Bahrain come from diverse geographical backgrounds, namely India, Egypt, Lebanon and Bahrain. The majority has been in Bahrain for more than 20 years teaching at the nursing division in the College of Health Sciences. They come from diverse cultural norms, with the majority being Indians and Bahrainis. They have heterophilous educational and socio-economic backgrounds.

Role of opinion leaders and change agents. The opinion leader at the Nursing division in the College of Health Sciences is the chairperson of nursing who is a Bahraini. She prepared for the change two years before its inception by conducting several workshops with the faculty, nursing leaders and the service personnel. She served at the college for 15 years before the introduction of change.

Type of innovation-decision: The chairperson of the nursing division at the College of Health Sciences initiated Change in Bahrain. Choice of case-based curriculum was an authority decision, which was made without consulting faculty members. These observations are based on data obtained from interviews as will be evident in the results section of this report.

Nursing Regulation

Bahrain is the first Gulf country, to commence nursing regulation, in 1977. An Amiri Decree (law) regulated the practice of nursing and midwifery, followed by the establishment of a midwifery council in 1978. A ministerial order in 1987 established the nursing and midwifery licensure and registration committee. The committee has made major strides in setting several regulatory mechanisms, such as the code of professional conduct for nursing, setting standards for practice, and putting forward guidelines for an automated registration and licensure system (Suwaileh, 2002). Other goals for the committee are to approve schools of nursing and helping nurses to practice safely (Al-Gasseer et al., 2003).

One of the major factors that played a critical role in the development of nursing is the establishment of the Nursing Development Committee (NDC.) in 1984. The committee has become a forum for nurse leaders from nursing services, education, human resource development and regulation to meet, discuss and recommend to the Minister of Health issues pertaining to education and service (Al Gasseer, 2003). Its terms of reference included the revision and assessment of the nursing education strategies in Bahrain and recommending actions that would aid in implementing new strategies, after getting the approval of the Minister of Health. The committee membership and terms of reference have been changed slightly over the years (Ministerial Decree, 1994).

The NDC has been instrumental in strengthening nursing and midwifery services in educational and health care facilities. The committee has also played a pivotal role in drafting legislative proposals covering the scope of nursing practice, working conditions (nursing cadre), and the health system (national health plan).

CHAPTER 4

METHODOLOGY

Design

This is a three-phase cross-national study. The illuminative approach to evaluation using a case study is used. The illuminative approach was used originally by Parlett and Hamilton (1972). According to Parlett and Hamilton the purpose of illuminative evaluation is to focus on the innovative program, "isolate its significant features, … and comprehend relationships between beliefs and practices and between organizational patterns and the responses of individuals" (1972, p.16). Parlett and Hamilton (1972) both believed that an illuminative approach helps in evaluating a program as a whole in its natural context. It is most appropriate in exploring, describing and understanding the process of an educational program and its performance rather than using it as a methodology for measuring outcomes.

The aim of illuminative approach is to understand the complex process studying the innovation in its context. It aims at explaining the advantages and disadvantages of the innovations from the perspective of teachers and pupils (Parlett & Hamilton, 1972). The four major pillars that underpin illuminative evaluation are (1) the importance of the wider context in which the educational program operates, (2) the relevance of the subjective view of individuals in the setting under study, (3) observing and documenting what happens in reality in the natural setting, (4) there is no absolute reality, there are different and multiple truths that need to be uncovered. "Illuminative evaluation places considerable emphasis on discovering what people view as the defining qualities of their setting … there is no one absolute and agreed upon 'reality' that has an objective 'truth'. Rather there are numerous different perspectives" (Parlett, 1981, p. 224).

Partlett (1981) further believed that the methodology is most appropriate in conducting small-scale educational research programs. "The basic emphasis of this approach is on interpreting... a variety of educational practices, participants' experiences, institutional procedures, and management problems.... The illuminative evaluator contributes to decision-making by providing information, comment, and analysis designed to increase knowledge and understanding of the programme under review" (p.219).

This approach was deemed appropriate for this study because it is believed that it has a potential to (a) clarify the sociocultural and political issues surrounding educational innovation in the countries being reviewed, (b) acknowledge the complexity of the learning milieu of educational institutions, (c) identify and clarify uncertainties surrounding particular innovations, (d) enhance dialogue among the stakeholders in an attempt to promote shared understanding of the objectives of an innovation, (e) clarify the processes of educational change in a nursing education context which impeded or facilitated the change process, (f) highlight the concerns of students and teachers undergoing change, (g) provide a detailed and comprehensive understanding of all issues surrounding the innovation, (h) concentrate on the process rather than the outcome of an innovation, and (i) acknowledge the uniqueness of each context and highlight its effects on the success or failure of the changes introduced. Hence, the researcher believes that the illuminative approach is the most appropriate approach for a study aimed mainly at uncovering the change process in nursing education institutions in two countries whose particular circumstances, although different, share a number of commonalities as well. In particular, the researcher chose the approach because it takes account of "the wider contexts in which educational programs function" (Parlett & Hamilton, 1972, p.8).

The case study design is chosen because it provides an in-depth holistic investigation of a single entity or multiple entities from the perspective of the participants, using multiple sources of data like documents, interviews, observation and self administered questionnaires. The focus is on describing, understanding and explaining the phenomenon under study (Tellis, 1997). To Yin (1994), the case study research method is an "empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used" (p.23). The emphasis is on exploring and probing the present event taking place in its real context, relying on multiple sources of evidence.

The present study investigated multiple case studies across multiple settings employing cross-case analyses which helped to highlight the key processes in each setting and focus on the common or different features of each case. The data collected in the case study is largely qualitative in nature, answering "why" and "how" rather than "what". It attempted to illuminate ignored processes that were not rigorously researched before, leading to an in-depth understanding and insight (Polit & Hungler, 1999). The data yielded from case studies was rich because of its multi-perspectival sources. It covered the process under study from the perspective of all participants and stakeholders associated with it (Tellis, 1997). Tools used to collect data included a variety of techniques, namely interviews, questionnaires and documentary analysis.

Sampling Method

Each of the two selected Arab Gulf countries constituted a case. Nursing education institutions were selected and included in the study on the basis of having implemented the defined change in nursing education in the last four years. Within each country, only those nursing education institutions whose educational change

affected more than administrative and governance change, and included curriculum change were examined. In UAE., the researcher randomly selected two institutes of the present five institutes (one of which was newly opened in September 2002 and did not experience the change), namely, Abu Dhabi and Sharjah Institutes of Nursing . The nursing division at the College of Health Sciences in Bahrain which introduced a case-based curriculum (CBC) was chosen as well. At the initial phase of the study, directors or heads of each nursing education institution were involved in the study. In addition, a theoretical purposive sample of each institution's faculty members with management responsibilities, tutors, students, and student counselors were selected for inclusion during this initial phase. A wide representation of faculty members and students were chosen, including new faculty members who had joined the educational institutions recently, faculty members who had been part of the innovation since its inception and students from all academic levels (first, second and third level). The faculty members were chosen according to a preset criterion i.e. those who witnessed the change, those who joined at a later time, new faculty members, and those who held senior administrative responsibilities. If available, counselors were included because they have easy access to students and can shed light on students' concerns about and perceptions of the innovation. Only one counselor in Abu Dhabi was chosen who holds dual responsibility i.e. counseling and teaching. All participating students in both the UAE and Bahrain were exposed to the traditional approach of teaching life sciences, fundamentals of nursing, research in nursing and nursing management. Case based curriculum was built around nursing care of adults, maternal and child health nursing and preventive and promotive nursing courses. Students were selected and interviewed from the three scholastic levels according to their academic standing, i.e. excellent, average and poor as shown by their academic performance.

Brief Description of Participants

UAE :   A purposive sampling of faculty was done.   In the initial phase of the study, a total of seventeen (17) faculty members were interviewed in the study; ten from Abu Dhabi Institute of Nursing and seven from Sharjah Institute of Nursing. The sample consisted of five (5) senior people in management, namely the Director of Sharjah Institute of Nursing, the Director of Technical Affairs, the Academic Coordinator and two Clinical Coordinators in addition to twelve (12) faculty members. Nineteen (19) students were selected from the three academic levels, namely, six from level one (DI), six from level two (DII), and seven from level three (DIII).

In the second phase of the study, all (n = 34) faculty members who taught the case-based curriculum in Abu Dhabi and Sharjah Institutes of Nursing were asked to participate. Twenty four faculty members (24) out of thirty two (32) faculty members agreed to participate in the study. Participating faculty members were given a self administered questionnaire, using data that evolved from the interviews conducted initially. The questionnaire contained fifty seven (57) items that addressed reasons for change, the facilitating and hindering factors in regard to innovation attributes, communication channels, time and the social system in addition to desirable, undesirable and unanticipated consequences. Twenty percent (20%) of the student population was selected randomly. The researcher used a list of students in each scholastic level. Students were numbered consequently per level and a table of random number was used to get the required sample size. A roster of sixty four (64) students was selected from the three academic levels DI, DII and DIII.   The students' questionnaire consisted of twenty six (26) questions that tackled four major categories: the positive and negative aspects of the case-based curriculum, and desirable and undesirable consequences. Both faculty members and students

completed the self administered questionnaire that had a 5 point Likert scale, ranging from strongly agree to not-applicable.

Bahrain: A purposive sampling of the faculty members was included in the initial phase of the study. A total of seventeen (17) interviews were conducted with the faculty members and senior managers. The sample consisted of three senior managers: the ex-chairperson of the program, the current chairperson and the coordinator of the program. In addition, thirteen (13) students were chosen and interviewed from the three academic levels based on their semester average, i.e., excellent, average and poor. Five students were from level one in the associate degree program (AD1), four from level two (AD2) and four (4) from level three (AD3). In the second phase of the study, thirty (30) of the faculty who taught the CBC were included out of thirty four faculty members. 25% of the student population was selected randomly using a numbered list of students in each level. The researcher selected the desired percentage using a simple random table namely forty six (46) students from level two and level three (the associate degree program closed last year and the school has currently only two levels two and three). Both faculty and students answered the self administered questionnaire that contained statements which evolved from the interviews. The statements were placed on a 5 point Likert scale ranging from strongly agree to not-applicable.

Data Collection

Illuminative evaluation is considered a general research strategy. The approach helps the evaluator to collect data from four areas: (a) observation, (b) interviews, (c) questions and tests and (d) documentary and background sources (Parlett & Dearden, 1977). The data gathered in this research focused mostly on interviews, questionnaires and documentary analysis. All interviews were recorded using a portable battery operated tape recorder supplied with a built in microphone.

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Phase 1. In the initial phase a number of sources of data was used, that is the Heads or Directors of Nursing education institutions, management team, tutors, students, student counselors and documents. Data collected at this stage laid the foundation for subsequent data collection. Participants were interviewed individually using interview schedules designed by the researcher.

Demographic data pertaining to number of years in teaching and position were also obtained from participants during the interview. The researcher conducted all interviews with the faculty members and students in Bahrain. In the UAE., to avoid bias, because the researcher is the Director General of the UAE nursing institutes, research assistants were used to collect data. All interviews were taped, after participants signed the consent form. Participants were given the right to choose a pseudonym before the beginning of the interview. The purpose of the study was explained to each participant prior to data collection. Each participant was given time to read the consent form before signing it (Appendix 3).

All interviews with the directors and faculty members were conducted in English (see Appendixes 4 & 5). The interview questions were semi-structured, and further questions were asked for clarification purposes. The interview questions focused on illuminating the diffusion and the consequence phases of the process of change. During the interview with faculty members, focus was on obtaining information regarding perceived facilitating and/or hindering factors of the innovation attributes, communication channels, the innovation-decision process and the social system. The consequences of innovation, and the effect of the educational innovation on the teaching-learning process and the culture of the educational institution were also the focus of the interviews. The length of the interview ranged for faculty members in UAE and Bahrain between 45 minutes to 1 hour/participant.

Students were given the option to choose either Arabic or English (Appendix 6). The interview questions with students centered on the perceptions of students regarding difficulties faced with the case-based curriculum and the positive and negative aspects of the case-based curriculum on the teaching-learning process. The consequences of the case-based curriculum on student-teacher interactions, student-students interactions and student assessment were explored in depth. The length of the interview for students in the UAE and Bahrain ranged between 15 to 25 minutes.

The researcher analyzed staff meetings and curriculum committee documents for all pertinent information that highlighted the process of change. Committee minutes and consultant reports, all served as a rich documentary historical evidence of the process of change. A checklist prepared by the researcher guided her and laid the foundation for gathering data (see Appendix 9). Document analysis helped to illuminate the progress of change and the difficulties encountered in its adoption. The data obtained from the documents gave the researcher a broader understanding of the events that took place during the negotiation for and implementation of change.

Phase 2. Survey type questions were used in this study during the second phase with the intention of validating findings. It is believed that data obtained during this phase illuminated further the process of change in these countries as well as enhanced the credibility of the results through triangulation of data collection techniques. The questionnaires were based on the data obtained from the initial phase to include both quantitative and qualitative questions in the form of open-ended questions that addressed, the evaluation of the innovation from the perspective of the participants (see Appendixes 7 & 8). The faculty members' questionnaire items were categorized into various subsections using the substantive

concepts of Rogers' theory. The major categories tackled the reasons for change, facilitating and hindering factors in the process of change, and consequences of change as perceived by faculty members focusing on innovation attributes, communication channels, time, social system and consequences of change. The questionnaires were mailed to students and faculty members in Bahrain. For the UAE participants, a research assistant administered questionnaires to faculty members and students.

Phase 3. This was the phase for developing the framework for educational change. This stage is a cross-case analysis examining the individual cases for similarities, differences as well as indicators of successful implementation. The aim at this stage was to make inferences regarding the process of change in nursing education in the Arab Gulf Region based on the data obtained from the cross-case analysis. All themes derived from phase one and validated through the cross-case analysis in phase two were analyzed for possible linkages and/or relational concepts so as to arrive at plausible inferences about the process of change in the Arab Gulf Region. The nature of leadership emerged as the central and/or major theme around which all planning, implementation and evaluation activities revolved. The major stakeholders, the cultural, societal and the political context of change emerged from faculty and students' interviews as important variables in the implementation of change in nursing education in the Arab Gulf Region.

Data Analysis

Bogdam and Biklen define qualitative data analysis as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (cited in Hoepfl, 1997, p.8). Hoepfl claimed further that qualitative researchers use inductive analysis, in that themes and categories emerge out of the

data. The role of the qualitative researcher is to develop an understanding and an interpretation of the whole, through categorizing themes into meaningful categories and then translating them into a meaningful model.

Before conducting interviews, the researcher developed an interview guide or a protocol for the transcription of data i.e., number of interviews, identification of participants, (Appendix 10). The transcript of each interview was read to gain an understanding of the whole situation, and then re-read again slowly to determine its significant features. All interviews were audio-taped and transcribed by the researcher. Translation of students' interviews was done by an English teacher and checked again with the original text by the researcher to maintain the sense of the original text. Each tape was at least listened to twice, once during transcription before typing and then later on to check the typed text with the data transcribed. All interviews were analyzed using the N-Vivo qualitative research program. At the beginning, all ideas were identified and coded under free nodes. Free nodes were then codified under the major categories identified mainly by Rogers' (1995) theory. Further categories emerged that attempted to highlight the wider context of change.

In the coding process, each significant feature of every interview was analyzed and formulated into a statement that expressed the implicit and explicit meanings of the statement. The new statements were validated by an expert to validate their interpretation (Asraf, 1996). All new statements were clustered together to formulate common themes which reflected the totality of the picture, a process called "open coding". After the themes emerged, they were organized into categories. The next stage of analysis involved re-examination of the categories and determining the similarities between them. The big picture, or the whole, started emerging at this stage. Finally, a general summary of the phenomenon was reached and validated by participants and expert colleagues. Two interviews were given to

an expert friend, to code independently. This was done to identify ambiguities and ensure validity (Willms & Johnson, 1993). Based on the feedback, additional categories were added. Focus group discussion with two experts available in the country was held at the end. The group looked at the management of categories and validation of suggestions was done. The presentation of the whole phenomenon was enriched with quoted illustrations that reflect the exact thoughts, concerns and feelings of the participants (Asraf, 1996; Hoepfl, 1997; v.d Merwe, 1998).

All through the process of data analysis, the researcher was analyzing and collecting data simultaneously. All field notes and reflective remarks were kept as raw data. In the second stage, SPSS version 11 was used to analyze the self administered questionnaire given to the faculty members and students in the UAE. and Bahrain. Cronbach alpha, Pearson's correlation coefficient, and T-tests were used to analyze the data. T-tests were used after conducting a Levene test for equality of variance between groups (UAE and Bahrain).

Academic Rigor

The major criticism against case studies is their lack of generalizability especially when single cases are employed. Threat to validity and reliability are often cited in literature. To overcome the threat, triangulation of data, investigators and methodologies is usually employed (Tellis, 1997). In qualitative research, attention is paid to the uniqueness of human experience and situations and truth is considered as relative. The researcher here paid special attention to credibility, dependability, confirmability and transferability. These strategies are intended to control bias and increase the truth value of the research. In quantitative research, special attention was paid by the researcher to the instrument utilized in collecting data, to ensure its reliability and validity (Polit & Hungler, 1999).

In all research, whether qualitative or quantitative, the researcher needs to pay special attention to validity and reliability. Before attempting to analyze data, the researcher recorded her own feelings, impressions, thoughts or insights that might introduce bias, a process often called "Bracketing" (v. d. Merwe, 1998). Bracketing helps to decrease and control bias by recording what one thinks one already knows or feels about the phenomenon under exploration and then setting it aside. McKenna (1997) considers bracketing as a "way of making the transition from our normal way of considering consciousness and the world to the properly phenomenological way of considering them" (cited in Holroyd, 2001. p.5). This was an essential process for the current study. In this study, the researcher examined herself in terms of age, ethnicity, religion, experience with nursing education, knowledge and expectations of the innovations and ways in which all these characteristics might bias the researcher in interviewing. All feelings and attitudes related to nursing innovation, in addition to assumptions and expectations of the particular innovations were written down before the research started, during data collection, and finally in analyzing the data (Holroyd, 2001). The biases and influences of the researcher's experience in the field were acknowledged and have been addressed in the limitation of the study in this chapter. An example of the researcher's attempt to write on feelings and attitudes are presented in Appendix 11.

The researcher paid special attention to credibility, which corresponds in qualitative research to internal validity, transferability, corresponding to external validity, dependability or reliability and confirmability or objectivity. Credibility refers to the "extent to which the findings accurately describe reality" (Hoepfl, 1997, p.12). Triangulation, peer debriefing, member checks, bracketing and using the words of the participants themselves, were used to enhance credibility.

Triangulation in qualitative research is achieved through data triangulation, method triangulation, investigator triangulation and theory triangulation (in this study, theory triangulation was not used). Data triangulation refers to time, person and space triangulation. Time involves collecting data at different points in time, and space triangulation denotes the collection of data at different sties. Both types of triangulations were used by the researcher who attempted to collect data and validate it at the two different sites and different points in time (Polit & Hungler, 1999).

Method triangulation consists of using more than one method. The researcher in this study used multiple sources and perspectives, namely interviews, analysis of documents and questionnaires. Using hybrid methods enriched the quantitative and qualitative data and led to an in-depth understanding of the process of change. Finally, investigator triangulation involves the use of more than one researcher in the analysis of data. The researcher sought the help of an expert in the transcription and analysis of interview data (Polit & Hungler, 1999).

To increase credibility, two additional external checks were employed by the researcher, peer debriefing and member checks. In peer debriefing, sessions were held with an expert to explore and review the various aspects of the inquiry. Member checks, on the other hand, involves validation of data through corroborating findings by the participants. The checks were carried out on an ongoing basis as data was collected or at the end after data had been collected and analyzed (Polit & Hungler, 1999). In this particular study, a questionnaire was administered at the end to all faculty members teaching case-based courses, and a random sample of students, to validate findings.

Finally, the purposive sampling followed up in the study enriched the data through offering possible contradictory accounts of events, and strengthened the

comprehensive description of reality. Throughout the research, the researcher attempted to record and analyze the feelings and thoughts of participants by using their own words and quoting them, thus adding to credibility (v.d. Merwe, 1998).

Transferability or generalizability refers to the "ability to generalize findings across different settings" (Hoepfl, 1997, p.12). Generalizability is very difficult to attain in qualitative research, since each context is unique by itself. The researcher attempted to describe and elaborate on the research context under study rather than seeking generalizations.

Dependability refers to reliability or replicability in conventional quantitative research. Lincoln and Guba (1985) claim that "since there can be no validity without reliability, a demonstration of the former is sufficient to establish the latter" (p.316). To increase dependability, the researcher attempted to use an "inquiry audit" which refers to the auditing of data throughout the process of data collection and analysis by an external expert.

Confirmability refers to objectivity. Lincoln and Guba (1985) emphasize the neutrality in research through the "inquiry audit" or trail which controls potential bias. Auditing takes care of raw data, its analysis, synthesis in addition to personal and reflective notes of the researcher herself. Siegle claimed that "An adequate trail should be left to enable the auditor to determine if the conclusions, interpretations and recommendations can be traced to their sources and if they are supported by the inquiry" (cited in Russell, 1999, p.3). Siegel also identified six areas that need to be given special attention in ensuring an adequate audit trail.

In this particular study, an expert colleague was involved in auditing these six areas : (a) raw data, in terms of all recorded interviews, results of questionnaires and the original documents, (b) analysis of data related to summaries written by the researcher, theoretical and personal notes related to hunches and working

hypotheses, (c) process notes related to notes from member check sessions, (d) material related to personal notes, expectations and intentions, (e) instrument development information related to all pilot forms, and preliminary schedules, interview form protocol and the questionnaire, (f) data reconstruction and synthesis product, referring to findings, conclusion and to the draft of the final report. All the steps mentioned above were sought by the researcher to make the research worthwhile and to manifest the unique experience of the participants in a context of change in nursing education.

Reliability of the self administered questionnaire was achieved by the researcher through utilizing Cronbach alpha to determine the internal consistency between the sub- items of each category. Content validity was ensured by giving the questionnaire to different colleagues to ensure that the questionnaire was really measuring what it was meant to measure. The following is the Cronbach alpha of all categories for both the faculty members and students in UAE and Bahrain.

Table 1. Cronbach Alpha for Faculty's Questionnaire in the UAE and Bahrain

Variables	UAE	Bahrain
Reason for change	0.86	0.74
Facilitating Factors: Innovation attributes	0.82	0.89
Communication Channels	0.88	0.85
Time	0.89	0.81
Social system	0.82	0.90
Hindering Factors: Innovation attributes	0.25	0.49
Time	0.82	0.88
Social system	0.83	0.87
Consequences: Desirable	0.70	0.78
Undesirable	0.77	0.55
Unanticipated	0.45 (excluding the item on regression of students over the years, it becomes 61%)	0.85

Table 2: Cronbach Alpha for Students' Questionnaire in the UAE and Bahrain

Variables	UAE	Bahrain
Positive aspects of case-based curriculum	0.78	0.84
Negative aspects of case-based curriculum	0.71	0.60
Desirable consequences of case-based curriculum	0.81	0.87
Undesirable consequences of case-based curriculum	0.56	0.23(excluding the item on exams being centered on the book it becomes 0.57)

Ethical Considerations

Permission for the collection of data from Bahrain was secured from the Director of Training in the Ministry of Health. At the Institutes of Nursing in the UAE., permission was obtained from the Undersecretary of Health (Appendixes 12 & 13).

The major ethical principles and rights of participants (Polit & Hungler, 1999) were adhered to in the study. Participation in the study was voluntary. Students, faculty, senior administrators and other participants were given the freedom to participate and withdraw at any point in time with no pressure exerted on them. Before any contact with the researcher, informed consent was obtained. All participants were informed in detail about the aim of the research, data collection methods, participant selection, the prolonged involvement and how the findings would be reported, in addition to giving them the right to withdraw any time during or after interviews, assuring them all the time of confidentiality. Debriefing sessions and counseling sessions were held with the interviewees to support them at the end of the interview due to their emotional involvement with the innovation.

Confidentiality was adhered to at all times. During the interviews all possible steps were taken to protect the privacy and identity of students and faculty through assigning false names to them to disguise their identity. Information released by participants was not publicly released in any manner that could expose the real identity of participants. To protect confidentiality further, access to tapes, and other data was restricted to those closely involved in the study and such material was destroyed as quickly as possible. Furthermore, pledges of confidentiality were signed by all research personnel and colleagues who dealt with data.

Limitations of the Study

1. The small non-random purposeful case sampling selected in the qualitative aspect of study may pose threats to generalizability and reliability. Unlike quantitative research, which stresses representation of the sample and generalizability, qualitative research focuses on the lived in-depth experiences of participants, with the guiding principle of data saturation of the phenomenon under study.

2. Lack of control of the variables under study may endanger the scientific approach and objectivity which is strictly adhered to in quantitative research, threatening validity and introducing bias. Qualitative research however focuses on illumination and understanding the phenomenon under study from the perspective of the participants.

3. The close relationship that develops between the researcher and the participants may threaten internal validity and introduce bias. To reduce its effect, the researcher attempted to analyze, examine and record her own feelings and perceptions of the phenomenon under study before and during the process of data collection and analysis.

4. Reluctance of some members of the purposive sample to participate may affect the results. Attempts were made by the researcher to saturate the data through sampling other members of similar characteristics.

5. The possible inappropriate and positive feedback from the participants of the UAE Institutes of Nursing who might try to impress the researcher who happens to be the Director of the Institutes may lead to distortion of data. Recruitment of research assistants to collect data in the Institutes of Nursing helped to decrease the effect of this variable. However the same research assistants might introduce bias. Measures were taken to train the research assistants in interviews in order to decrease subjectivity.

6. Study participants at all sites might attempt to influence and change data. Participants might want either to show that the change was positive or might be against it completely due to the requirement and change it imposed on them. The researcher tried to put the participants at ease and stress the importance of the study, showing that the aim was not evaluation but understanding the phenomenon under study.

7. The study was time-consuming in terms of the collection and analysis of data in addition to the uncertainty that clouds most of qualitative research.

8. Service personnel were not included in the study due to the difficulty of accessing them in Bahrain.

CHAPTER 5

RESULTS

Introduction

This chapter presents the results of the data obtained in the first phase of the study from interviews, and documentary analysis. The presentation of results is organized under the subheadings which were used in the case study protocol presented in Appendix 10 which includes the country, type of innovation, year of inception, demographic characteristics of participants, reasons for change, the nature of innovation i.e. its attributes, communication channels, time, social system, and consequences of the innovation for the teachers and the learners. It also presents the results of the second phase of the study, which focuses on the self administered questionnaire delivered to faculty and students in the UAE and Bahrain.

Country: United Arab Emirates

Type of Innovation

Change at the Institutes of Nursing in the United Arab Emirates came with the introduction of a case-based curriculum (CBC) following years of a traditional content-and lecture-based curriculum.

Year of Inception

The CBC was initiated in 1997 at the Institutes of Nursing. The Institutes at that time were for the first time secure after 2 years of turmoil. In 1995, the contract of the Ministry of Health with the American University of Beirut was ended, and the second disruption was caused by discontinuing the proposed management of the

Institutes by the Higher Colleges of Technology which lasted for only one year, in 1996. Planning for change started in the institutes in 1997 and the new programme was implemented in 1998.

Demographic Characteristics of Participants

A total of seventeen faculty members participated in the study. Ten were from the Abu Dhabi Institute of Nursing and seven from the Sharjah Institute of Nursing. The sample had five senior people in management, namely the Director of Sharjah Institute of Nursing, the Assistant Director for Technical Affairs, the Academic Coordinator and two Clinical Coordinators. Of the remaining twelve faculty members interviewed, one Counselor was included in the study and had a dual responsibility in teaching and counseling. Of the seventeen faculty members interviewed, five joined the Institutes of Nursing after the implementation of the change. Forty one percent (41%) of the faculty members interviewed had 6-10 years of teaching experience, 25% of the faculty had 1-5 years of teaching experience, 25% had more than 15 years of teaching experience and 9% had less than 5 years experience. Nineteen students were also selected from the three academic levels based on their semester averages, that is excellent, average and poor. Six students were from DI, Six from DII, and seven from DIII.

Reasons for Change

A number of reasons for change from a traditional curriculum to a case-based curriculum were identified by the interviewees (managers and faculty). For the most part, data obtained from interviews with managers and faculty revealed that educational, political, social and contextual factors were responsible for the need for change in the Institutes of Nursing in the UAE.

Educational factors. Educational reasons for change dominated as the most common reason for change. Themes emerging from the data on educational reasons

for change were (a) faculty and management dissatisfaction with the old curriculum, and (b) a better calibre of students joining the Nursing Institutes. Faculty and management dissatisfaction with the old curriculum emerged as the dominant theme as a reason for change from the traditional to the case-based curriculum in the UAE. Graduates' inability to correlate theory with practice, their inability to deal with the dynamics of the clinical learning environment and content overload were the most frequently mentioned reasons for change. For some of the faculty, the old curriculum yielded students accustomed to performing tasks and unable to adapt to change around them. Their concerns were evident in the following quotes:

> *"We all felt that the old curriculum wasn't getting us where we wanted to get ... we were complaining that, we gave our students so much content yet at the end, wherever you asked them a simple question, they knew nothing about it".*

> *"Our students were set to do things in certain ways and could not manage when there was change around them".*

Yet, another faculty member was concerned with the students' lack of ability to bridge theory and practice. She claimed:

> *"We were giving long hours of teaching, and students were still going to the clinical areas as if they didn't know anything, there is something wrong".*

Perhaps the following statement from one of the interviewees captures the essence of educational reasons for change from the old curriculum to the case-based curriculum in the UAE. Mrs. N, a senior manager, claimed that:

"Everybody was dissatisfied. The faculty members hated the old medical oriented curriculum that was a set of disconnected systems, faculty was not able to finish content within the assigned time. Students complained of the massive content and were not motivated. Service personnel complained of our students' lack of initiative and inability to adapt to new situations".

Furthermore, it would seem that the move to increase admission requirements from 50 and 58% to 60 and 65% in scientific and literal streams respectively was also regarded as having created an opportune moment to change to a teaching/learning programme that would facilitate students' ability to think critically. A senior manager reflected this belief by saying:

"Better students were coming to the Institutes, which convinced us of the need to choose a method which would make the students think and analyze instead of just memorizing information".

Political and social factors. Interviewees cited a number of political and social factors as pressure to change in nursing education in the UAE. These were ongoing changes in the health care system, change in governance of the Institutes and the nursing services' dissatisfaction with the clinical competence of the graduates of the Institutes.

According to the interviewees changes were taking place in the health care domain on a daily basis. There was a general view that no content could ever keep

up with the vast changes that were taking place in the health sector. A senior manager stated:

> *" We tried hard over 16 years to increase content and to keep up with changes in the health sector by introducing different courses, but the result was still the same, students were not able to keep up with the advances in the health care sector. Furthermore, the nursing directors were complaining that our graduates lacked the initiative to read about the new surgical and medical management of diseases".*

Change in institutional governance resulting from the departure of the American University of Beirut and the higher colleges of technology led to low staff morale with several people resigning because of insecurity and helplessness. One of the senior managers mentioned that:

> *"Faculty were frustrated, and had very low self esteem. They were not sure if they could succeed on their own or not. Introducing change at that critical moment aimed, among other things at raising staff morale by making them confident of their ability to introduce change and succeed in it without the presence of an outside party".*

Nature of Change in the UAE.

Results on the nature of change are presented, using the categories that emanated from the questionnaire. These include facilitating and hindering factors as major categories. Substantive concepts of Roger's Change Model are used to

interpret the interviewees' responses. Consequently, this section of the report presents both facilitating and hindering factors with regard to (a) the innovation attributes, (b) communication channels, (c) time (d) the social system and (e) consequences of the innovation.

Facilitating factors in the process of change.

A number of factors related to changing from a traditional to a case-based curriculum were perceived as having facilitated the change process in the UAE. The facilitating factors were mainly the attributes of innovation (namely relative advantage), the communication channels, time (especially as this relates to the decision-making process) and the social system.

With regard to **attributes of innovation**, faculty members perceived the major attributes of case-based learning to be related to its relative advantage compared to a conventional nursing programme. Themes emerging from the faculty data regarding their perception of the advantages of the case based curriculum over the traditional one were related to its ability to (a) create a lively atmosphere in the class, (b) train students to be critical thinkers, (c) help students to retain information, (d) allow students to relate theory to practice, and (e) help tutors to improve their teaching methodologies. The following statements extracted from the transcribed data are representative of such responses.

> *"It is a very lively scene; the students are not getting bored, sitting and feeling drowsy".*

> *"The students are more critical thinkers, they are more self-directed, they go and they search for information from different sources, they are more confident and they can*

present themselves, express themselves in a much better way, plus they can analyze and interpret different types of information much easily".

"The students prepare their tasks at home and they get the time to discuss and exchange ideas and debate the concept in the class room, and when they go out of the class, I am sure, it will be stuck in their brains". [s.i.c]

"They are applying the information to a case which makes it easy for them when they go to the clinical areas".

"In the traditional curriculum,, the theory was in one valley, and the practice was in another valley, completely apart, now, there is coherence between the theory and the practice".

"Nowadays, you see students demand that you improve your teaching qualities, and give them a chance to express themselves in the classroom".

An important factor of advantage is related to the satisfaction of people with it. Themes emerging from the perceptions of faculty members regarding the meaning of CBC reflected their satisfaction with the method and its positive impact on them as teachers and on students. The following examples illustrate the satisfaction of faculty members with the case based curriculum:

"It is a way of life, something learned, you apply it here, there and everywhere. It is a special way of communication, thinking, behavior ... you feel you are dealing, adult to adult. You are not dictating things, you are dealing with students as adults ... It was very nice for me, it helped me a lot in my career".

"It is a much more positive experience, and I am very proud of that".

"... It empowers the students in many aspects ... It encourages the teachers also to implement various teaching methods ... It is adult learning".

"I can't do without it now; it is a change that has been created in me as an educator".

Students also perceived the case-based curriculum to be more advantageous than the traditional curriculum. According to them, the main facilitating attributes of the new curriculum were its ability to help them: (a) develop cooperative learning and participation skills, (b) bridge theory and practice through the cases, (c) build skills in presentation, and (d) improve proficiency in the English language. Their positive experiences with the case- based curriculum were expressed in the following quotes:

"We...cooperate. Each participant understands how the other thinks and responds to the idea. In the CBC, we sit together and everyone shares the idea with others".

"There is participation, more than one point of view. One can see part of the topic and another sees the other. This will give you a panoramic view point".

"The case based program is better ... The information is passed to students in such a way that the student can see the case "theory" to study and at the same time the real case in the clinical area , so CBC makes a connection between the two". [s.i.c]

"There is a style for presentation, and in the presentation, one's own language is important and the confidence increases".

For students, for whom English was a second language, being presented with an opportunity to discuss the cases in their own language during small group discussions while being expected to communicate their ideas in English during whole class presentations, enhanced both understanding of what was taught as well as developing their English language proficiency.

"It will help the student to know English well ... to stand in front of the students when she is sure her language is clear".

With regard to **communication channels**, interpersonal communication mainly amongst peers was seen as a facilitating factor among the faculty. This was voiced by a number of participants who felt that being able to share ideas and/or experiences with colleagues facilitated their involvement and participation in the change process. Communication with colleagues took place through various modes such as face to face in each others' offices, telephonically as well as through constructive feedback during simulated practice workshops. The following excerpts refer to modes of communication:

> *"If I have any concern, I can ask any of my colleagues who have more experience in the CBC".*

> *"I go ... to my colleagues in the office, I said so and so happened with me ... if it happened with you what will you do".*

> *"We do lots of it ... on the phone, share ideas. The consultation with others is always a source of richness and we share new ideas like brain storming".*

> *"We go for advice, sometimes from our colleagues, sometimes from some other institutes".*

The value of simulated practice in front of peers emerged as a dominant theme emerging from the data on communication channels as a facilitating factor in the change process. The simulated practice on facilitating learning in case-based learning (CBL) groups helped faculty try out the innovation in a non-threatening

atmosphere. Getting constructive feedback from one's colleagues seemed to have facilitated adoption for many faculty members in the UAE. An interviewee commented on the process of demonstration and role play by saying:

"We demonstrated in front of our peers, ... and they responded to us as if they were students, and we had feedback from them. I found that very helpful and very constructive because we were exposed in a non-threatening situation, with no students ... you are going to make errors and yet nobody is going to judge".

Time emerged as another element of the change process which facilitated adoption in the UAE, specifically, the innovation decision process. Although change in the Emirates was initiated by authority in response to a need expressed by faculty, the faculty made a collective decision in the choice of the case based curriculum. With regard to time and the **innovation decision process**, perceptions of faculty members concerning the process of introducing the case-based curriculum differed, depending on the time at which they joined the institutes of nursing. Staff who participated during the introduction phase had a very positive outlook towards the activities leading to innovation adoption. According to them, participating in pre-adoption and pre-implementation workshops helped them understand the innovation as well as what was expected of them. They all confirmed their choice of the case-based curriculum. Themes emerging from staff's perceptions regarding the introduction of change in nursing education in the UAE were mainly (a) the significance of having external consultants, (b) availability of reading materials, and (c) staff involvement from programme inception to implementation. They also

commented favorably on the fact that several parties were involved with them, namely representatives from the clinical areas, and that the faculty members played the major role in drafting the curriculum. The following are excerpts from the interviewees' perceptions about the innovation decision making process, that is, involvement in activities that help the individual decide to adopt or reject the innovation.

"We attended many workshops on the curriculum, the curriculum structure, the philosophy, from zero we started"

"In addition to the usefulness of participating in workshops, and the presence of a curriculum consultant during the implementation stage, the literature review and articles sent beforehand to prepare the faculty members were perceived as a big advantage".

"We sat together, and worked it out, then we designed the macroplan of the curriculum gradually and we agreed ... on what the courses would be, the sequence of content in the courses and then gradually prepared the cases and the following year we started the new curriculum".

Documents were found by the researcher which address the issue of educational workshops delivered to faculty and students. These included the executive summaries by the external consultants, a circular and curriculum committee minutes.

One of the external consultants' (Uys, 1997) executive summary highlighted a series of three workshops delivered to the faculty members and the positive impact on them, along with her suggestions to improve library resources.

A circular issued on December 12, 1999, announced that the following workshops would be delivered by an external consultant (a) evaluation in a case-based curriculum, by the external consultant, (b) the teacher's role in a case-based curriculum, and (c) the learners' role in a case-based curriculum.

The curriculum committee meeting minutes of 31st January1998 cited several workshops delivered to faculty and students by the external consultant, including one on cooperative and learning strategies to DI students, and one on how to achieve student to student discourse, to faculty members. In addition to the above, faculty members were informed and trained by the external consultant to perform telephone conferencing prior to teaching cases across all institutes where concerns and proper strategies of delivering cases were shared.

One aspect of **the social system**, specifically the interaction between the staff and the external change agent was also seen as a facilitating factor. Faculty members who attended the change process from the beginning felt secure in the presence of an expert. They expressed this by stating:

> *"She (the external consultant) attended with us many times*
> *... She was very good and she gave us many comments ...*
> *until we felt that we could follow the process safely".*

> *"She told us about our weak points and our strengths and*
> *we started to work on the weak points".*

Documents emanating from a curriculum committee meeting held in September 1998 corroborated the interview results. During this meeting, the purpose

and principles of classroom observation were outlined. Emphasis was placed on the fact that the purpose of classroom observation would be for classroom improvement rather than performance appraisal.

Hindering factors in the process of change.

Not all factors were perceived by faculty members as having facilitated the process of change. Faculty members cited many factors that they perceived as a hindrance to the process of change at the Institutes. The hindering factors were related to the attributes of the innovation (namely complexity and incompatibility) time (related to the implementation of change) and the social system.

The major hindering attribute of case-based learning, according to the faculty's perception, was its complexity. The following excerpts from faculty members illustrate this point:

> *"It (case-based learning) is more difficult because you have to prepare and have also to manage the classroom and to make sure that every student is active ... and is preparing well and also sharing or participating in the discussion".*

> *"CBC is more complex ... It involves guided discussion and questioning ... and then making sure the students are really working on the tasks ... I find it more difficult than the traditional method".*

> *"CBC involves methodologies to be used. There are more expectations from the tutor ... and more expectations from the students ... We had many obstacles to deal with".*

Incompatibility of the teaching/learning process entailed in CBL with the students' social and educational background as well as the teachers' previous experiences as teachers was the most commonly cited hindering attribute of the innovation. The traditional educational background of the students and teachers as well as the cultural norms with regard to what is expected of the students by their parents and society were seen to be incompatible with some of the expected student behavior in CBL. The following are some of the expressed perceptions regarding the hindering features of CBL:

> *"The majority of our faculty members are from Jordan ... Whenever we get teachers from countries (Jordan) where knowledge content is something which is fixed, does not change and is not questionable, the teachers hinder the case-based process ... this is the culture of our people".*

> *"Some teachers are not used to having students talk in the classroom".*

> *"They (the students) have these big problems, the weaknesses with the language and their life style and the way they were brought up. You can see the way they were taught – all through their previous academic life until they reached here".*

"They (the students) are not used to looking up things, and to go on their own and look for information. They are not outspoken, by character and the way they are raised".

"They (the students) are not allowed to communicate with our people, they are not allowed to talk with their friends by telephone ... These things will affect the personality of the students ... their way of communication, ... the self confidence of the students".

A senior manager captured the essence of the incompatibility of CBL with the social upbringing of the students by stating:

"Students are raised in a very protective manner, at home; they are not allowed to question any decisions regarding them. In school, they are not asked to think about what is given to them as information, so they reproduce the information ... They are not outspoken ... The cultural factors are against the application (of CBL), and a girl who questions even in our school is considered rude".

According to one of the students, incompatibility of the teaching and learning process in CBL with some of the students' learning styles and personalities was seen as favouring a certain type of student, while placing others at a disadvantage.

"I think it is a bit unfair because some students are courageous and they like speaking out ... Other students are shy by nature and they keep silent all the time ... They feel they can't convince the others of their points".

In regard to the innovation decision process (the implementation stage), themes emerging from the faculty members' perception of the hindering factors were mainly related to (a) inadequate management of classroom sessions, (b) lack of clarity on the part of the faculty members with regard to their role in the classroom and clinical areas, and (c) language barriers.

Inadequate classroom management, which could be attributed to lack of clarity on the part of the faculty as to their roles in the classroom, was rivaled only by incompatibility as one of the most hindering aspects of CBL. The following exemplars illustrate these perceptions:

> *"Some teachers think that the tasks are things that have specific answers, that they are not debatable. Instead of coming with information ... the teacher keeps on asking the same question several times to several students expecting the students to get the answer in her head rather than analyzing the task and getting to an answer that is logical, and then judging whether it is acceptable or not".*

> *"The answer is always go and look for information and the person can not go in the clinical setting ... It is not always possible to go and look for the answer so, I believe CBL it is deflating the students and it is deflating their eagerness".*

> *"We are not supposed to say two full sentences in the classroom. We are not supposed to talk and they(tutors)*

feel as if they are committing a crime if they explain. I think
that this is wrong".

"They (tutors) prepare the knowledge, but not the process
of how to get the students to get the knowledge".

That the students' first language was not English was also perceived as a
hindering factor for facilitating active learning, where the expectation is that students
should feel free to ask questions, discuss issues or just share what they have
learned with others. Furthermore, this seemed to have affected students' learning
outside the classroom.

"One of the most important thing that should be considered
which is the nature of our students. Inside the classroom,
you will find that one third of the classroom are prepared
enough ... the remaining students will not be well prepared
for the discussion inside the classroom and this makes it
very difficult ... to start a discussion inside the classroom".

"They want to learn, they want to know, they want to
discuss issues, they want to participate, but they are really
stuck with the language barrier".

"Their English is so weak"

The main category emanating from the data on perceptions of students
concerning the obstacles they faced in the case-based curriculum centered on its

complexity as a teaching/learning approach, especially as this related to the students' English background, which hindered their preparation, participation and writing assignments. Themes emerging from students' perceptions on hindering factors were related to (a) language barrier, (b) difficulty and lack of clarity of some tasks in the cases, (c) long time spent on preparing case, and (d) presentation in front of colleagues. The excerpts from students' perceptions illustrate the difficulties faced by students in the case-based curriculum:

> *"The ... difficulty was our grasp of the English language, which we had to improve".*

> *"The most difficult problem I faced when we started was the English language".*

The amount of time spent preparing for a class, as well as perceived rigidity in the manner in which students were expected to prepare for class were perceived by the students as hindering factors in the implementation process. It seemed that these factors made it difficult for students to learn at the pace that was expected of them and added to the perceptions that the CBL was more complex than the traditional approach to teaching and learning. In students' own words:

> *"The method of preparation they ask us for is affecting us. It's wasting our time... Why do we have to prepare and write the answers to the tasks on the note book ... It takes time to write". [s.i.c]*

> *"It took a lot of time, a lot, a lot. We prepare for a whole day and write, I might spend the whole day writing ... I don't*

have time to review the subject and concentrate. Time is
wasted on reading and writing".

Students like faculty, perceived inadequate management of the classroom session to be one of the hindering factors in the implementation process. These perceptions seemed to be especially related to failure to afford time for synthesis and clarification in the case of differences in information and/or issues presented by the students. For them, this often led to confusion and frustration.

"At the beginning there were vague questions, we didn't
understand either the questions or the answers. In other
situations we had questions that could have more than one
answer".

"The problem is that when the students read the content at
home, they understand it differently. When they come to
the class to explain it, every student explains it in her own
way. Maybe it is wrong, so she passes the idea on to other
girls in a wrong way ... Even if somebody notices that there
is something wrong, the first idea will stick in our mind, so
there will be confusion .... The information will not be
passed on correctly because they themselves don't
understand".

"What is happening ... is that the presenter in the group is
preparing everything for her group, so, the other girls are

not involved in the activity despite of the tutor's instructions to involve all members of the group".

An aspect of the social system which hindered the process of change was communication with the senior people who evaluate faculty members' performance. This was voiced by several faculty members who described their evaluators as inflexible and lacking in knowledge and expertise. The following excerpt illustrates the point:

"Only one person told me how to act inside the classroom, but I am not sure if that person was performing in the ideal way ... We should get someone who is more professional ... and has the proper literature that will tell us how to perform in the classroom".

A senior manager captured the essence of the problem by stating:

"If I am somebody who believes in certain ways of applying the case- based curriculum, and I have power in the school, ... my mistake can be perpetuated all over the school ... We have to work on people in control in the school, then on the teachers, then on the students, I am talking about the head of school who evaluates teachers, academic and clinical coordinators".

Consequences

Faculty members perceived the innovation to have desirable and undesirable consequences in addition to unanticipated consequences that were witnessed at a later stage. Themes emerging from the faculty members' perceptions regarding

desirable consequences of the case based curriculum were mainly (a) enhanced student-student interaction, (b) strengthened student-teacher relationship, (c) improved teaching-learning process even in didactic courses, (d) diversified students' assessments, (e) empowered faculty's decision- making through academic departments, and (f) students developed as self learners.

The following excerpts from the faculty's perceptions regarding desirable consequences highlight this:

"It is enhancing the teamwork, and the group work and the group process".

"We are not any more the policeman in the classroom, we are their tutors, and we are creating a relaxing atmosphere, a warm atmosphere".

"The teaching-learning process has improved and has been modified a lot, even in traditional courses under the effect of the case- based curriculum".

"Each and every student has to interact, and has to present a case at a certain point of time, so you have a better assessment of all the class".

"I am very happy with the assessment in CBL ... Now the students are able to stand up ... and discuss things ... and they can write assignments".

"It (referring to decision making) is based more than before on the tutors, so, it is less centralized ... We now have a voice and our suggestions can be heard in the curriculum committee".

The curriculum committee minutes for 2003 revealed announcement of subject departments and expanding the responsibilities of the course coordinator in addition to representing the subject committee in the curriculum committee.

In regard to the desirable consequences of change from the students' perspective, the majority of students perceived its positive effect on the culture of the institution. Themes that emerged from students' perception of the desirable consequences focused on its effect on student-student interaction, student-teacher interaction, assessment and the teaching-learning process. This is clearly illustrated in the following quotes from the students :

"I myself am a member of a group with girls I didn't use to speak to during the break or even studying. When we started CBL I had to deal with them so now every student knows the others ... This change made us closer to each other".

"It's great; each student does her own way. Each one wants to express her own opinion and speak ... We speak more than the tutor does ... We analyze and search".

"In the lecture-based system we used to listen but now we explain and discuss things ... if I have a point which is different from the teacher's, I tell her frankly".

"It evaluates the student in a good way ... the evaluation depends on how much the student studied, prepared and discussed with the teacher, the evaluation is excellent".

"The teaching-learning method is definitely better. If one listens all the time, subjects taken will not have much effect, If this person can learn and at the same time teach, it would be better".

Themes emerging from the faculty members' perceptions regarding undesirable consequences of the case-based curriculum centered on: (a) less content and knowledge, (b) student's weakness in clinical skills, (c) student's inability to bridge between theory and practice, and (d) student's burn out.

The following excerpts reflected how the undesirable consequences were perceived by faculty members :

"Students did not receive the education they were supposed to receive".

"Our students in the previous 2 or 3 years were weak in skills".

"In the clinical area, when we ask them about things, they don't use or apply what we try to teach them".

"They are overwhelmed, overwhelmed with different courses, different information. They are crying. They are really burned out".

In regard to unanticipated consequences, themes emerging from faculty's perceptions of unanticipated consequences centered on: (a) regression of student's performance over the years, (b) lack of motivation among students, (c) insufficient time to cover the objectives, (d) lack of preparation by students, (e) inconsistency among tutors in the application of the case-based curriculum, and (f) empowerment of students in the case- based curriculum. The following excerpts emphasize the unanticipated consequences as perceived by faculty:

"The first group who graduated ... were really excellent. By the second year it was getting worse".

"They (referring to students) are not motivated towards the case-based curriculum and we are not succeeding to motivate them".

"The discussion needs time and patience and listening and take and give so time sometimes is not enough to complete the case".

"One third of the classroom are prepared ... the remaining students will not be well prepared for the discussion inside the classroom".

"Every one still... has got different ideas about how to lead a class".

"The students having 80% of the decisions was really unexpected. At the beginning of the case based learning, we were not informed that the students to evaluate the tutors".

Unanticipated consequences, according to the students' perceptions, were related mainly to the process of preparation and participation in the classroom. Themes which evolved from the students' perceptions were centered on (a) inability to locate information or understand it, (b) confusion relating to presentation and group discussion, (c) exams centered on the textbook, and (d) waste of time in the preparation of tasks. The following excerpts are typical of the comments by students regarding unanticipated consequences:

"Sometimes what you have prepared turns to be wrong i.e., the page where you got the information from was wrong".

"I might spend the whole day writing. I might write about something I understand or don't understand because they (faculty) want us to write on the notebook and show it to them at the beginning of the session".

"Whatever material you bring from outside the prescribed book, from other references, you are still stuck to the prescribed book ... the extra material ... is not important because it is not included in the exam".

Additional Findings

The rate of adoption. The process of change at the Institutes of Nursing was triggered by authority. All faculty members however, chose the type of curriculum that they wanted to adopt and played an active role in the process of change as exhibited by the statement of one faculty member:

> *"we sat together, and worked it out, then we designed the macroplan of the curriculum gradually and we agreed ... on what the courses would be, the sequence of content in the courses and then gradually prepared the cases, and the following year we started the new curriculum".*

The classification of faculty members on the basis of the time they adopted (innovativeness) and accordingly plotting the rate of adoption (number of adopters over time) was not feasible in this study. All faculty members adopted the innovation at the same time. Faculty members were asked about their perceptions of the time it took them to feel comfortable with the innovation and their responses varied.

The range of time for faculty to feel comfortable with the innovation varied between zero (0) and two (2) years. Novices without proper introduction to the change process felt comfortable directly, compared to senior tutors who felt comfortable only after 1-2 years. The majority, however, felt that each time they taught; they felt more comfortable.

The following excerpts clarify the interviewee's statements regarding their perception of comfort with the innovation. A manager took one year to feel comfortable with the innovation, she stated:

"After finishing the first year, after my exposure to two courses, one in semester one and one in semester two, I felt that I could do it".

In contrast to the manager, a novice with no experience felt comfortable immediately, she stated:

"I did not feel any difficulty in applying this case-based learning (CBL)... it is the same traditional lecturing ... both are new for me and I adapted quickly".

In contrast to all faculty members, a senior manager, observing the application of CBL over the years in the classrooms, became concerned. The cause of concern, as perceived by the senior manager, is the improper application of the process. The following excerpt depicts the manager's statement of the current situation as perceived by her:

"When it was introduced ... I felt happy applying it ... I am now feeling that it is not being applied as well as it used to be when it was first applied, so I can not say with time I am getting more comfortable. In fact I am getting less comfortable as time goes by".

Summary of UAE 's Major Findings

In summary, change at the Institutes of Nursing took place when the traditional curriculum was changed into CBC in 1997. The change was triggered mainly by the dissatisfaction of faculty with the traditional curriculum. Data which

emanated from faculty interviews highlighted the whole process of change in regard to its facilitating and hindering factors in addition to its consequences.

The major facilitating factor according to the faculty members was related to the advantages they perceived in the case-based curriculum. Additional factors which contributed to facilitating change were related to interpersonal communication and simulated practice in front of peers. Active involvement in all pre-implementation orientation workshops and the presence of an external change agent, i.e. the curriculum consultant, during the process of implementation facilitated change to the case-based curriculum.

Students as major players in the process of change in educational institutions perceived the major facilitating factor to be related to their perception of the advantages of CBL. To them, the case based curriculum helped them develop skills in presentation, participation in groups and to improve their English proficiency.

With the complexity of the change process, not all factors surrounding change were perceived by faculty as facilitating. Several hindrances were cited in faculty, one of which is related to their perceived complexity of the teaching-learning process entailed in the case- based curriculum and its incompatibility with their educational background and their previous experiences. Other factors perceived as hindrances mainly revolved around the implementation phase and the confusion which evolved from inadequate understanding of the role of the tutor as a facilitator. After the departure of the curriculum consultant, the issue seemed to be complicated further by the lack of support and expertise of senior evaluators who should have guided faculty in the implementation of the new curriculum. The poor academic standard and the social upbringing of students incapacitated further the active teaching-learning process advocated under the case-based curriculum.

Hindrances perceived by students were mainly related to their academic and social background which made the requirements of the case-based curriculum an ordeal. To the students, the major obstacles centered mainly on time spent on preparation, difficulty of some cases and presentation in front of their colleagues.

As a result of the adoption of the case-based curriculum, several consequences were perceived to be taking place by both faculty and students. According to faculty the desirable consequences were mainly centered on the positive effect of the teaching learning process on improving student-student and student-teacher interaction. Faculty felt further that they became more involved in decision making through the academic departments which were reestablished under the case-based curriculum. Students also perceived the desirable consequences to be centered on student-student and student-teacher interaction, in addition to improvement of assessment and the teaching-learning process.

Undesirable consequences as perceived by faculty were related to the students' weaknesses in the clinical areas, burn out and receiving less knowledge under the case based curriculum. Unanticipated consequences were mainly the regression of students' performance and motivation over the years and insufficient time to cover the material. Students, on the other hand, perceived the major unanticipated consequences to be related to the lengthy process of preparation and participation in the groups.

One unique finding under the case based curriculum was the rate of adoption as perceived by faculty members. Time varied between faculty and was not found to be related to years of experience.

Country: Bahrain

Type of Innovation

Change started in Bahrain with the introduction of the case-based curriculum after years of a traditional and competency-based curriculum.

Year of Inception

Change started in the Nursing division of the College of Health Sciences in Bahrain in 1998. Planning for change was spearheaded by the Nursing Development Committee which initiated change in 1996. The plans were finally realized after the visit in 1997 of a consultant who fine-tuned their efforts.

Demographic Characteristics of Participants

Seventeen staff members, including faculty and senior managers participated in the initial phase of study. The sample consisted of three senior managers, the ex-chairperson of the program, the current chairperson and the coordinator of the program. Of the remaining fourteen faculty members, three handled responsibility for coordination in addition to classroom and clinical teaching. Seventy five percent of the faculty had from 16-27 years of teaching experience, (33% from 21-25 years, 26% from 16-20 years of experience, and 16% had from 26-30 years of teaching experience). The remaining 25% had from 1-4 years of experience.

Only four of the participating faculty had not been part of the initiation of change in Bahrain. One, however, had been involved in the curriculum change process in Abu Dhabi before taking up a teaching position in the nursing division at the College of Health Science in 2000. Thirteen students chosen from the three academic levels based on their semester average (excellent, average and poor) also

participated in the first phase of the study. Five students were from level I, 4 from level II and 4 from level III.

Reasons for Change

Several reasons for change were identified by managers. The data obtained from interviews with managers identified educational, political and social factors, as responsible for change.

Educational factors. Themes emerging from interviewees' responses concerning educational reasons for change were: (a) local and international changes in secondary school curricula and health professionals' education, (b) faculty and management dissatisfaction with the old curriculum, (c) a better calibre of students joining the nursing profession, and (d) a high dropout rate in the first year of Nursing at the nursing division of the College of Health Sciences.

Contextual factors in the nursing division seemed the dominant theme that emerged from the interviewees' statements. At the local level, the Ministry of Education in Bahrain introduced changes that upgraded the high school curricula. The change made the bridging non-credit courses offered at the College of Health Sciences obsolete. The change was also concurrent with other international changes in Schools of Nursing addressing the process of teaching. The following excerpts from the participants' statements illustrate the point:

> *"They were changing the high school curriculum and updating them ... we felt that the high schools were more advanced ... so we had to upgrade ourselves, and we cancelled the bridging courses".*

> *"We thought that things were changing, and that we needed to re-think the curriculum, the method of teaching; schools*

of nursing and medical schools were going into problem-based (learning)".

A progress report on the implementation of the new associate degree programme (Abdullah, 1998) corroborated the data obtained from the interviews. According to this report the bridging courses, that is, the first semester zero credit courses in Math, Chemistry, Physics, Biology and English were cancelled in 1998.

At the nursing division, faculty were perceived by managers to be dissatisfied with the old curriculum. Graduates' inability to meet the requirements of the service and exhaustion of all efforts to upgrade the curriculum were cited as major reasons for dissatisfaction with the old curriculum. The following excerpts from the interviewees support these observations:

"We used to hear comments ... that your students are not meeting our requirements ... so we tried in the past to do adjustments in the clinical timing, increase the clinical exposure of students ... give them more on-the-job-training, but it was not solving the problem..."

"Stakeholders wanted people who could adjust to the system after graduation and we thought that developing this self-centered learning was the best way of doing that".

"The curriculum was old. We had nearly exhausted all the changes that we could do ... and it was out of date, so staff were not happy with the curriculum any more, nor with the method of teaching ... We were thinking there should be an

alternative way of teaching students other than classroom teaching".

Furthermore, it seemed that better candidates were joining Nursing with averages of 80% and above in comparison to the previous 60%. The new calibre of students was perceived as a driving force for change, facilitating the introduction of a teaching methodology that would foster self-learning strategies. On the other hand, the high academic profile of students increased their drop out rate in the first semester (the bridging non credit courses). The courses were planned, originally to bridge the gap between the secondary school program and the nursing program. The managers' point of views regarding the new caliber of students in Bahrain are clearly illustrated in the following quotes:

"Students used to get bored when teachers just stood and spoke. Such high caliber students would accept a methodology that advocated self directed learning".

"The calibre of the students that we get is much higher than what we used to get before, we get students with 80% and 90%...we used to get before students with lower averages 60% and 70% and sometimes from the literary steam ... students are now bored with the subjects that you repeat things for them in the 1st semester. Most of the zero credit courses are covered in their current secondary school program". [s.i.c]

Documentary evidence found by the researcher is related to academic council minutes (June 9th, 1998) where the acceptable secondary average for applicants to nursing was raised to 70%.

Political and social factors. Faculty and managers cited several political and social factors which drove change in nursing education at the Nursing division of the College of Health Sciences in Bahrain. The themes emerging from the interviewees' statements were related to ongoing changes in the health care system, high academic qualifications of the faculty and nomination of the nursing division as a W.H.O collaborating center.

According to interviewees, changes in the health care domain were vast. No curriculum could keep up with the changes in the health care sector which nowadays demands creative nurses. One of the managers mentioned that:

> *"The answer is in preparing students to be self learners and thus to be able to meet the ever changing challenges of the health care sector. The information gets old ... and we need to change the methodology into something else where students build in themselves the need for self learning".*

To another manager:

> *"The health care services now want to see nurses as people who are creative, people who have wide understanding, look for change, who are self directed learners".*

In addition to the driving forces in the health care sector there was another driving force at the School of Nursing in Bahrain. Change was perceived to have the

potential to succeed due to the high academic profile of the faculty members. According to a manager:

> *"We have around 60% master graduates, everybody else is B.S. graduate. They are very highly qualified staff. They would be capable of handling such a change".*

Nomination of the nursing division as a W.H.O collaborating center was perceived to be yet another drive for change by a manager. Being the only center in the Gulf Arab region brought with it the responsibility of being ahead of all other nursing programs in the region. A senior manager stated this:

> *"As a W.H.O collaborating center... it should lead nursing in the region, so there was a push regionally to adapt a new way ... a new method of teaching".*

Nature of Change in Bahrain

The nature of change is presented using the themes that evolved from faculty members and students. Facilitating and hindering factors are presented using the categories (a) innovation attributes (namely relative advantage), (b) communication channels, (c) time (related to the innovation-decision process) and the social system.

With regard to the attributes of innovation, the relative advantage of the case-based curriculum compared to a competency-based curriculum was the most commonly occurring theme from data obtained from faculty. Themes emerging from faculty's data regarding their perceptions of the advantages of the case-based curriculum centered on its ability to (a) promote self-directed learning, (b) help to relate theory to practice and (c) allow students to retain information.

The development of life long learning skills such as self-directed learning, information search, and independence in learning was the most commonly cited attribute of CBL that helped facilitate curriculum change in Bahrain. The following excerpts from the participants' statements illustrate the point.

"I prefer the case-based curriculum, because on the part of the students, it is more beneficial for them especially for inculcating skills that they will have for life, like self-directed learning".

"CBC makes the students independent learners".

"They will learn to depend on themselves, so when they see cases in the clinical areas, they will not say they didn't teach us".

"They search for information, they present the information, it remains in their brain cells".

For some, however, another relative advantage of CBL compared to the old curriculum was helping learners correlate theory with practice. In their own words:

"We are not teaching theory only, they have to go to the clinical area, and they have to apply the information, ... it will be easy for them (referring to students) ".

"When they see the cases in the clinical areas they can relate it to what they were taught in the classroom ... the link became better".

Improving English proficiency of students seemed to some faculty members a major advantage of the case-based curriculum. They stated:

"CBL improved the students' English in talking"

"Their English language has improved a lot, it (referring to case based) has improved their spelling ... now they can read their text books easily".

An interesting remark was cited in the coordinator of the program who thought that the major advantage of CBL is improving the faculty members' knowledge and preparation. She stated:

" It forced the faculty to be updated more than the traditional one ... In CBC... the teacher has to be in full confidence in front of the students, because they will ... ask many questions, so the teacher has to be prepared well".

An important dimension of relative advantage as an innovation attribute is the satisfaction of people with the innovation. Themes emerging from the perceptions of faculty regarding the meaning of a case based curriculum revealed a strong sense of satisfaction in the curriculum itself. The following statements extracted from the transcribed data are representative of faculty members' satisfaction:

"It is a very rewarding kind of teaching ... very rewarding".

"I feel that this is really a wonderful curriculum, I really enjoy it, I like it, and I hope that all the programs in our college will implement CBL".

"I feel it is a very interesting curriculum".

Students also perceived the case-based curriculum to be more advantageous than the old competency-based curriculum. They perceived the advantages to be related to its ability to: (a) challenge them to search for references, (b) improve their English language, (c) promote self learning, and (d) increase their self confidence and self esteem. The students shared their positive experiences by stating:

"The Case-based curriculum made us look for reference books in libraries and ... to locate information on the computer".

"The student starts depending on himself, searching, looking and asking".

"It made us research, read by ourselves, depend on ourselves".

"The student is self-dependent. He doesn't rely on tutors, he studies alone, summarizes alone".

The dominant teaching/learning strategy in CBL is student presentation and discussion, an important attribute of an active learning

environment. Similar to the UAE students, the students in Bahrain saw this aspect of case-based learning as an advantage of the approach compared to the old competency-based curriculum. According to some of them this approach has increased their self esteem and improved their English proficiency. The following quotes illustrate the point:

> *"CBL has increased our self esteem. It increased our courage to present before people without fear".*

> *"Your English will be good, you know how to write, how to spell words, how to talk, to think, how to write, in this style".*

> *"The student comes prepared for the session. It means she has had to read and prepare at home, so her English improves".*

With regard to communication channels, peer communication was perceived as a facilitating factor. In the absence of an expert, faculty members felt that the only facilitating factor was consulting one another which at times did not achieve remarkable results. The following responses refer to this observation:

> *"We discuss among the teachers who are teaching and usually we will end up there. If there is any problem, we go to the coordinator who will go to the chairperson... This helps".*

"All faculty who teach the same subjects have regular meetings and they discuss problems with the coordinator... This helps us in clarifying ambiguities".

"We don't have any expert or consultant I don't see anybody expert. We ask each other and decide ... this at least makes us all understand same things". [s.i.c]

Time, a critical variable in the diffusion process, emerged as another facilitating factor with regard to the innovation decision process. Although change in Bahrain was an authority decision, activities taking place in the pre-adoption stage helped in accepting the innovation. Perceptions of faculty concerning the process of introducing change differed depending whether they witnessed the change or not. Faculty who witnessed the change had a slightly more positive outlook towards activities taking place in the workshop and the group discussion. Themes emerging from staff's perception regarding the introduction of change in Bahrain were mainly the importance of (a) The introductory workshop (b) group work and group discussion.

The following quotes illustrate participants' thoughts about the facilitating factors of the innovation decision process:

"It was good to start with the workshop".

"What made it easy was shared group discussion".

"It was the workshop first, and I was an active participant in that workshop... after the workshop it became better".

One aspect of the social system which facilitated the diffusion of the case-based curriculum was the presence of the consultant and the style followed by the consultant in introducing the innovation. The following statements from the faculty exemplify this observation.

"The consultant ... introduced it in an easier way".

"She (the consultant) gave us clear objectives ... She brought lot of material to read ... she explained what exactly a case based curriculum is and how to go about it".

A report on the activities of the curriculum planning committee (taskforce, June, 1998) by Batool Al Muhandis revealed that six workshops were conducted between February and March 1998 with the nursing faculty, and nursing representatives, in addition to representatives from allied health divisions of the College of Health Sciences. Ideal characteristics of graduates, philosophy, competencies in addition to the conceptual framework were identified. Along with the report, a letter addressed to the Undersecretary for training and planning, asking for an external consultant from South Africa to come in November 1998 to familiarize faculty with the case based curriculum corroborated the data obtained from interviews on the availability of an external consultant during the initial phases of introducing change in Bahrain.

Hindering Factors in the Process of Change

Several factors were cited in faculty as hindering the process of change. The cited hindering factors were related to attributes of innovation (namely its complexity

and incompatibility), communication channels, time (related to pre-implementation and implementation) and the social system.

The major hindering factor related to the attributes of innovation was its complexity, in comparison with the previous competency-based curriculum. The majority of faculty stated

> *"CBC is more complex".*

> *"For the teachers to prepare and teach CBC, it is more complex".*

Perceptions of CBL as a complex teaching/learning methodology were mainly associated with the perceived time demands it placed both on students and teachers. The teachers saw the time demands placed on students by CBL as affecting the students' ability to correlate theory with practice. For the students, the whole experience of having to spend a lot of time searching for information was viewed with feelings of frustration. The following are some of the participants' views about CBL and time.

> *"We are running, and we are not giving enough time for the students to look and understand what they are getting" (faculty).*

> *"Students have a lot of concern about CBL. They are crowded, they are under great pressure, and they can not handle it" (faculty).*

> *"Budgeting time is the most important thing. If there is no organized time, overcoming the problem is difficult"* (student).

> *"Even if you budget your time, you feel that the rest of the time is less than studying time. It takes you more than an hour to study and to hunt for information. You need another hour to organize it and an hour to study and explain"* (student) .

Incompatibility of the new curriculum with the way things had been done at the Institution emerged as another hindering attribute of innovation and led to ineffective implementation. Some of the faculty members were not used to the teaching/learning processes entailed in a case-based curriculum and found the whole approach frustrating, artificial and time consuming. The issues were complicated further because, faculty, lacking the expertise in writing cases, started adding tasks to the original cases which ended up in the artificial and illogical representation of the cases.

> *"I feel the patient is not realistic, because, that patient didn't go into this complication but I added a task, making that patient going into some complications. There are some artificial things in it".* [s.i.c]

> *"I come out of class frustrated when half of them, they just come without reading ... In this one hour, I could have talked instead of giving them time to prepare, so*

sometimes teachers are frustrated and become very bored".

"Didactic teaching is best controlled by the teacher, and whatever the portion you want to cover, you will cover in the limited time whereas using CBL, one hour will extend into three hours ... so time constraint is a factor in CBL".

The incompatibility of the teaching/learning process in CBL with the socio-educational background of the students was perceived to have contributed to the difficulties encountered in implementing the new program. Hence some of the interviewees commented:

"They (referring to students) are very passive, because of their high school preparation, spoon feeding".

"Students have to be here in the library for a long time. Some can't. They said we are not allowed, they mean, their family will not allow them to stay up late, so that also affects their preparation".

One major hindering theme that emerged from the data on communication channels focused on the lack of simulated practice in front of peers. In the absence of simulated practice, faculty members had no opportunity to experiment with the innovation. Hence, feelings of inadequacy and lack of confidence emerged. The faculty members' concerns and frustrations were evident in the following quote:

"We didn't have, you know, like demonstration, ... To see at least how it is applied ... We didn't need demonstration, but

at least to see how it is going, supposed to go, we didn't

have, they told us, create ... At least, if we had gone to a

demonstration ,we would have developed self confidence,

you know that it is supposed to be like this". [s.i.c]

Time emerged as another hindering factor in the process of change in Bahrain, more specifically the innovation decision process. Change in Bahrain, as in the UAE was an authority decision, but unlike in the UAE, there seemed to be perceptions of an improper introduction of the case-based curriculum. The lack of preparation of the faculty members for change and its suddenness were seen by them as major hindrances in the introduction of change. Participants became very upset when discussing the lack of planning and the suddenness of change. They expressed this clearly by stating:

"We had an improper introduction".

"It was introduced to us when ... (mentions two senior

managers' names) went to Abu Dhabi and they attended a

workshop or something there and they came back and they

introduced it to us and there was a lady I forgot her name,

she came from South Africa and she gave us a workshop

about it".

"Not good to start and we didn't finish some of the cases,

you know and sometimes we used to do the case, and then

tomorrow, next day, we had to teach, and we were not

completely prepared".

"It was too sudden for us. We need to change, we need to adapt and make new cases, but all of it was too sudden".

Invariably, the abruptness of the introduction of the case-based curriculum affected the implementation process. The faculty were not allowed enough time to 'mentally process' the innovation and go through the process of seeking information about it. Hence, at the time of data collection there seemed to be a feeling of having had to implement something that was alien to them, especially as far as this relates to understanding the dynamics of an interactive teaching methodology such as CBL. Others related their dissatisfaction with the organization of cases and the academic and social background of students. In their own words they claimed:

"It was a bit difficult for us to adopt it, because we did not know how to do it".

"We put group work to students, like this group B will prepare this topic. Each group has a different topic. The others don't prepare the other groups' topic. Then after one year, we found this method is not working well".

"Some cases lacked critical elements, some faculty started to add tasks, delete tasks, add content to cases until at the end we found that we have incoherent artificial cases which had at times contradictory condition". [s.i.c]

One of the documents found by the researcher is minutes taken from an academic council in July, 1998 where Professor Uys (consultant) presented the new

curriculum and recommended development of audiovisual facilities and laboratory facilities.

The social system also appeared to have had a hindering effect on the implementation process. Social system factors which were perceived as having impeded the implementation process were mainly lack of knowledge of the case-based curriculum and lack of expert opinion leaders during the implementation stage. The following excerpts from the interviewees' statements bear testimony to these observations:

> *"All of us were sailing in the same boat, you know, so, there was no support".*

> *"I wished the chairperson was in full view of it, knew what was CBC or the Associate Degree head knew it, the way the consultant was talking about". [s.i.c]*

> *"We need people who really understand how a case based curriculum should be implemented. We need lots of workshops to make faculty and other people, even the administration, understand how a CBC should be implemented."*

> *"I remember (named a manager's name) came to our meeting, and we didn't know what she wanted. In fact, she told us herself, she didn't know exactly what it was all about"*

Some of the senior managers in agreement with all faculty and captured the essence of the process of change at the beginning, by saying:

"What we knew, we transferred to people ... we were ourselves not expert in a CBC".

"Our experience in a CBC depended on our own initiative, ... We didn't have a clue what a CBC was".

All these issues, lack of simulated practice, lack of expert opinion leaders, and incompatibility of the new curriculum with what was known and done before led to lack of confidence, confusion and improperly structured cases. This is what some of the faculty had to say on the effect of the lack of simulated practice and expert and/or opinion leaders on the implementation process:

"When you want to teach, you want to be self confident, so when you are, faced with something new and you are not prepared, you are hesitant. So how about the students".

"We have mixed up several topics like infertility, dysfunctional uterine bleeding, and fibroid uterus and tried to put them in the same case".

"Nobody knew at the beginning how to go about like this, so we invented. Like me, I invented my own way of trial and error, what I thought was best for my class, that did not work well ... we still do not, know what is CBC". [s.i.c].

Perceptions of students concerning the difficulties they experienced in the case based curriculum, were congruent with those of faculty. Their major concerns were related to its incompatibility with their past academic preparation and their English background. Students were used to be spoon-fed in their schools and the transition to the self-learner status advocated in CBL was perceived as frustrating and unacceptable. A common theme was:

> *"The first thing is the language ... the difficulty is the language".*

> *"I couldn't accept this at all at the beginning. Everything was difficult and frustrating. We used to be passive from elementary to preparatory to secondary ... just getting information".*

The issue seemed to be compounded further in the implementation process. Students were suddenly confronted with silent passive teachers who did not facilitate discussion. Tasks taken home became unpleasant chores which consumed time. Students felt lost and could not locate the information correctly which became worse in the absence of adequate resources. They expressed their concerns and frustrations by saying:

> *"The teacher is silent. She doesn't give extra information in class she gives the information we already have"*

"The teacher doesn't comment whether what the student said was O.K or not".

"The trouble is where to locate the information in the reference-book, is it at the beginning or at the end of the book".

"May be what you prepared at home is totally irrelevant to the topic ... so this causes confusion in class ... and takes a long time".

"The resources in the college are very old ... we need newer ones".

"We do not have adequate resources in the library".

Students' frustrations with the implementation process reached their climax with the new requirement of presentations. Students were requested to prepare tasks which they did not comprehend and present them to their colleagues, an experience which was perceived by the majority as frightening and intimidating. The following quotes bear out this perception:

"I felt perplexed at the beginning, afraid. We have just left school. We are not accustomed to standing in front of a class and a tutor to explain a topic".

"The student doesn't get full information, she doesn't understand the main information, and she only understands what she can grasp, so how can she present information which she does not understand?".

The perceptions of students listening to the presentations was even worse. In the absence of a "facilitator", students felt lost and were not sure of the information presented. Their concerns are best represented in the following quotes:

"When another student gives a presentation, you are sometimes not sure whether what she said was right".

"The tutor only receives the information in the presentation, even if the students said they did not get the picture, the tutor would say it was clear even if some get lost".

The problems faced by the students in the implementation of the CBC worsened with the discrepancy among tutors regarding their role in the case-based curriculum. Tutors, to solve some of the problems that students encountered, started sharing their photocopied notes. Others did not, which led to further confusion as to the expectations of teachers in the case-based curriculum. The following quote illustrates their concerns:

"Some teachers give you notes to copy, others refuse to do that ... We wish the teachers would all give us the notes".

An aspect of the social structure perceived by managers to hinder the process of change was the initial resistance of the academic council to change. Though change was forced by the Undersecretary at the end, the resistance resulted in an impaired relationship between the senior management of the school of nursing and the academic council. In a manager's own words, she stated:

"The major restraining force was from the college administration, the top level, the dean of the college, he was refusing our change. His refusal was reflected on the academic council, the majority of whom are from allied health professions. I had to suffer for one year in the college without people speaking to me properly, as if I had done a sin".

The Academic council minutes of July 1998 corroborated the data obtained from interviews regarding the Dean's views toward implementing the new curriculum and his suggestion to consult W.H.O before implementing it.

Another aspect of the social system which hindered the process of change was the perceptions of faculty that administration had forced the change on them without preparing them adequately for change. Faculty views on the influence of the social system, specifically the social structure and type of innovation as a hindering factor, differed based on citizenship. Non-Bahraini faculty felt that they, as expatriates, had no say in a change which was mandated by a Bahraini. To a

Bahraini national faculty member, being in an Arab country, change is expected, like everything else, to be forced. Participants became very upset when discussing the lack of planning. They expressed this clearly by stating:

> *"We are expatriates ... so whatever is given, we will implement".*

> *"We in the Arab countries have dictator systems ... The scheme was not pilot studied, opinions of faculty were not taken. The faculty were not prepared ahead of time ... After the people came from Abu Dhabi, they said ... We are starting the CBC, so whether you like it or not, you have to accept it and you have to do it".*

Reluctance of the academic council, along with forced sudden change by the school of nursing administration, led to frustration and feelings of inadequacy among faculty. The issue was complicated further by the organizational structure at the College of Health Sciences in Bahrain, which impeded change further. Decisions taken by faculty regarding introducing changes in the curriculum were delayed by the academic council. The coordinator of the associate nursing program expressed this tedious process clearly by stating:

> *"To take a decision takes a year. It takes a long time for a decision and a very long time to make a decision regarding the curriculum ... All decisions have to be approved by the academic council ".*

The preceding analysis section dealt mainly with the participants' perceptions of CBL with regard to the innovation's attributes (form), and meaning. The following section deals with the results obtained from the data on the function of CBL, that is, the participants' views regarding its contribution to their teaching and learning lives.

Consequences

Faculty perceived the case based innovation to have desirable and undesirable consequences and some unanticipated consequences that faculty witnessed later on. Themes emerging from faculty members' perceptions regarding desirable consequences were mainly related to (a) improving the student-teacher interaction and (b) encouraging group dynamics. Faculty shared their positive experiences by stating:

> *"There is more communication, more interaction between the teacher and the student".*

> *"I can say it (referring to student-teacher interaction) has improved very much, because the teacher becomes more friendly".*

> *"Students are better now, they are not just guinea pigs, you (referring to teacher) do not just go and give them information".*

> *"In the CBL you tell the students, I am not evaluating you, it is an evaluation for the whole group, so the group members, all work together and discuss". [s.i.c]*

Students' perceptions of the desirable consequences of change were similar to the faculty members' perceptions. Themes that emerged from students' perceptions of the desirable consequences focused on the effect of the CBC on (a) improving the student-teacher interaction, (b) enhancing the student-student interaction, and (c) improving the teaching-learning process. The majority stated:

"There is cooperation. If there is something I don't understand ... I can go to the teacher's office to ask her and she answers me. I feel the relationship is much better than the one that existed in the lecture based curriculum".

"The teacher's relationship with student is very good because the teacher knows who Khadeeja is, who Fatima is".

"The interaction is more among students because each student has new information from a different edition. So one student has more information so we take this from her and we give her what we have".

"The case-based method provides an environment of cohesion. The students are all for one and one for all. Everyone knows what the other needs and tries to help".

"Participation is more in the case-based method ... It makes the class more active".

"CBL increased communication between us as students or between us and the teachers and other people around us".

In regard to undesirable consequences, themes that emerged, from faculty's interviews centered on (a) lack of clinical skills of students, (b) less content and knowledge, and (c) students burn out. The following statements are typical of the undesirable consequence of the CBC as perceived by faculty:

"We always argued when we started the CBC, are we giving enough clinical exposure?... and we found that students are not sufficiently skilled".

"Faculty ... feel that they (students) are not skilful ... they think of theoretical things more than doing actual things in the clinical areas".

"The student's knowledge is limited".

Students' inability to correlate theory with practice was often attributed to lack of time which was seen to be an unanticipated consequence of CBL. The faculty members expressed their views about the pressures of time exerted by CBL on them and the students as follows:

"They go to the clinical areas but although they are supposed to be applying what they have learnt, you don't

see them ready or prepared, because they don't have the time to sit and read and just reflect on what they have learnt".

"We do not have time to finish the cases ... we are always in need of more sessions ".

In relation to unanticipated consequences, more themes emerged from faculty members' perceptions about CBL. For the most part, these focused on (a) utilization of previous students' answers to triggers, (b) students losing motivation (c) lack of preparation of students, (d) insufficient time to cover the objectives, (e) inconsistency among tutors of the courses in applying the case based curriculum, and (f) empowerment of students under case-based method, and students' dissatisfaction with the teaching/learning process.

The most commonly cited unanticipated consequence of CBL was the students' dissatisfaction with faculty members' performance in the classroom, which led to conflict between faculty members and students. The following quotes from the data obtained from faculty members and management bear evidence to this observation.

"There is no consistency among teachers in implementing CBL and this leads to conflicts with the students".

"Students came complaining about some of the faculty, that some faculty are not playing any role in the teaching, they are just sitting on the chair and giving the turn to students to give presentation ... When she (the tutor) leaves the

class, students do not know whether what was said in class is correct or not".

"Students complain of some of the faculty, that they don't play their role properly. They just come and sit in the classroom, and they don't even open their mouth, not even one word".

"Every teacher is different in her skill of teaching and the type of approach, and we found that some teachers were using the real case based teaching, and some were mixing the didactic and the CBL and some were automatically reverting to the old system".

Another frequently occurring theme with regard to unanticipated consequences of CBL was students' utilization of previous students' work rather than working on the case studies on their own. The faculty members felt that this behavior defeated the purpose of CBL, which is, facilitating self-directed and inquiry-based learning. In their own words:

"Duplication of notes is the major unanticipated consequence"

"The cases, are transmitted to the students from one group to the other. They are copies"

"We found that students already had answers, and we can't prevent it, because they always share".

Together with facilitating independent and inquiry-based learning, increasing student motivation to learn is one of the valued educational objectives of CBL. For this particular group of learners, there was a perception by the faculty that CBL, in fact, had the direct opposite consequence, albeit an unanticipated one. Progressive loss of student motivation over the years was one of the most commonly cited unanticipated consequences of CBL. Views of the faculty on student motivation can be gleaned from the following excerpts from the interview data:

"The first group was very good, the second group was O.K. By the time, we are teaching the third group, we are finding that students are not as motivated as they should be"

"The students are coming without preparation, … it will be a big problem for us how can we facilitate if students do not prepare? … So …we have to give lecture, what we'll do". *[s.i.c]*

An interesting unanticipated consequence is the faculty's perceived empowerment of students, in the case-based curriculum. Faculty felt that students exercised a new freedom under the case based curriculum which they misused and posed a threat to staff. Reporting and complaining to administration became the norm in the nursing school. Their concerns were made evident in the following quotes:

"They have the right to go to the head of nursing to complain about their teachers".

"They can write a complaint and give it to the dean to tell him this teacher did not speak to me properly. The faculty will be penalized, some will receive warnings".

"The discipline here in the college is only for the faculty".

Fear of students' empowerment was exhibited further in the faculty members' perceived threat of students' evaluation. Faculty were trying to please students by going back to didactic lecturing, thus defeating the whole methodology of the case-based curriculum. In their own words, they stated:

"If I do not use a transparency, students will not be happy, because they like to take notes and copy, but I change because I want to satisfy the students ... I want better evaluation, so when I use a transparency and explain ... then they feel I am a good teacher and, I get good results". [s.i.c]

"One question in the exam came and was not taught because it was not in the case, but it was in the exam paper, so the students, they will go and complain to the head of the program, telling, teacher So and So didn't teach this part. All the blame will come on the faculty, and may be she

will receive a warning especially if she is non-Bahraini, you see. So to protect herself, she will go to the systemic approach slowly to cover everything". [s.i.c]

Additional Findings

A number of additional factors that either facilitated or hindered the process of change in Bahrain were listed in the results of this study. These related mainly to the social system, with specific reference to the type of change and the adequacy of the available resources for the envisaged change.

Inadequacy of resources. The implementation of the new case-based curriculum became a chore to faculty members, and obstacles increased with the lack of adequate resources for faculty and students. The following quotes illustrate their concerns:

"Our library has very minimal references" (faculty member).

"The books are very old". (faculty member).

"Four computers in the library are not enough". (faculty member).

"The information reaching the college is ... very old ... we get references but the college doesn't make them available" (student).

Rate of adoption. Change in Bahrain was initiated by authority. All faculty members felt that they were not adequately prepared for the change which was forced on them. Perhaps an excerpt from one of the faculty members can illustrate the situation:

"At the beginning, it was a bit difficult for us to adopt it because we did not know how to do it".

Faculty irrespective of education or status progressed at different rates following no apparent pattern. Novices felt completely comfortable after a few sessions while senior faculty members took around 1-2 years to feel comfortable. The following excerpts from novices illustrate the situation.

"Once I taught the first case, I felt comfortable".

"Within one week, less maybe".

"I felt easy from the beginning ... because I was not used to teaching lectures and giving lectures".

In contrast to novices, senior tutors, took between 1-2 years to feel comfortable. The following excerpts from the senior tutors illustrate this point:

"Maybe one year".

"For me two years".

"One year after we started".

Summary

Change was implemented at the Nursing division of the College of Health Sciences in Bahrain in 1998. It involved changing the competency based curriculum into a CBC. The change was triggered by educational, political and social reasons.

The major facilitating factors in the process of change as perceived by faculty members were related to the attributes of innovation (namely its advantage), peer communication, introductory workshops and the presence of a change agent in the introduction of change. Students, on the other hand perceived the major facilitating factors to be related to their perceived advantage of CBL over the old curriculum. The major advantages of the CBC as perceived by students were related to promoting self learning, increasing confidence and improving their English language.

As in all change processes, several factors were perceived as hindering the process of change. The major factors, as perceived by faculty members were related to attributes of innovation (namely its complexity and incompatibility), and lack of simulated practice in front of peers. Other hindering factors centered mostly on the process of implementation and emphasized improper introduction, lack of planning and suddenness of change. Hindrances mentioned under the social system focused on the lack of an expert consultant during implementation.

Hindrances perceived by students were mainly related to improper diverse implementation of the case-based method in the classroom. Furthermore, the students were not able to meet the requirement of preparation at home because of their poor English background. Lack of resources, managing time, and difficulty in doing or understanding presentation were other hindrances Cited in the students in Bahrain.

As a result of change, several consequences were perceived by faculty and students. The desirable consequences as perceived by faculty were related to

improving the teaching-learning process and the student-teacher interaction. Student' perceptions were congruent with the faculty members and focused on improving the teaching-learning process and encouraging interaction among the students and between the students and the faculty members .

Undesirable consequences as perceived by faculty members were related to students' lack of clinical skills, less content and students' burn out. Unanticipated consequences were mainly related to students copying the answers from other students, lessening of motivation, insufficient time to cover the objectives, inconsistency in the implementation of CBL and empowerment of students under the CBC.

The rate of adoption of CBC was not related to years of experience, varied among faculty members and did not follow a consistent pattern.

Cross Case Analysis: Faculty's Perceptions Regarding Innovation

Introduction

The results of this section are based on the responses obtained through the self administered questionnaires which were forwarded to faculty members and students in the UAE and Bahrain. Twenty four faculty members from the UAE participated in this phase of the study and thirty from Bahrain. The response rate for faculty members in the UAE was 100% and 91% in Bahrain. Sixty four students participated from the UAE and forty six from Bahrain. The return rate of the questionnaire by both groups of students was 100%. All of the returned questionnaires were used in the analysis. The perceptions of the faculty members in both the UAE and Bahrain will be presented under the following subsections: (a) reasons for change, (b) nature of change and (c) consequences of change in the two countries. Cross case analysis of faculty members' data will be presented first,

followed by a presentation of students' data. Finally data on correlations between elements of innovation (CBC) and their consequences are discussed.

Reasons for Change

In general, no differences were found between the two countries with respect to perceived reasons for change. Overall results on comparing means between the two countries were not significant (t = .176, p =0.87). Similar results were found on analysis of data by item, except for the variable high dropout rate of first year students (t =2.76, p. =0.008). Significant differences were found on the perceptions of faculty members on high dropout rate of first year students in the old curriculum as a reason for change. Bahrain faculty members disagreed more than the UAE faculty members in this regard and did not consider the dropout rate of students in the first year of nursing as a reason for change in their Institution. The UAE faculty members on the other hand, seemed to vacillate between agreeing and disagreeing that high dropout rate was one of the reasons for changing from the traditional to a case-based curriculum. Although mean scores for this group of participants on this variable were high at 3.13, compared to the Bahrain group's mean scores at 2.40, the UAE standard deviation was high at 1.03.

In both countries, local and international changes in curricula were perceived by faculty members as major reasons for change, followed by changes in the health care sector. In Bahrain, dissatisfaction with the old curriculum rated third whereas in the UAE it rated fourth. In both countries the caliber of students joining nursing was perceived to be improving and rated third in the UAE and fourth in Bahrain. These data appear in Table 3

Table 3 : <u>Variations between the UAE and Bahrain Faculty members on Reasons for Change</u>

Reason for Change	Country (n)	Mean	Std Deviation	T	p-value (2-tailed)
Dissatisfaction with old curriculum	UAE (24)	3.67	1.09	-.51	.615
	Bahrain (30)	3.80	.85		
Improved caliber of new students	UAE (24)	3.71	1.12	.25	.806
	Bahrain (30)	3.63	1.10		
National changes in health services and health professionals' education	UAE (24)	4.17	.96	- 1.16	.252
	Bahrain (30)	4.43	.73		
Health service dissatisfaction with graduates	UAE (24)	3.46	.98	-.03	.975
	Bahrain (30)	3.47	.97		
Local and International changes in curricula.	UAE (24)	4.17	1.13	- 1.61	.113
	Bahrain (30)	4.57	.68		
High 1st year dropout rate	UAE (24)	3.13	1.04	2.76	.008
	Bahrain (30)	2.40	.89		
Quality improvement and reduction of cost of program	UAE (24)	3.54	1.18	.70	.486
	Bahrain (30)	3.30	1.32		
Overall Results	UAE (24)	25.83	5.55	.18	.861
	Bahrain (30)	25.60	4.18		

Facilitating Factors

Innovation attributes. No significant differences were noted between both groups utilizing the t-test at 0.05 level of significance. Faculty members in UAE and Bahrain considered the major advantages of the case-based curriculum to be related to creating a lively atmosphere in the classroom and promoting self-directed learning. The least mean score in the UAE data was 4.13 (SD=0.54) and was related to the effect of the innovation on helping students retain information. In Bahrain, faculty members perceived bridging between theory and practice as the least advantage of the case-based curriculum, though the mean was high (mean =4.37) at a S.D of 0.62. See Table 4 for a tabular presentation of these data.

Table 4 : <u>Variations between UAE. and Bahrain Faculty members on</u>

<u>Facilitating Attributes of the Innovation</u>

Facilitating Attributes of the Innovation	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Creates a lively atmosphere in class	UAE (24)	4.58	.50	-.882	.382
	Bahrain (30)	4.70	.47		
Trains students to be critical thinkers	UAE (24)	4.38	.50	-1.917	.061
	Bahrain (30)	4.63	.49		
Helps students to retain information	UAE (24)	4.13	.54	-1.932	.059
	Bahrain (30)	4.50	.82		
Improves tutor's teaching methodologies	UAE (24)	4.29	.86	-.835	.407
	Bahrain (30)	4.47	.68		
Promotes self-directed learning	UAE (24)	4.63	.50	-.313	.756
	Bahrain (30)	4.67	.48		
Allows students to bridge theory and practice	UAE (24)	4.42	.58	.304	.763
	Bahrain (30)	4.37	.62		
Overall Results	UAE (24)	26.42	2.59	-1.203	.234
	Bahrain (30)	27.33	2.93		

<u>Communication channels.</u>

Table 5 below presents data on differences between groups regarding facilitative communication channels in the process of change. Significant differences were noted between the UAE and Bahrain faculty members regarding the importance of simulated practice in front of peers in facilitating implementation of the innovation. The Bahrain faculty members strongly agreed that simulated practice in front of peers facilitates the diffusion of change. The mean of their responses was 4.47, and the result was significant at (t = 3.507, p = 0.001). The UAE faculty members, on the other hand, perceived interpersonal communication among peers as necessary for facilitating change. The mean of their responses for

communication channels was 3.96 (SD = 0.91) in relation to a mean of 3.71 for simulated practice.

Table 5: <u>Variations between the UAE and Bahrain Faculty members on</u> <u>Facilitative Communication Channels in the Process of Change</u>

Facilitating Factors of Communication Channels	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Interpersonal communication amongst peers	UAE (24)	3.96	.91	-1.609	.114
	Bahrain (30)	4.30	.65		
Simulated practice in front of peers	UAE (24)	3.71	.96	-3.507	.001
	Bahrain (30)	4.47	.63		
Overall results	UAE (24)	7.67	1.76	-2.728	.009
	Bahrain (30)	8.77	1.19		

Time- innovation decision process. Significant differences were only noted between the UAE and Bahrain faculty members regarding the effect of group work and group discussion in addition to staff involvement, in facilitating the process of change. The Bahrain faculty members strongly agreed with the statements that group work and group discussion facilitated the process of adopting change. The mean of their responses was 4.63 and was significantly different from the UAE faculty members' mean at t = 2.599 and p = 0.12. Bahrain faculty members also perceived staff involvement in the change process from inception to be critical in facilitating change. The mean of Bahrain faculty members' responses was 4.50 and was significantly different from that of UAE the faculty (t = 2.449, p =0.18). See Table 6.

Table 6 : <u>Variations between the UAE and Bahrain Faculty members on the</u>

<u>Facilitating Factors of the Innovation Decision Process</u>

Facilitating factors of innovation decision process	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Group work and discussion	UAE (24)	4.04	1.12	-2.599	.012
	Bahrain (30)	4.63	.49		
Pre-adoption workshops	UAE (24)	4.29	.86	-.488	.628
	Bahrain (30)	4.40	.77		
Availability of reading material.	UAE (24)	3.96	1.16	-1.922	.060
	Bahrain (30)	4.43	.63		
Staff involvement from inception to implementation.	UAE (24)	3.92	1.10	-2.449	.018
	Bahrain (30)	4.50	.63		
Overall Results.	UAE (24)	16.21	3.69	-2.225	.030
	Bahrain (30)	17.97	2.03		

Social system. No significant differences were noted between the UAE and Bahrain faculty members in relation to the presence of the external consultant and relationship of faculty members with the consultant during the process of implementation. Overall results comparing the means between the two countries were not significant at (t = 0.195, p = 0.846). Participants from both countries agreed that the presence of the external consultant during the process of implementation facilitated change with a mean of 4.04 (S.D = 1.08) for the UAE faculty members and 3.87 (SD = 1.20) for Bahrain faculty members. They also agreed that the relationship between the faculty members and the consultant during implementation facilitated change with a mean of 3.71 and 3.77 for the UAE and Bahrain faculty members respectively. Standard deviations were also similar at 1.23 and 1.14. Table 7 below presents a tabular illustration of these results.

**Table 7 : <u>Variations between the UAE and Bahrain faculty members on the
facilitating factors of the social system</u>**

Facilitating factors of the social system	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
The presence of an external consultant during implementation.	UAE (24)	4.04	1.08	.557	.580
	Bahrain (30)	3.87	1.20		
The relationship with the external consultant during implementation	UAE (24)	3.71	1.23	0.181	0.857
	Bahrain (30)	3.77	1.14		
Overall Results	UAE (24)	7.75	2.13	.195	.846
	Bahrain (30)	7.63	2.22		

<u>**Hindering Factors**</u>

Innovation attributes. No significant differences were noted between faculty members in the UAE and in Bahrain in regard to the perception of complexity of the case-based curriculum as a hindering factor in implementation (t = 0.36, p =.72). In both countries, faculty members perceived the case-based curriculum to be more complex than the traditional curriculum. Means were high at 3.92 (SD = .65) and 3.83 (SD = 1.07) for the UAE and Bahrain faculty members respectively.

Furthermore, faculty members in both countries agreed that the incompatibility of the teaching/learning process entailed in CBC with students' social and educational background, coupled with the teachers' previous traditional teaching experiences hindered the implementation of CBC. For both the Bahrain and the UAE faculty members, the background and teaching styles of teachers were seen as the most incompatible variable with the innovation. Mean scores on this factor were 4.03

(SD = .77) and 4.04 (SD = .69) for Bahrain and the UAE faculty members respectively. The data is presented in table 8.

Table 8 : <u>Variations between the UAE and Bahrain faculty members on the Hindering Factors of the Innovation Attributes</u>

Hindering factors of the innovation attributes	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Case based is more complex than the traditional curriculum	UAE (24)	3.92	.65	0.36	0.723
	Bahrain (30)	3.83	1.07		
Background teaching styles of tutors	UAE (24)	4.04	.69	0.042	0.967
	Bahrain (30)	4.03	.77		
Academic and social background of students	UAE (24)	4.29	.75	1.854	0.069
	Bahrain (30)	3.87	.90		
Overall Results	UAE (24)	12.25	1.33	1.278	0.207
	Bahrain (30)	11.65	1.93		

Time – innovation decision process. No significant differences were noted between faculty members in the UAE and Bahrain in regard to the hindering factors in the innovation decision process (t = -0.431, p = 0.668). Faculty members in both the UAE and Bahrain perceived the students' lack of English proficiency as the major hindering factor to the process of implementing the case-based curriculum. Means were high at 4.38 (S.D = 0.71) and 4.07 (S.D = 0.79) for the UAE and Bahrain faculty members respectively. In the UAE, the second hindering factor as perceived by faculty members was the lack of clarity of the tutor's role in both classroom and clinical teaching followed by lack of resources. In Bahrain, the second hindering factor was the lack of support from the clinical areas, followed by passivity of

teachers in class. The least hindering factor in the UAE was the suddenness of change. The mean scores on this factor were 3.58 (S.D = 0.65) and 3.73 (S.D = 0.94) for the UAE and Bahrain faculty members respectively.   In Bahrain, the least hindering factors was the lack of preparation of faculty. The mean scores on this factor were comparable with the UAE and were 3.73 (S.D = 1.05) and 3.75 (S.D = 0.74) for Bahrain and the UAE faculty members respectively.   See Table 9 for a tabular illustration of the data.

Table 9 : Variations between the UAE and Bahrain faculty members on the hindering factors of the innovation decision process

Hindering factors of the Innovation Decision process	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Lack of clarity of tutors' role in the classroom or clinical areas.	UAE (24)	3.88	.80	.293	.771
	Bahrain (30)	3.80	1.03		
Student's lack of English proficiency.	UAE (24)	4.38	.71	1.495	.141
	Bahrain (30)	4.07	.79		
Passivity of teachers in the classroom.	UAE (24)	3.50	.98	-1.575	.121
	Bahrain (30)	3.90	.84		
Lack of support from the clinical areas.	UAE (24)	3.63	1.10	-1.178	.244
	Bahrain (30)	3.93	.83		
Lack of preparation of faculty at the beginning.	UAE (24)	3.75	.74	.066	.948
	Bahrain (30)	3.73	1.05		
Suddenness of change.	UAE (24)	3.58	.65	-.661	.512
	Bahrain (30)	3.73	.94		
Inadequate planning leading to unstructured curricula.	UAE (24)	3.58	.78	-1.041	.303
	Bahrain (30)	3.83	.95		
Lack of resources.	UAE (24)	3.79	.66	.576	.567
	Bahrain (30)	3.67	.88		
Overall Results	UAE (24)	30.08	4.41	-0.431	0.668
	Bahrain (30)	30.67	5.32		

Social system. Significant differences were noted between the UAE and Bahrain in the perception of faculty members regarding lack of support from top institutional management (t = -2.374, p = 0.021). Bahrain faculty perceived the lack of support from top management as a hindering factor in contrast to the UAE faculty members. The mean scores on this factor were 3.70 (S.D = 1.02) to 3.00 (S.D = 1.14) for Bahrain and the UAE respectively. Faculty members in both the UAE and Bahrain perceived the major hindering factor to be the lack of an identifiable, knowledgeable internal change agent during implementation, though the mean was higher in Bahrain. The mean in Bahrain was 3.83 at (S.D = 0.097) compared to the UAE mean of 3.50 at (S.D = 1.10). The least mean score in the UAE data was 3.00 (S.D = 1.14) and was related to the perception of faculty members regarding lack of support from institutional top management. Bahrain's faculty members perceived the involvement of management in classroom observation as the least hindering factor in the social system. Their mean scores were 3.37 (S.D = 0.93). The overall means of faculty members responses were higher in Bahrain than in the UAE and were high at 25.00 (S.D = 4.99) for Bahrain in relation to 23.00 for the UAE (S.D = 3.64). The data is illustrated in Table 10.

Table 10 : <u>Variations between the UAE and Bahrain faculty members on the</u>

<u>hindering factors of the social system</u>

Hindering Factors of the Social Systems	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Involvement of management in classroom observation	UAE (24)	3.29	.69	-.329	.743
	Bahrain (30)	3.37	.93		
Non-negotiable and forced change by top management within the school	UAE (24)	3.42	.88	.063	.950
	Bahrain (30)	3.40	1.04		
Lack of support from institutional top management outside school.	UAE (24)	3.00	1.14	-2.374	.021
	Bahrain (30)	3.70	1.02		
Lack of knowledgeable change agent during implementation.	UAE (24)	3.50	1.10	-1.171	.247
	Bahrain (30)	3.83	.99		
Freedom given to students under the case-based curriculum.	UAE (24)	3.17	.70	-1.838	.072
	Bahrain (30)	3.60	.97		
Inflexibility of classroom observers regarding the teaching-earning process in case based system.	UAE (24)	3.42	.78	-.754	.454
	Bahrain (30)	3.60	.97		
Perceived helplessness and defenselessness regarding decisions about change.	UAE (24)	3.46	.78	-.612	.543
	Bahrain (30)	3.60	.89		
Overall Results	UAE (24)	23.25	3.64	-1.520	.135
	Bahrain (30)	25.10	4.99		

Consequences

Desirable consequences. The two groups differed significantly overall (t = 2.38, p. = .021) regarding the perceived desirable consequences of CBC. Furthermore, on item analysis, significant differences were found between groups

regarding the effect of the case based curriculum on the teaching-earning process, students' assessments and development of students as self-learners. Bahrain's faculty members strongly agreed that the case based curriculum affected positively the teaching-learning process, students' assessment and self- learning. Faculty members in the UAE perceived the highest desirable consequences of the case based curriculum to be better student-student interaction followed by student-teacher interaction. The means for these factors were 4.54 and 4.33 respectively. In Bahrain, faculty members rated development of students as self-learners and improvement of the teaching learning process as the most desirable effects of CBC. The means were 4.67 for both factors. All the factors which emerged as desirable consequences of CBC were rated highly by both the UAE and the Bahrain faculty members, except perhaps for empowerment of the faculty's participation in decision making, which received the lowest rating as a desirable consequence of CBC from the faculty members from both countries. Nevertheless, both groups agreed that CBC did empower faculty members in decision making, although more so for the Bahrain group than the UAE group. The mean in Bahrain was 4 (S.D = 1.29) in relation to a mean of 3.54 for the UAE (S.D = 1.10). The data is displayed in Table 11.

Table 11: <u>Variations between the UAE and Bahrain Faculty members on</u> <u>Desirable Consequences</u>

Desirable Consequences	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Enhanced student-student interaction	UAE (24)	4.54	.51	.227	.822
	Bahrain (30)	4.50	.78		
Enhanced student-teacher interaction	UAE (24)	4.33	.57	-.341	.735
	Bahrain (30)	4.40	.81		
Improved the teaching-learning process	UAE (24)	4.21	.51	-3.156	.003
	Bahrain (30)	4.67	.55		
Improved the students' assessment	UAE (24)	4.00	.72	-3.228	.002
	Bahrain (30)	4.57	.57		
Empowered faculty's decision making through the various committees	UAE (24)	3.54	1.10	-1.385	.172
	Bahrain (30)	4.00	1.29		
Developed students as self-learners.	UAE (24)	4.21	.51	-3.397	.001
	Bahrain (30)	4.67	.48		
Overall Result	UAE (24)	24.83	2.62	-2.383	.021
	Bahrain (30)	26.80	3.29		

Undesirable consequences. Significant differences were found in the perceptions of faculty members in Bahrain and the UAE regarding their perceptions of the undesirable consequences of the case-based curriculum on the development of clinical skills, integration between theory and practice and students' burnout. Faculty members in Bahrain felt that the case-based curriculum led to deficiency in clinical skills (t = -2.84, p = 0.006). They also perceived the students' lack of integration between theory and practice as a major undesirable consequence (t = -2.87, p = 0.006). In contrast, faculty members in the UAE perceived the undesirable consequences to be related more to students' burnout. Student burnout was rated

as the top undesirable consequence by the UAE group and was significantly different from the Bahrain group's rating at t = 2.570 and p = 0.013. See Table 12.

Table 12 : <u>Variations between the UAE and Bahrain Faculty members on Undesirable Consequences</u>

Undesirable Consequences	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Deficiency of clinical skills among students	UAE (24)	3.38	1.14	-2.842	.006
	Bahrain (30)	4.17	.91		
Lack of integration of students between theory and clinical areas	UAE (24)	3.08	.78	-2.865	.006
	Bahrain (30)	3.73	.87		
Less content delivered under case based curriculum	UAE (24)	3.75	.99	-.542	.590
	Bahrain (30)	3.90	1.03		
Students' burnout in case-based curriculum	UAE (24)	3.79	.83	2.570	.013
	Bahrain (30)	3.20	.85		
Tardiness in taking decisions, concerning courses	UAE (24)	3.29	.96	-.411	.683
	Bahrain (30)	3.40	.97		
Overall Results	UAE (24)	17.29	3.26	-1.332	.189
	Bahrain (30)	18.40	2.85		

Unanticipated consequences. Significant differences between the perceptions of faculty members in the UAE and Bahrain regarding unanticipated consequences were only noted in the statement that copying between students was an issue at (t = - 2.924, p = 0.005). The problem seemed to be perceived more by Bahrain faculty members and was considered as a top unanticipated consequence, followed by lack of preparation of students. In the UAE, faculty members perceived inconsistency among tutors in the application of the case-based curriculum to be the most unanticipated consequence. The mean scores on this factor for the UAE was 4.21 (S.D = 0.78) compared to a mean score of 3.93 (S.D. = 0.87) for Bahrain.   In

the UAE and Bahrain, the least rated unanticipated consequence was perceived by faculty members as regression of students' performance and lack of motivation of students. Table13 presents the results.

Table 13: <u>Variations between the UAE and Bahrain faculty members on Unanticipated Consequences</u>

Unanticipated Consequences	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Regression of students' performance over the years	UAE (24)	3.25	.94	-1.407	.165
	Bahrain (30)	3.63	1.03		
Lack of motivation among students	UAE (24)	3.54	.78	-.229	.820
	Bahrain (30)	3.60	1.04		
Insufficient time to cover the objectives	UAE (24)	4.13	.90	1.423	.161
	Bahrain (30)	3.73	1.08		
Lack of preparation of students	UAE (24)	4.17	.761	-.142	.888
	Bahrain (30)	4.20	0.93		
Inconsistency among tutors in applying case-based curriculum	UAE (24)	4.21	.78	1.210	.232
	Bahrain (30)	3.93	.87		
Copying of students from senior students	UAE (24)	3.63	.97	-2.924	.005
	Bahrain (30)	4.43	1.04		
Overall Result	UAE (24)	22.92	2.67	-.588	.559
	Bahrain (30)	23.53	4.54		

Cross Case Analysis: Students' Perceptions Regarding Innovation (CBC)

This section of the report presents results on cross case analysis of students' perceptions regarding innovation in the two countries participating in this study. These results are presented with regard to facilitating factors, hindering factors, and consequences of case-based learning.

Facilitating Factors of the Case-based Curriculum

Significant differences were noted in the perceptions of students regarding the facilitating factors of the case-based curriculum at (t = 3.449, p = 0.001). Students in the UAE perceived the facilitating factors of the case-based curriculum to be more than Bahrain students especially in its ability to (a) bridge the gap between theory and practice, (b) promote self-learning, (c) increase self confidence, and (d) enhance effective communication. Students in both the UAE and Bahrain, however, agreed with most of the statements on the facilitating factors of CBC over the traditional one, though the overall mean was higher in the UAE (mean = 35.27 compared to a mean of 32.30 for Bahrain). Responses from both groups were in exact order, with improving English and promoting cooperation being rated more highly than the rest of the other variables, whereas effective communication and bridging the gap between theory and practice received low, albeit positive ratings from both groups. These data appear in Table 14.

Table 14 : <u>Variation between the UAE & Bahrain students on the facilitating</u>
<u>aspects of the Case-based Curriculum</u>

Positive Aspects of CBC	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Developed cooperative learning and participation	UAE (64)	4.58	.59	1.723	.088
	Bahrain(46)	4.37	.68		
Bridged theory and practice	UAE (64)	4.19	.81	2.538	.013
	Bahrain(46)	3.78	.84		
Built presentation skills.	UAE (64)	4.44	.64	1.375	.172
	Bahrain(46)	4.24	.87		
Improved English proficiency.	UAE (64)	4.67	.59	1.170	.245
	Bahrain(46)	4.52	.75		
Challenged students to self-learners	UAE (64)	4.44	.81	2.263	.026
	Bahrain(46)	4.04	1.01		
Promoted self-learning	UAE (64)	4.34	.84	2.955	.004
	Bahrain(46)	3.78	1.15		
Increased self confidence and esteem	UAE (64)	4.42	.87	2.588	.011
	Bahrain(46)	3.93	1.10		
Enhanced effective communication	UAE (64)	4.19	.73	3.259	.001
	Bahrain(46)	3.63	1.06		
Overall Results	UAE (64)	35.27	3.75	3.449	.001
	Bahrain(46)	32.30	5.26		

Hindering Factors of the Case-based Curriculum

Overall differences between groups on hindering factors of CBC were significantly different at (t = 3.81, p = 0.000). All the means of the responses of students regarding hindering factors of the case-based curriculum were higher in Bahrain than the UAE (mean in Bahrain = 36.16 vs. a mean of 32.75 in the UAE ; except for the effect of poor English background as a hindering factor (mean in Bahrain = 3.07 compared to a mean of 3.44 in the UAE). UAE students perceived their poor English background to be more of a hindrance to effective learning in CBC

compared to the Bahrain students. Significant differences between the UAE and Bahrain students were noted in the following aspects: passivity of teachers in the classroom, inability to locate information in the books, unavailable resources, time spent in preparation and organizing time. The most highly rated hindering factor of the case-based curriculum as perceived by students in the UAE was the lack of clarity of tasks followed by time spent in preparation. In Bahrain, the time spent in preparation was perceived as the most negative aspect followed by the organization of time. The least negative aspect in the UAE was utilization of different teaching styles in the case-based curriculum compared to students' proficiency in English in Bahrain. The data is illustrated in table 15

Table 15 : <u>Variations between the UAE and Bahrain Students on the hindering aspects of the Case-based Curriculum</u>

Negative Aspects of CBC	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Passivity of teachers in classroom	UAE (64)	3.48	1.08	-4.032	.000
	Bahrain(46)	4.28	.94		
Different styles of teachers in CBC	UAE (64)	3.38	1.15	.714	.477
	Bahrain(46)	3.22	1.13		
Difficulty in doing or understanding presentation.	UAE (64)	3.72	.93	-1.063	.290
	Bahrain(46)	3.91	.96		
Inability to locate information.	UAE (64)	3.52	1.04	-3.739	.000
	Bahrain(46)	4.22	.87		
Lack of resources	UAE (64)	3.19	1.05	-4.609	.000
	Bahrain(46)	4.13	1.07		
Managing time.	UAE (64)	3.92	.93	-2.975	.004
	Bahrain(46)	4.43	.83		
Poor English proficiency.	UAE (64)	3.44	1.13	1.887	.062
	Bahrain(46)	3.07	.85		
Time spent on preparation	UAE (64)	4.02	1.02	-3.702	.000
	Bahrain(46)	4.63	.57		
Difficulty and lack of clarity of tasks.	UAE (64)	4.09	.83	-1.159	.249
	Bahrain(46)	4.28	.86		
Overall Results	UAE (64)	32.75	5.06	-3.805	.000
	Bahrain(46)	36.17	4.01		

Desirable Consequences

Data on desirable consequences of CBC appears in Table 16. The means of all desirable consequences as perceived by students were higher in the UAE than Bahrain. Significant differences were found between the UAE and Bahrain students in four out of the five statements listed under desirable consequences at (t=3.51, p= 0.001). The UAE students perceived the desirable consequences of the case-based curriculum to be mostly related to enhancing interaction between students and the teacher, improving assessment, making the teaching-learning process more effective and creating a lively atmosphere in the classroom.

Table 16: <u>Variations between the UAE and Bahrain Students on the Desirable Consequences</u>

Desirable Consequences	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Enhanced student-student interaction	UAE (64)	4.39	.66	1.415	.160
	Bahrain(46)	4.17	.95		
Enhanced student-teacher interaction	UAE (64)	4.25	0.80	4.262	.000
	Bahrain(46)	3.50	1.05		
Improved course assessment	UAE (64)	3.83	1.03	1.993	.049
	Bahrain(46)	3.46	.86		
Made the teaching-learning process active	UAE (64)	4.17	.81	2.747	.007
	Bahrain(46)	3.70	1.01		
Created a lively atmosphere in class	UAE (64)	4.23	.89	3.212	.002
	Bahrain(46)	3.63	1.08		
Overall Results	UAE (64)	20.88	3.20	3.510	.001
	Bahrain(46)	18.46	4.02		

Students in the UAE and Bahrain perceived the most desirable consequences of the case-based curriculum to be increasing the student-student interaction. The mean scores on this factor were 4.39 and 4.17 for the UAE and Bahrain respectively. Although students rated improved student assessment the lowest compared to the

other desirable consequences of CBC, means were high for both groups at 3.83 (SD = 1.03) and 3.46 (SD = .86) for the UAE and Bahrain respectively.

Undesirable Consequences

The means of all undesirable consequences as perceived by students were higher in Bahrain than in the UAE. Significant differences were noted between students' perception in the UAE and Bahrain regarding the undesirable consequences in two major statements, namely the difficulty in locating information and the ambiguities that take place during presentation and group discussion. Students in both countries perceived the undesirable consequences in the same order. The most undesirable consequences were related to ambiguities that arise in presentation and group discussion, inability to locate information, losing time in preparing the tasks and concentration of the exam on the text books. The means were higher in Bahrain in comparison to the UAE (15.93 to 14.23) and differences were significant at (t= -3.45, p= 0.001). See Table 17 for a presentation of data.

Table 17 : Variations between the UAE and Bahrain students on the Undesirable Consequences

Undesirable Consequences	Country (n)	Mean	Std. Deviation	T	p-value (2-tailed)
Inability to locate information	UAE (64) Bahrain(46)	3.66 4.13	.95 .75	-2.821	.006
Confusion related to presentation and group discussion	UAE (64) Bahrain(46)	3.83 4.41	.97 .72	-3.467	.001
Exams centered on textbook	UAE (64) Bahrain(46)	3.14 3.48	1.10 1.13	-1.573	.119
Wasting time on preparing tasks	UAE (64) Bahrain(46)	3.61 3.91	1.08 1.03	-1.485	.140
Overall Results	UAE (64) Bahrain(46)	14.23 15.93	2.86 2.04	-3.450	.001

Relationship between Elements of Change and its Consequences

Table 18 below presents data on the relationship between elements of change and their consequences as viewed by the faculty members from the UAE and Bahrain. The innovation attributes, communication channels and implementation process were highly correlated with desirable consequences at 0.01 level of significance. Hindering factors in the implementation process and social system were also highly correlated with undesirable and unanticipated consequences at 0.05 and 0.01 respectively.

Table 18 : Relationship between Elements of Change and its Consequences in the UAE and Bahrain Faculty members

Elements of Change (n)	CONSEQUENCES					
	Desirable Consequences		Undesirable Consequences		Unanticipated Consequences	
	Correlation	p – value	Correlation	p – value	Correlation	p - value
Facilitating Innovation Attributes (54)	.652**	.000	.087	.532	.119	.391
Facilitating Communication Channels (54)	.609**	.000	.094	.497	.124	.370
Facilitating Innovation Decision Process (54)	.353**	.009	.327*	.016	.103	.459
Hindering Innovation Decision Process (54)	.131	.347	.332*	.014	.424**	.001
Hindering Social System (54)	-.049	.724	.561**	.000	.434**	.001

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Data on students' perceptions of the relationship between various elements of change and its consequences appear on Table 19. The facilitating factors were highly correlated with desirable consequences at 0.00 level, and negatively correlated with undesirable consequence at 0.05 level of significances. The hindering factors were highly correlated with undesirable consequences at 0.01 level of significance.

Table 19 : Relationship between Elements of Change and its Consequences among the UAE and Bahrain Students

Elements of Change (n)	CONSEQUENCES			
	Desirable Consequences		Undesirable Consequences	
	Correlation	p – value	Correlation	p –value
Facilitating Factors (110)	.680**	.000	-.199*	.037
Hindering Factors (110)	-.254**	.007	.569**	.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Summary of the Cross Case Analysis results for Bahrain and the UAE faculty members' and students.

Change from the traditional to case-based curriculum was triggered in both the UAE and Bahrain by educational, social and political reasons. No significant differences were noted between UAE and Bahrain on reasons for change.

In both countries, the major facilitating factors in the diffusion of change according to faculty members were related to the innovation attribute (namely its advantage), communication channels i.e., interpersonal communication, and simulated practice which had higher mean scores in Bahrain than in the UAE.

Significant differences between the UAE and Bahrain were noted in the facilitating factors of the innovation decision process. Bahrain's faculty members strongly agreed that group work and staff involvement in the introduction of change facilitated the process of diffusion. No differences were noted in the facilitating social factors. Faculty members in the UAE and Bahrain considered the presence of the change agent during the process of implementation of change as important to its success.

Significant differences were noted in the perceptions of students regarding the facilitating factors in a case-based curriculum. They were mainly centered on the ability of CBL to bridge theory and practice, promote self-learning, self confidence and effective communication and ratings were higher in the UAE than in Bahrain.

Hindering factors as perceived by faculty members were related to the complexity of the case- based curriculum and its incompatibility with the students' and tutors' backgrounds. No significant differences were noted in identifying the major hindering factors in the innovation decision process. These factors were focused on lack of planning and preparation of faculty members for the change. Significant differences were noted between both the UAE and Bahrain faculty members in identifying hindering social factors, namely in the lack of institutional top management during implementation of change. Bahrain faculty's mean was higher on this aspect.

According to students, significant differences were noted between both groups in regard to the hindering factors in the case based curriculum. The means were higher in Bahrain than the UAE in the passivity of teachers, inability to locate information and manage time, coupled with lack of resources.

Significant differences were noted between the UAE and Bahrain faculty members in the identification of desirable consequences, where the UAE faculty members' mean rated higher on the effect of CBC on the teaching-learning process, student's assessments and development of students as self-learners. Significant differences were also obtained for students in the identification of desirable consequences and were congruent with the faculty members' results. The mean of students' responses in the UAE was higher than in Bahrain. Significant differences were noted on the effect of the CBC on enhancing student-teacher interaction, improving the teaching-learning process, assessment and creating a lively atmosphere.

Significant differences were also found in the identification of undesirable consequences where Bahrain's mean scores were higher on identifying lack of integration between theory and practice, and lack of clinical skills among students. The UAE faculty members identified students' burn out as the major undesirable consequence. The means of all undesirable consequences as perceived by students were higher in Bahrain than in the UAE. Significant differences were noted in the confusion related to group presentation and discussion in addition to the inability to locate information. Unanticipated consequences were similar in both countries, except for the problem of students' copying the answers to their assignments which was higher in Bahrain than the UAE.

Finally, employing Pearsons' coefficient of correlation for faculty members' responses, it was found that the innovation attributes, communication channels and the implementation process were highly correlated with desirable consequences at 0.01 level of significance. Hindering factors in the implementation process and the social system were highly correlated with undesirable and unanticipated

consequences at 0.05 and 0.01 level of significance. With respect to students, the facilitating factors were highly related with desirable consequences at 0.00 level of confidence. The hindering factors were highly correlated with undesirable consequences at 0.01 level of significance.

CHAPTER 6

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In this chapter, the researcher will discuss the results from the UAE and Bahrain, following Roger's conceptual framework. In discussing the results, the researcher will focus on the similarities as well as the differences between the UAE and Bahrain. The researcher will follow the case study protocol, starting with the reasons for change and then the nature of change. Analysis will then follow Roger's conceptual framework, i.e. discussing attributes of innovation, communication channels, time and the social system.

The innovation that took place in both the UAE and Bahrain was the introduction of a complete change in curriculum that shifted from the traditional model to the case-based curriculum. The change involved a total change in curriculum material, new teaching approaches and pedagogical beliefs, which shifted the focus of the teaching-learning process from the teacher to the student. It was considered as an innovation in both the UAE and Bahrain because it represented a complete "departure from common practice" (Adams & Chen, 1981, p.223).

Reasons for Change

The change was triggered by several cultural, political and educational factors. Educational factors dominated in both countries as reasons for change. Dissatisfaction with the old curriculum, a better caliber of students joining the nursing profession, and wanting to be in line with the recent expectations of international nursing organizations seemed to be the major drives for change in both countries. The findings were found in both the qualitative interviews and the self-administered questionnaires employing the T-test at 0.05 level of confidence.

Change in both countries was also driven by other social and political reasons. In both the UAE and Bahrain, dissatisfaction in the nursing service with the quality of nursing graduates, and the vast changes taking place in the health sector were Cited in both faculty members and students. Bahrain, being nominated as a WHO center in the region, had to meet the expectations of WHO and be ahead of other countries in the region. According to management, the new curriculum was supposed to meet the expectations of stakeholders in the country and be a role model to all countries in the Arab Gulf region. This issue was mentioned only by senior managers who saw in the new change a chance for the nursing division at the College of Health Sciences to reassert itself as the pinnacle of expertise in the Arab Gulf region. This enthusiasm was not shared by any faculty member, hence there were different perceptions of the reasons for change at the outset.

The UAE, unlike Bahrain, had a change in institutional governance with the departure of the American University of Beirut. The administration perceived the curriculum change as aiming at raising staff morale by making them feel that they could succeed on their own. The need to raise staff morale as a reason for change was, in fact, raised by management only. None of the faculty members identified this factor as a major reason for change. This could be due to the fact that more than 50 % of the faculty members resigned upon the departure of the American University of Beirut for fear of insecure jobs. Hence, a number of the staff interviewed only joined the Institutes after the American University of Beirut had already left.

Dissatisfaction with the old curriculum as a reason for change is congruent with the first step in Ely's conditions of change and the first stage in the C-R-E-A-T-E-R model, which is dissatisfaction with the status quo (Ely, 1990; Havelock & Zlotolow, 1995). Swansburg (1996) also, feels that the first stage emerges when people are dissatisfied and their expectations are not met. Change in nursing

education is not always driven by a felt need or dissatisfaction of faculty, or management. Mchale claimed that worldwide, changes taking place in nursing education are usually triggered by the profession and governmental policies (cited in Crotty & Butterworth, 1992). In the Arab Gulf region, national reform directives are mainly issued by the Arab Gulf Cooperation Council (GCC) Nursing Technical committee, the nursing development committee in Bahrain and International organizations like WHO which has a strong presence in the Gulf, especially in Bahrain, which is nominated as a collaborating center for nursing development.

Historically, other factors have shaped nursing curricula and the pedagogy followed in teaching the content. These factors are (a) changes in the health care delivery system, (b) health human resource requirements and management, (c) international organizations, (d) national education reforms and policies, and (e) information technology (Alwan & Hornby, 2002; Hantas, 2001; Henry, 1996; ICN 1996; Tompkins, 2001; Watkins, 2000). In the new millennium, nursing education is trying to respond to all the vast changes taking place in the health care sector by preparing students to be life-long learners. The faculty members tend to emphasize the process of knowledge acquisition rather than the content. Developing critical thinking abilities, problem solving and self-directed learning skills are becoming the mandates of several nursing curricula (Carpio, 2001; Hasida, Yagil & Spitzer, 1999,).

One of the studies that illustrates the sources of educational innovation was carried out by Berman and McLaughlin (1977, 1978). These researchers studied 293 federally sponsored educational change projects. They found that the decision to get involved in an innovation could stem either from the school administration trying to get funds or from a desire to solve a local need. Innovations driven by need tended to achieve more success than those driven by the need of funds. Hall and Hord

(1987) claimed that the source of the innovation is not as important as the process of planning and implementing the innovation.

Starting change even in the presence of a perceived need or dissatisfaction with the situation is not always an easy task. Managers may perceive certain needs, which may not be a priority to teachers or students. Consensus on the priority of needs from the outset will encourage all stakeholders to be involved in the process of setting the scheme for change and driving it forward. Perceptions of the faculty members in Bahrain about the social and political reasons for change reflected a different perspective from those of management for change. The difference is related to lack of agreement on common needs and goals from the beginning. Agreement on common goals from the beginning provides "a screening mechanism for helping groups sort out and integrate competing priorities" (Fullan & Stiegelbauer, 1991, p. 69).

Agreement on goals looks to be the first step in initiating change. Miles (1987) claims that vision entails agreement on objectives, content and the process of change. It focuses on two major areas "shared vision of what the school could look like; it provides direction and driving power for change ... The second type is shared vision of the change process... what will be the general ... plan or strategy" (Miles, 1987, p.12). Involvement of all stakeholders in initiating, implementing and monitoring implementation will ensure a smooth course for the innovation (Fullan & Stiegelbauer, 1991). Racine (1998), in support of Fullan and Steigelbauer, claimed that programs that have a clear vision, and have coherent steps to achieve the goals are more likely to succeed than those whose goals are not well articulated.

In planning the change, faculty and the management in Bahrain seemed to have different reasons for change and its meaning. Failure to take time to create a shared meaning for change seem to have led to feelings of inadequacy and lack of

ownership of the new curriculum. It is crucial at the beginning of any change to establish a common meaning for change. Managers, students, nurse educators and other service personnel should have a common understanding and vision of what the change entails. Change will not succeed individually and collectively unless people are "clear about new educational practices that they wish … to implement" (Fullan & Stiegelbauer, 1991, p. 46). To Hall and Hord (2001) "meaningful change is not going to be possible until people at all points come to understand the whole system and begin to trust members at other points" (p.12). The meaning of change seemed blurred in Bahrain, where the faculty expressed in interviews that they were not sure of the meaning of change, and implemented it by trial and error.

Many studies were conducted highlighting the role of leadership in formulating a common vision among all parties in planning change. One such study was conducted by Louis and Miles (1990). They surveyed 178 urban school managers who were engaged in improvement endeavors for up to four years. In addition, case studies of five high schools were conducted in an attempt to highlight conditions for success and improvement. The major conditions for success in schools were the presence of a shared vision among all stakeholders. Shared vision does not mean agreement on goals only. Shared vision looks at the whole change process, with detailed implementation plan, strategies, and resource allocation. Rosenholtz (1989), based on the results of a study involving 78 elementary schools in eight districts in Tennessee confirmed the importance of having a clear common vision among all parties.

Nature of Change

An important factor to be considered in introducing change is the choice of a strategy for implementing change. Strategies employed in introducing change seem to decide the course of change and whether people adopt or reject the change. In

Bahrain, the power coercive strategy mentioned by Chin and Benn (1985) was used in introducing change, as emerged from the excerpts of interviews obtained from faculty members. This strategy does not allow people to own the innovation from the beginning. It perpetuates feelings of helplessness among adopters who have to wait for directions from the top management to resolve issues and problems. The problem becomes worse when people are not given the chance to participate actively in the innovation so that they become clear about the innovation and ways to implement it.

Similar to Bahrain, UAE management exerted authority to create the momentum for change. The implementation process itself however, followed the normative-re-educative strategy. The Institutes of Nursing (ION) started a series of workshops over one year to prepare the faculty members for change. The faculty chose the case-based curriculum and started preparing the cases under the supervision of a Professor who was seconded to the Institutes for one academic year. The perceptions of the faculty members regarding the introduction of change as stated in the interviews were very positive in contrast to those of the Bahrain faculty who felt that change was forced on them.

Differences of opinions in change theories exist as to the effectiveness of authority decisions in introducing change. For instance, for Rogers (1995) authority decisions in introducing change are more likely to accelerate innovation adoption and diffusion compared to optional and collective decisions. Chin and Benne (1985) hold an opposite opinion and maintain that power coercive strategies are less likely to be effective in introducing change. Louis and Miles (1990) found that the best educational environments had a constructive blend of top management input and participation of people at all levels. The two countries started at the same place in the choice of strategy. In both the UAE and Bahrain, the decision to introduce

change in the curriculum was made at the level of top management. This, however, was as far as the similarities went in the strategies followed in introducing changes in the UAE and Bahrain.

Contextual factors seem important in considering planning change. In considering these factors, the change agent needs to understand the culture of the organization and to identify driving and restraining forces (Lewin, 1951). This understanding will allow the change agent to unfreeze the restraining forces and work on the driving forces in the system. One major restraining force is the provision of adequate human and material resources before implementing change (Adams & Chen, 1981; Zaltman & Duncan, 1977). Technological support seemed not to have been taken in consideration in preparing for change in Bahrain. Excerpts from students' and faculty members' reports, in Bahrain reflected the lack of resources, like computers, books and journals at the college, five years after implementing change. These lacks made implementation difficult since the innovation required students to be self-learners with easy access to learning resources.

Another restraining force in the UAE was staff instability. The instability of the workforce at the Institutes of Nursing created an unstable environment where new staff members were continually joining the Institutes. Gulka (1993) claimed "a permanent staff builds the necessary level of trust with its community which is the basis of the school's effectiveness" (p.19). Both the UAE and Bahrain lacked a structural staff development program that could cater to the needs of novice faculty members and equip them with expertise. Orientation of new faculty members in both countries was focused on the provision of reading material and allowing them to attend classes. Joyce and Showers (1980) emphasized the importance of a well-structured staff development program and related it to students' outcomes.

Facilitating factors.

The change and strategies followed in introducing change were not the only different characteristics noticed in Bahrain and the UAE. Other differences were perceived by nurse educators and students as either facilitating or hindering the process of change, such as the attributes of innovation, communication channels, time and the social system.

Starting with the facilitating factors regarding attributes of innovation, both Bahrain and the UAE faculty members perceived the relative advantage of the case-based curriculum over the traditional one and affirmed their satisfaction with it. Findings were supported by the T-test at 0.05 level of confidence and no significant differences were noted between the groups. Themes that emerged from the faculty members in the interviews in both countries emphasized the ability of the case-based curriculum to affect students by promoting (a) their self-learning, (b) their retention of information and (c) bridging theory and practice. In the UAE, however, faculty mentioned, in addition, the effect of case-based learning on diversifying and improving the teaching methodologies of the nurse educators and creating a lively atmosphere in the classroom. These findings suggest that CBL could have changed positively the teaching methodologies of the nurse educators in all courses, including those courses that were not taught using the case study approach leading to lively interactive sessions.

Literature review on case-based learning confirmed the advantages Cited in the faculty in both the UAE and Bahrain. Christensen and Hansen (1987) claimed that case-based learning is a process-oriented approach that enhances problem-solving skills. Research done in the field of case-based learning cited several advantages of case-based learning such as creating a lively atmosphere in the class, increasing communication between and among teachers and students and

improving academic performance. Other advantages were related to encouraging students to be life-long learners, enhancing students' confidence and bridging theory and practice (Neil, Lachat & Taylor-Panek,1997; Thomas, O'Connor, Albert, Boutain, Brandt, 2001; Tompkins, 2001)

Benner (1984) found that proficient and expert nurses had many exemplar cases in their curriculum that they had utilized in the clinical area in taking clinical decisions. Benner claims "Proficient performers were best taught by use of case-studies where their ability to grasp the situation is solicited ... proficiency is enhanced if the student is required to cite experience and examplars for perspective" (p.30). Group work and class discussion, with emphasis on inquiry-based, collaborative and cooperative learning, are the main teaching strategies used in case-based learning. Case-based learning seems to provide an enjoyable experience to both faculty members and students. A study conducted in Georgetown University School of Nursing in a sophomore course, "Clinical decision making in Nursing", seventy two students and three faculty members worked in groups using patient cases. Each of the three faculty members was responsible for facilitating the discussion for 24 students.. The evaluation of the course revealed that the faculty and majority of students enjoyed the group discussion, lively atmosphere and patient-centered cases (Neil et al., 1997).

A series of studies were conducted to find out the advantages of case-based teaching and learning. Cases were drawn from the clinical areas and used in advanced psychiatry courses delivered at the University of Washington. The advantages of case-based learning and teaching were found to be increased confidence among students, increased clinical critical reasoning and bridging the gap between theory and practice. (Thomas et al., 2001). Other studies using narrative pedagogy in which students brought their personal experiences with patients to the

classroom confirmed an increase of discourse between teachers and students and that thinking was stimulated (Diekelmann, 2004).

Research has demonstrated the positive effect of using the case-based learning in improving the academic performance of students and increasing comprehension and synthesis of subject matter. Cravener (1997) found that using cases in teaching an undergraduate psychosocial nursing concept course to a large group of students yielded positive academic outcomes. Students were divided into groups and asked to work on specific tasks. The achievement scores of students ranged from 72% to 98% with a mean of 86%. Students' journals for the majority of student showed deep comprehension and synthesis of the psychosocial concepts.

Students, in both the UAE and Bahrain, perceived the relative advantage of case-based learning over the traditional method in improving their English language and increasing their self-learning abilities. In the UAE, students mentioned in addition to the ability of the case-based curriculum to bridge theory and practice and to develop cooperative learning and participation skills. The self-administered questionnaire results supported the interviews. Students in both the UAE and Bahrain perceived the advantages of the case-based curriculum over the traditional one, though the mean was higher in the UAE (4.17 to 3.69). Johnson and Johnson (1989) surveyed 193 studies in which cooperative learning was used as a major instructional method. The findings confirmed that interpersonal relationship among students and between students and teachers increased. Motivation, collaborative skills and academic achievement increased as well.

The findings suggest that students in the UAE had a better-facilitated approach in the classrooms, which made the students appreciate participation and cooperation. The proper facilitation of classroom discussion and group work by a skilled facilitator is a prerequisite for the success of the case-based method

(Cravener, 1997). The facilitator's role is critical under all student-centered teaching methodologies employing collaborative and cooperative learning. The facilitator should pay special attention to group work because dysfunctional groups may jeopardize the teaching-learning process. In a study conducted in a Brazilian Medical School seeking tutors' and students' opinion regarding the tutorial groups conducted under problem-based learning (a student-centered teaching philosophy); tutors and students agreed that the major problems were related the effectiveness of the tutors' group dynamics and facilitation skills (Zanolli, Boshuizen & DeGrave, 2002).

Communication channels are vital elements for the success of an innovation and its diffusion. Interpersonal communication played an active part in the diffusion of innovation in the UAE and Bahrain. Potential adaptors tend to ask advice from senior people whom they perceive to be well versed in the innovation. Rosenholtz (1989) claimed that collaborative schools (learning-enriched schools) were characterized by teachers who continually built up their skills through consultations with colleagues and by attending conferences. In the self-administered questionnaire, the faculty members in Bahrain and in the UAE regarded highly the effect of interpersonal relationship and peer simulation in the introduction and diffusion of change, though its effect was higher in Bahrain where peer simulation was more emphasized.

In the UAE and Bahrain, nurse educators mentioned in the interviews that they depended on each other for consultation though the picture was different in each country. In the UAE, the communication seemed more of a personal informal manner that involved telephoning, personal conversation and attending classes. They expressed their satisfaction in getting appropriate useful feedback from colleagues. In Bahrain, though interpersonal relationships were mentioned as a

facilitating factor, faculty members expressed doubt in their interviews about the usefulness of the communications, since no one was considered as an expert.

Other differences were noted between both countries in the communication channels particularly in simulated practice. In the UAE, simulated practice in front of peers was perceived as a positive drive for change. Faculty members in the UAE had an opportunity to practise in front of their peers before adopting the new curriculum. The Faculty members who participated in the inception of change, and therefore, experienced the change from the traditional to the new case-based learning curriculum at the Institutes expressed satisfaction with simulated practice. Simulated practice was done in front of the external change agent who provided feedback and the faculty members were encouraged to share in the discussion.

Several scholars and theorists have stressed the significance of simulated practice in facilitating learning. One of the leading theorists of social learning theory is Bandura (1977). His theory of efficacy claims that learning happens by observation, imitation and modeling. Modeling will succeed if the model is competent, has power and gives relevant information to participants. The efficacy of simulated practice is also discussed in Joyce and Showers' (1980) model. The model has five major components, which are presentation, demonstration or simulated practice, allowing participants to practice in the workshop session, providing advice and feedback and finally coaching. One of the studies that tested the efficacy of Joyce and Showers' model was conducted by Bush (1984). He found that around 19% of people transfer the skill if they are provided with presentation, simulated practice and allowed to provide feedback about the skills. The percentage increases up to 95% if people are provided with coaching by an expert. Coaching plays a pivotal role in enhancing teachers' adoption of new learning practices in a supportive and collaborative atmosphere. The expert coach provides constructive

immediate feedback to help teachers to slowly transfer the newly learned teaching skills into the classroom environment (Bush, 1984).

In Bahrain, faculty members agreed strongly that peer simulation helped in the introduction of change. The findings in the self-administered questionnaire revealed a higher mean in Bahrain than the UAE (4.47 to 3.71). The result differed from the interview findings where faculty expressed lack of peer simulation in the introduction of change. This contradiction could be attributed to faculty members' misunderstanding the question and valuing what they hoped to have rather than what they really had had.

In the process of introducing innovation, faculty members in both countries perceived the introductory workshops as a major facilitating factor. The Faculty members in the UAE, however, had a more positive attitude expressed in the interviews, towards the workshops that were held over a year and were preceded with reading materials. The Faculty members in the UAE were also involved from the beginning in the choice of the curriculum and hence developed shared meaning and shared decision-making from the outset. The questionnaire results showed that faculty members in Bahrain agreed strongly more than the UAE faculty that introductory workshops and staff involvement were important in introducing change. The mean in Bahrain was 4.63 compared to 4.04 in the UAE. The contradiction between the interviews and the questionnaire could suggest that faculty members misunderstood the question and answered what they hoped to see happening rather than what really happened.

An aspect of the social system identified solely by the UAE faculty members in the interviews as a major facilitating factor was the presence of an external change agent during the process of implementation. The continuous constructive feedback, open dialogue and the help rendered by the external change agent were

perceived as extremely important by the faculty members who were present during the implementation phase. The findings were supported by the self-administered questionnaire with the mean higher in the UAE than Bahrain (4.04 to 3.87).

The impact of a knowledgeable external change agent has been documented in several studies. McHugh and Stringfield (1999) in their 3-year analysis of the implementation of a core curriculum in five schools in the United States found that success of implementation was related to the provision of adequate resources and the presence of an involved leader during implementation. Joyce and Showers' (1980) theory establishes that coaching during change would increase the success of acquisition of new skills by 76%. Other studies that highlight the importance of having external change agents in the process of change were cited in Cox (1983). In a study of 80 external consultants who worked with 97 local schools, Cox found that the external facilitator was perceived to be helpful by teachers. The facilitator made them aware of the innovation, and provided continuous support and training.

Hindering Factors

Differences as well as commonalities were noted in the perception of faculty members and students in Bahrain and in the UAE regarding the hindering factors in the process of change.

The case-based curriculum was perceived by faculty members in both countries to be incompatible with their didactic background and their traditional teaching methodologies. In both the UAE and Bahrain, faculty members perceived the case-based curriculum to be incompatible with students' cultural and social background. Students' poor English background, and the restricted social customs, which did not allow students to come to the nursing school after school hours were incompatible with the case-based method curriculum. Faculty members felt frustrated because cases were time-consuming and students came unprepared to

their classes. Literature attests to studies where incompatibility of the change with the nurse educators' old role made them frustrated integration of nursing colleges in the United Kingdom with higher education resulted in changes in the roles of teachers like teaching a large group of students and leaving the clinical areas. This change in the role of nurse educators made them perceive change as a "nightmare" (Carlisle, Kirk & Leuker, 1996).

In the UAE, faculty members claimed that the cultural and educational background of some faculty members made them inflexible to change. Fullan and Stiegelbauer (1991) claim that cultural changes are hard to achieve and demand "strong persistent effort because much of current practice is embedded in structures and routines and internalized in individuals" (p.143). Under the case-based curriculum, faculty members are expected to encourage the participation of students and to deal with them on equal basis in the classroom, a philosophy that was threatening and unacceptable to some faculty members. "Building a community that encourages participation and sharing around the analysis of cases requires openness to opposing view points ... takes time, careful planning and many opportunities to engage in discussions" (Risko & Kinzer, 1999,p.55).

Students in both countries perceived the case-based curriculum to be incompatible with their learning styles, as they had been taught in the traditional method throughout their schooling. They also felt that the requirements of the case-based curriculum were demanding and needed more effort. To them adult learning was a difficult task which was frustrating especially with their poor English background. Presentation was suited only to the courageous students who could talk boldly in front of their colleagues. A study conducted in the UK to establish the advantage of students acting as teachers in an inquiry-based nursing curriculum confirmed the dislike of students for presentation. Students did not feel at ease

delivering lectures and considered that presentation needs expertise, which can only be delivered by skilled experienced facilitators (Morris & Turnbull, 2004).

Another hindering factor perceived by faculty members in Bahrain was dissatisfaction with the cases. Faculty members were dissatisfied with the content and the design of the cases. At the beginning faculty chose the cases too hurriedly, only to find out later on that they did not meet the needs of the students. To resolve the issue, more content was added to the cases. At times the added content was contradictory to the patient's condition; and often made the cases incoherent and unauthentic. This defeated one of the most important purposes of case-based learning, that is, providing students with authentic teaching/learning experiences and thus bridge the gap between theory and practice. Hence, faculty lamented that students failed to bridge the gap between theory and practice, knowledge gained in the classroom was not transferred to clinical learning.

Complexity as a major attribute of the innovation was perceived as a hindering factor by faculty members in both countries. This was an expected result since the case-based curriculum represented a complete deviation in its teaching methodology from the traditional curriculum. Faculty members in Bahrain perceived the case-based curriculum to be more complex in terms of preparation required and the teaching- learning methodology. In the UAE, more insight and understanding of the dynamics involved in teaching in the case-based curriculum were noticed. Faculty members mentioned in detail the difficult aspects as related to classroom management, motivating students, participating and collaborating. The findings in the self-administered questionnaire corroborated the interviews. Faculty members in the UAE and Bahrain perceived the complexity of the case-based curriculum to be higher than in the traditional curriculum. Means were high at 3.92 for the UAE and 3.83 for Bahrain. Eggen and Kauchek claimed that case-based teaching is more

complex than the traditional curriculum because "learning to guide students into genuine understanding is much more sophisticated and demanding" (cited in Sudizna, 1999, p.16).

One may argue that complexity does not always hinder implementation; in fact it might trigger improvement. Crandall, Eiseman and Louis (1986) found that people who attempt to introduce major complicated changes tend to accomplish more than people who introduce minor changes, since complexity challenges people to work harder to accomplish it. They claimed "the larger the scope and personal demandingness of a change, the greater the chance for success (p.25). Schorr (1997) claimed further that programs that have ambitious goals demonstrate more success than programs which do not introduce major alterations to the teaching-learning process. On the other hand, one has to be cautious in attempting a major change, which involves multi dimensions, like the introduction of CBC to both the UAE and Bahrain. Utter failure will result if change is not planned properly, or time is not allowed to introduce the new innovation or if the innovation itself is beyond the ability of adopters (Fullan & Stiegelbauer, 1991).

Communication was another hindering factor, which was shown more explicitly in Bahrain. Lines of communications were highly structured and bureaucratic and were obstructed at the top of the hierarchy by an academic council, which was not supportive of the innovation. All decisions concerning changes suggested by faculty members were stopped by the academic council, including acquisition of technological support. The interpersonal relationship between colleagues did not help in Bahrain because they felt that none was prepared well enough to teach in a case-based curriculum.

Regarding the hindering factors in introducing the innovation, differences were distinctly seen between the UAE and Bahrain. In Bahrain, the lack of planning and

preparation and suddenness of change were noted as major impeding factors to the success of the innovation. Faculty members had insufficient time to prepare cases and did not have adequate resources. Developing cases needed resources as well as money (Billings & Halstead, 1998). For change to succeed, ample time should be allowed to adopt the innovation. The shorter the time between adoption of the innovation and its implementation, the more chances there are for the innovation to fail (Huberman & Miles, 1984).

The situation in Bahrain was further handicapped by the absence of expertise among all faculty members, including the director who initiated change. Faculty members felt frustrated, overwhelmed and did not know how to handle their concerns. They expressed their frustration over the lack of support received during the introductory phase, and the lack of expertise among all, including the director. In the absence of an expert model, modeling of behavior did not take place. The major role of the faculty member under the case based method is to "help students develop reasoning skills by modeling those skills in his own approach to the case and by being directive in leading students through steps in the reasoning process" (Hughes, Donaldson, Kardash & Hosokawa,1997, p. 446). Faculty members, especially in Bahrain, failed to facilitate classes and group discussion and in their turn, failed to be role models to their students. Faculty then opted to try by trial and error or be silent during the session or go back to the traditional lecturing that they were comfortable with.

Several experts in the field have voiced their concerns about the dangers of implementing change without having enough knowledge. Ely (1990) notes that: "without the specific knowledge and skills to bring about the change, the individual is helpless" (1990, p. 300). The self-administered questionnaire findings corroborated the interviews. The mean of faculty members in Bahrain was higher than in the UAE

in regard to suddenness of change (3.73 to 3.58) and inadequate planning (3.83 to 3.58).

During implementation, teachers voiced concern about lack of induction and structured development programs to prepare them to adapt to their new role as facilitators in the classroom. Sabring and Bryk (2000) claimed that professional development in schools should focus on classroom activities. Rosenholtz (1989) found that schools that were continuously improving were characterized by a successful staff development program. Joyce and Showers (1980) in their work with administrators and teachers established a clear link between staff development, implementation and students' outcomes.

Lack of planning in the introduction of change was perceived as a hindering factor by several nurse educators (Carlisle, Kirk & Leuker, 1996; Davis, 1991; Hallett, 1997). Ely (1990) commented on the need for people to have enough time during the change process by saying "Implementers must have time to learn, adapt, integrate and reflect on what they are doing" (p.300). Ely further claimed that adopters do not want to follow the innovation blindly but they would like to see a "firm and visible evidence that there is endorsement and continuing support for implementation" (p. 301). The UAE and Bahrain faculty members mentioned in the self administered questionnaire that there was lack of planning in the introduction of change, though the mean of responses was higher in Bahrain than in the UAE (3.83 to 3.58). The lack of planning mentioned in the UAE could be attributed to the fact that more than 30 % of faculty members interviewed joined after 1997, the year of planning change.

Planning for change also entails getting the support of stakeholders. This is a major task and the onus falls on the management. Without the support of the stakeholders, systematic changes might not work out, creating animosity among key

stakeholders in the system.   In the U.A. E, the board supported the change triggered by the administration and provided the necessary funding in recruiting a consultant to plan change over a year, and, at a later stage, an external change agent during the period of implementation. In Bahrain, political support from the major stakeholder (academic council) was granted at the beginning, to be denied at a later stage when the council felt that change was imminent. This made introducing and implementing change very difficult.

Stakeholders' support is essential for change to succeed. The importance of the support of stakeholders has been cited in literature. Perhaps one of the best examples is the Fullan and Stiegelbauer (1991) model on the new meaning of educational change. These researchers emphasized the importance of getting the support of all stakeholders before initiating change .The stakeholders include the teacher, the principal, the student, the district administrator, the consultant, the parent, the community and the government. All stakeholders are expected to have a common meaning for and vision of change. In Bahrain, the bureaucratic organizational hierarchy dictated getting the support of all stakeholders namely the minister, the assistant undersecretary, the dean of the College of Health Sciences, faculty members and finally students. Faculty members and students were not consulted at all. Furthermore the chairperson tried to get the approval of the minister by bypassing the dean, a move that proved to be unsuccessful in the long run.

In introducing change, the personal characteristics of the management or the initiator of change should not be underestimated. One of the major personal characteristics is the slow and gradual introduction of change by the change agent. The management needs to "give them (referring to people experiencing change) the chance to come to terms with what the changes mean for them personally. "People need some space and time to do this effectively" (Secrets of Successful Change,

1999, p.1). Hall and Hord (1987) conducted a study in three schools in three states in U.S.A and found that principals' styles as change facilitators correlated 0.76 with implementation success. Schools that have an initiator – style were found most successful followed by managers and last but not least important by responders. Initiators have clear vision and strategy of what the change entails. The decisions are made in consultation with teachers and are goal-oriented. Managers manage the operational aspects in the schools and are not good at delegating tasks. Responders focus on crisis management rather than long-term planning.

The hierarchical bureaucratic structure at the nursing division of the College of Health Sciences determined the flow of information and decision at the college. It also throws light on the leadership style in the Arab Gulf region, which is highly authoritarian and bureaucratic (Younis, 1993). The leadership style in most organizations in the Arab Gulf region is based on cultural values, which are unique and may differ slightly from one country in the Gulf to the other. In a study conducted by Welsh and Raven (2004) examining the relationship between small management enterprises and employees' perception of customers' service, slight differences among citizens in the Arab Gulf countries were found. Welsh and Raven (2004) reported that Saudis tend to be more authoritarian while Kuwaitis were more tribal. In general, the Bedouins have their own culture values, which are focused on a patriarchal family and on top-down authority. Decisions in most organizations are centered on managers. This hierarchical type of authority produces inefficiency and ineffectiveness because decisions are centralized (Younis, 1993).

Muna's (1980) study of the attitudes and behaviors of 52 Arab executives sheds further light on the management style of Arab managers. He claimed that decision-making in organizations is mainly consultative, and that delegation is still relatively very small. Managers manage by surrounding themselves with a group of

subordinate submissive employees who are loyal to them. Loyalty is regarded highly by managers and is regarded more highly than any other organizational value. It is worthwhile noting that there had been a very slow shift in the past years in management styles of Arab managers towards democracy, with focus still on consultation, own decision, and last on delegation. Consultation is done on a one to one basis rather than in groups or using teamwork (Muna, 2003).

Abbas and Al-Shakhis (1985) contrasted North American managerial styles with Saudi Arabian styles and found that the leadership styles are completely different. Saudis tend to exercise a consultative rather than a participative leadership style. Organizations in Saudi Arabia are hierarchical and centralized. Other differences were noted in recruitment and promotion. In the U.S.A recruitment proceeds according to predetermined standards and according to preset criteria that include qualification and experience. In Saudi organizations, selection is subjective and closely related to familial ties. Planning is minimal and evaluation is informal.

The authoritarian management style was an impeding factor to the introduction of CBC in Bahrain. The majority of faculty members were expatriates who perceived the management directive as an order, which could not be challenged. They felt intimidated and were engaged in the process with unclear goals and limited knowledge of the dynamics involved in CBC, which led to utter failure. Feelings of ambivalence, sense of loss of control and uncertainty were verbalized by faculty members in the UK after the implementation of Project 2000 (Stew, 1996). A study conducted by Sheppard and Brown (1996) which covered eight schools in Newfoundland, with 139 teachers and 2623 students revealed that 72% of teachers believed that the director was the most critical determinant for school improvement. Leadership was perceived to be "democratic, participatory, visionary, change-oriented, visible, supportive, collaborative, goal-oriented and

intellectually stimulating" (p.5). Training of the Director was found to influence the director's behavior and the students' outcomes and to lead to a cooperative professional culture.

As an initiator of change, the director or head of school is required to be an expert in the innovation, involve people in the change process, develop credibility, and the ability to delegate, while monitoring the accomplishments of the tasks (Hall & Hord, 1987). Both the UAE and Bahrain faculty members in the self-administered questionnaire identified the lack of an identifiable knowledgeable change agent during the process of implementation as the major hindering social factor. The mean of the faculty members' responses was higher in Bahrain than in the UAE (3.83 to 3.50). Faculty members in Bahrain felt overwhelmed by a change directed by a person who was not perceived as an expert with the change. Several scholars have found that the teachers' perception of the role of the director or head of school is important. For instance, according to Berube, Gastone and Stepans (2004) "Teachers' perception of the principal as an instructional leader can have a major impact on the school culture and the success of professional development of teachers" (p.1).

Fullan and Stiegelbauer (1991) claimed, "Educational change depends on what teachers do and think" (p.117). The innovation that took place in both the UAE and Bahrain demanded a total shift in teachers' teaching methods which they were not well prepared for, especially in Bahrain .The teachers' felt that the innovation aggravated their load since they were preparing cases, teaching, and supervising students in the clinical areas. Fullan and Stiegelbauer (1991) claimed that a new innovation "can either aggravate the teachers' problems or provide a glimmer of hope" (p.126). The Bahraini teachers felt frustrated and just applied case-based learning methodology by trial and error. They were unhappy to relinquish an old role,

in which they were experienced for a new role, for which they were unprepared. That nurse educators experienced similar feelings in situations which lacked proper planning and were cited in many studies namely (Adams & Chen, 1981;Carlisle, Kirk & Leuker, 1996; Davis, 1991; Hallet, 1997; Stew, 1996). In response to the forced change by administration, nurse educators kept a passive and powerless profile because they felt that they were not equipped to meet the demands of case-based learning.

In the implementation process, similarities as well as differences were noted between Bahrain and the UAE. In both countries faculty members, mentioned the social and cultural factors of students as major hindering factors. The issues centered on their weak English background, their social upbringing and their academic preparation. In Bahrain, similar to the UAE, the educational and cultural background of students was a concern to faculty members. Faculty members perceived the didactic educational background of students in schools as a major impediment to CBL. Culturally, students according to faculty members, were raised up at home and at schools not to challenge authority figures, which impeded the active teaching-learning process advocated under CBL. The finding is not strange in the UAE and Bahrain since both countries share common social and cultural values. The findings were supported in the self-administered questionnaire. Faculty members in both the UAE and in Bahrain perceived English proficiency and the academic and social background of students as major hindering factors though the mean was higher in the UAE for English proficiency, (4.38 to 4.07) and for academic and social background of students (4.29 to 3.87).

A study (Billeh 2002) done in the Gulf concerning the level of secondary students, reported the weak English background of students. Billeh's study also revealed that that the quality of publicly funded schools is not up to the expected

standard. He/she also advocated the development of new teaching methodologies to allow students to meet the requirements of the new millennium. The reason behind weak English proficiency is that English instruction is not provided in the early grades and teaching occurs in a mixture of Arabic and English. The lack of planning in the educational system is clear in the lack of congruence and compatibility between individual and societal needs on one hand and educational goals on the other.

Faculty members were also concerned about their role in the classroom under the case-based curriculum, though the concerns seemed more pronounced in Bahrain than in the UAE. In the UAE, the role of faculty members in the classroom was perceived to be related to the cultural and educational background of the nurse educators. Tutors coming from didactic educational background were inflexible in their teaching methodologies and uninterested in change. In both countries faculty members were not confident in the role of the facilitator. They lacked clarity regarding their role in the classroom and the clinical areas. Facilitation became a hard task which was compounded by the students' English and social background.

In Bahrain, in addition to the above concerns, faculty members expressed concern over lack of resources, which also impeded change especially when the innovation required allocation of proper resources. In implementing change, administrators need to support the change process and provide the necessary human and material resources; Hall and Hord (2001) claimed, "If administrators do not engage in ongoing active support, the change effort will die" (p.13). The lack of clarity of the faculty's role in the classroom emerged in the self-administered questionnaire. Faculty members in both the UAE and in Bahrain were unclear about their facilitation role in the classroom or clinical areas. The mean scores in both countries were close (3.88 for the UAE to 3.80 for Bahrain).

Students in both countries corroborated the faculties' perceptions regarding their language proficiency deficit which made them spend a long time in preparation. Their awareness of their poor English background made the demands of CBL a chore in terms of preparing tasks and presentations. Differences were noted regarding their perceptions of the hindrances in the case-based curriculum. In the UAE, the major hindering factors were related to their lack of English proficiency, the vague tasks in the cases, method of preparation and individual differences among students in presentation skills.

In regard to the method of preparation, students in the UAE described writing the answers to tasks as an ordeal which consumed their time, rather than the preparation process itself, as mentioned by Bahraini students. In the presentation, the individual differences between students seemed an unfair issue to students, since they were graded on the presentations. Some students had the ability to present, others were withdrawn and presentations became a nightmare to them. In Bahrain, the major hindering factors were related to the tutor's role in the classroom, lack of resources, difficulty in doing or understanding presentations and lastly, locating the information in the textbooks.

The findings in the students' questionnaire corroborated interviews. Students' perceptions in Bahrain were significantly different from those in the UAE. The Bahraini students' concerns were mainly related to the passivity of teachers in the classrooms, their own inability to locate information, unavailable resources, time spent in preparation and organizing time. The passivity of the teachers in the classroom again sheds light on the confusion of teachers regarding their role under CBL and their consequently wrong practices.

The passivity of Bahraini teachers in the classroom is well understood in the absence of a staff development program that trains and supports staff in the

implementation of the new methodology. Faculty members in Bahrain had no expert coaching them in the classroom, which led to confusion. In a study conducted by Hughes et al. (1997), almost all students focused on the critical role played by the teacher as a facilitator of group work and as an expert in initiating critical thinking skills. The other concerns of students regarding time spent in preparing for the cases is justified and documented in literature (Bernstein, Tipping, Bercovitz & Sinner, 1995). The length of time taken by students in both the UAE and Bahrain is well understood, considering the additional language barrier.

Students' reluctance to accept the requirements of the case-based learning is well understood since students had been taught in the traditional way throughout their scholastic years prior to joining nursing. Hull and Rudduck (1980) conducted a project in four schools in England and conducted interviews with students involved in a humanities project. The students were expected to prepare and interact in the classroom. Students expressed their feelings by saying "suddenly they say they are going to teach us as adults after teaching us as babies for years" (p.2). Loving and Wilson (2000) in reporting the effect of educational change on students found that students felt like "guinea pigs". Their resistance was only overcome through workshops that prepared them for the change. It is interesting to note that in both the UAE and Bahrain, students were not prepared well for the change other than explaining to them their expected role under the case-based curriculum.

Social system components perceived to be hindrances in the implementation of the case-based curriculum were different in the UAE from those in Bahrain. The external change agent was present in Bahrain only during the introduction of change. In the UAE the external change agent was present during the introduction and the first year of implementation The presence of the external change agent was perceived by the UAE faculty as a major facilitating factor .The UAE faculty's

responses in the self administered questionnaire related to the lack of the presence of the external change agent during implementation could be attributed to the fact that nearly 30% of the faculty interviewed in the UAE joined after the external change agent left. Bahrain's faculty has been more stable. Bahrain's faculty response in the self administered questionnaire regarding the change agent could only mean that the faculty misunderstood the question and answered what they probably would have liked to witness rather than what had actually taken place. The higher mean in Bahrain under hindering social factors meant that the social system in Bahrain was less facilitating than in the UAE.

A unique social system component perceived by the UAE faculty to hinder the process of adopting the case-based curriculum was the evaluation of faculty members. In the UAE the senior faculty members or managers who evaluated the faculty's performance were perceived as inflexible and lacking in knowledge and expertise. With the departure of the external change agent, a senior faculty member assumed the role of coaching and supporting teachers and evaluating their performance. The situation became worse when classroom and clinical observation for teaching improvement could not be viewed as separate and distinct from performance evaluation and what was meant to be a teaching improvement strategy became part of the faculty's annual evaluation.

Literature attests to the importance of supporting teachers and coaching them during the introduction of change. McLaughlin and Pfeiffer (1988) studied four districts to find out ways of improving teacher's evaluation. Districts which exhibited marked improvement were evaluating teachers for the purposes of promoting them or identifying areas of weakness. All weaknesses exhibited were targeted through staff development. They also found that the climate of the organization is a key factor to the success of the organization. Any climate that, concentrates on

evaluating teachers only for the sake of identifying deficiencies will not allow people to grow and improve.

In Bahrain, the major elements in the social system perceived by faculty as hindrances were resistance of the academic council to the introduction of case-based curriculum, forcing change by the nursing division's management, free access of students to administration and feeling threatened by students' evaluation. Faculty members felt that students, under CBL, became daring and threatening. This perception is related to students' evaluation of their teachers' performance. The perceived threat seems a legitimate one in a hierarchy that is centralized and where teachers have no voice. The complete obedience of the faculty to the chairperson's initiative is a typical example of an oppressed relationship, which educators have tried to eliminate. Change cannot take place at the classroom level if the culture of the school doesn't promote shared participation and shared decision-making. Teachers working in a highly centralized oppressed bureaucratic environment are not expected to be partners with the students in the teaching-learning process.

Consequences

Desirable, undesirable and unanticipated consequences were noted in both the UAE and Bahrain. Desirable consequences in both countries were related to the culture of the institutions, namely improving student-teacher and student-student relationships. In the UAE empowerment of faculty members and the diversification of students' assessment were identified as desirable consequences of the case-based curriculum by faculty members. The self administered questionnaire administered to faculty in both Bahrain and the UAE corroborated the data obtained from faculty interviews regarding perceived desirable consequences of CBC. Desirable consequences were related mostly to improvements in the teaching-learning process, student's assessments and developing students as self-learners.

Louis and Miles (1990) found that irrespective of the origin of change, "power sharing" is critical for the success of change. Groups of teachers, students, and administrators of different background and roles must be set up with delegated authority, trust and resources. Empowerment of faculty was achieved in the UAE through shared decision-making, which was done by faculty representation in all subject department committees. Suggestions made by subject department committees were raised to the curriculum committee, which included at that time managers of branch institutes, the counselor, and an elected faculty representative. Resources and support were also provided during the introduction of the innovation. In Bahrain the lines of communication impeded decision-making and shared participation, which made the faculty feel powerless.

Attention must be given to the serious involvement of faculty in decision-making through representative teams. Involving only a selected number of teachers in a curriculum committee or other decision-making committees might not help in the diffusion of innovation. This step might endanger the whole dissemination of the diffusion since teachers would think that the few selected teachers in such committees had been given special recognition by the administration. Furthermore, the selected teachers in committees would alienate themselves from others thinking that their participation is crucial for the success of change while others are not (Fullan & Stiegelbauer, 1991).

Students' interview data corroborated the findings of the faculty. In the interviews, the students perceived the desirable consequences to be better student-student and student-teacher relationships, better assessment, improvement of the teaching-learning process and creating a lively atmosphere. The findings were further validated by the self-administered questionnaire where the mean was higher in the UAE than in Bahrain (4.17 to 3.69). The results seem to confirm further that

students in the UAE had facilitators who understood the dynamics involved in CBL better than their counterparts in Bahrain.

Regarding undesirable consequences, faculty members in both countries were concerned about the decreased amount of content in case-based learning compared to that in the lecture-based method, students' weakness in clinical skills and students' burn out. Concern with content rather than process seems to be a standing issue for faculty members in both the UAE and Bahrain. Concern with content could be due to lack of proper planning in Bahrain and lack of diffusion of innovation in the UAE. Several scholars have found that worldwide, nurse educators are still concerned with content to meet the requirements of official boards and accrediting authorities and keep up with the changes in the health care sector (Diekelmann, 1992; Ironside, 2004; Tanner, 1998). It can be argued then, that concern with adequacy of content coverage with curricular approaches that place emphasis on the process of learning rather than what is learned, including CBL, is peculiar to the participants of the present study.

Nurse educators were and still are concerned with adding content to keep up with the vast changes taking place in the health domain. Ironside (2004) claimed "Content is constantly added to the curricula to reflect advances in biomedical and nursing knowledge and important trends in the health care system in general and the discipline of nursing in particular" (p.6). The debate is still going on among nursing educators whether content is more important than the process. Teaching content guarantees a certain bulk of content, which nurse educators feel is needed to meet the requirements of the health care services. They also believe that content should come first, followed by the process. The case-based curriculum challenges this assumption. It operates on the principle that relevant content derived from real patient cases can be taught through the process. Hence students can meet the

requirements of the profession in addition to developing critical thinking skills and problem-solving abilities.

In Bahrain, change was not properly introduced and the faculty members were not prepared well to adopt the new interactive teaching-learning methodology advocated under CBL. This led to concern with content to the point of adding unrelated content to the cases, which made them artificial. In the UAE, with the absence of the external change agent, faculty members were learning from each other with minimal support from senior people. The issue was compounded by the high turnover rate in the faculty, of the seventeen faculty members interviewed, five joined after the inception of the change. Faculty members felt secure only in content, which was compatible with their didactic background and soon started deviating from the original spirit of the case-based curriculum.

The exaggerated concern with content makes one wonder about the students' and faculty's perceptions of the advantages of the case-based curriculum. Both parties claimed that CBL encourages self-learning, though the concept in actual practice seemed more like chaotic presentation and group work. In Bahrain, teachers adopted a passive role in the classroom. They lacked facilitation skills which led to unsatisfied students demanding rote learning and traditional methodologies .The students' preference for traditional rote learning seems a direct consequence of the presence of ill prepared teachers who were not competent in the application of facilitation skills in the classroom. Literature studies attest to the preference of students for self-directed learning, provided teachers receive ongoing staff development programs that stress the dynamics involved in reinforcing SDL (O'Shea, 2003).

One of the identified undesirable consequences of CBL was the students' inability to integrate theory and practice leading to weakness in clinical skills.

Students' weaknesses in clinical skills might be attributed in UAE to delaying the fundamental nursing course to the second year and condensing it over three weeks covering 30 sessions of nursing skills compared to the 100 sessions offered in the fundamental nursing course in the first year of the old curriculum. A similar pattern was reported in Bahrain. Another reason could be the students' inability to utilize the self-learning strategies in the clinical areas and to failure of the tutors who accompany them to direct them and help them develop their analytical skills and thinking strategies. A third reason seems to stem from the lack of cooperation of clinical personnel in the service area. This lack of cooperation could be due to lack of sustainable efforts to involve and train service personnel in enlightening them about the case-based curriculum. Students' inability to bridge theory and practice in Bahrain could be caused by the lack of authenticity of cases which rendered them artificial. "Using case studies to bridge the gap between theory and practice ... can help students learn how to solve the real-world problems that arise in their clinical practice" (Dowd & Davidhizar, 1999, p. 45-46).

It is interesting to note that clinical personnel were involved only in the initial stages. No follow up has been done in either the UAE or Bahrain to solicit their point of view as equal partners. Failure to address the clinical personnel is apt to result in misunderstandings of the dynamics of case-based learning from both parties. Hallet (1997) found community nurses in England frustrated with novice nurses who were introduced into the community without properly planning for them. Partnership between service and education in the implementation of change yields successful stories (Oneha, Sloat, Shoultz & Tse, 1998). Lack of involvement of the clinical personnel was evident in both countries and was compounded by the fact that teachers lacked facilitation skills in the clinical areas and could not lead students to identify their weaknesses and work on their own.

In the UAE, the faulty members perceived the major undesirable consequences as revealed by the self-administered questionnaire to be related to students' burn out. The Bahrain faculty was more concerned with lack of clinical skills and lack of integration between theory and practice. Students in Bahrain had a higher mean score than in the UAE regarding undesirable consequences as revealed in the students' self-administered questionnaire. In both countries students perceived the undesirable consequences in the same order. The most undesirable consequences were related to ambiguities that occurred during group discussions, inability to locate information, and long time spent on preparation.

The undesirable consequences in Bahrain seem to be related to the failure of the teachers to act as facilitators in the classrooms. Probing for answers, raising issues and helping students connect and defend their answers by presenting rationale needs adequate preparation. Groups, which are not facilitated properly, will not be able to process information properly, with some students assuming a passive profile (Tomey, 2003). The time lost in preparation is also related to the student's language skills, which handicaps their understanding and synthesis of the information.

Transforming the culture of the classroom is not an easy task especially when the teachers and students are not equipped well to deal with the dynamics of CBL. Students in the Gulf are usually passive at home and at school. Building open dialogue in the classroom, means transforming the whole culture of the school into a cooperative and collaborative culture. This transformation needs careful planning, continuous follow up and induction programs for both students and teachers. Wiley suggests, "effective discussions require practice, practice, and practice" (cited in Risko & Kinzer, 1999, p.55).

Unanticipated consequences were perceived by faculty members in both countries. Common unanticipated consequences were related to lack of preparation of students, insufficient time to cover objectives and inconsistency of tutors in the application of the case-based curriculum, and empowerment of students. In Bahrain, an additional unanticipated consequence was mentioned by faculty members, namely students copying answers from other students. This is not so unexpected since students had no real facilitation in the classroom, yet they were expected to have answers to the tasks. Potential problems under learning with cases include "learner motivation, faculty role adjustment, program commitment" (Tomey, 2003, p.37).

Findings in the self-administered questionnaire corroborated the above findings regarding unanticipated consequences. Faculty members in Bahrain were concerned with the copying between students. In the UAE, the inconsistency between tutors, followed by lack of preparation of students seemed the main issues. Another interesting finding was the concern of faculty members in both the UAE and Bahrain over the empowerment of students. This concern was mainly manifested through students evaluating the teachers' performance, and the teaching- learning methodology. This concern surprised the researcher since it defeats the spirit of self-learning which advocates a collegial relationship between students and teachers. Students are expected to have a say in decision-making and to be active partners in the teaching-learning process.

Empowerment of students is not a new concept. Critical pedagogy, advocated by Paulo Freire (1998), is about empowerment. Empowering students in their learning environments will establish them as equal partners in the teaching-learning process. Empowerment requires a revolution in the traditional teaching-learning environment, which oppresses the student and establishes the teacher as

the only authoritarian and powerful figure for the dissemination of knowledge. Critical pedagogy loathes powerlessness of students and tries to create in the students positive attitudes towards change. Through discussion and active participation of students with each other and the teacher, students would be exposed to new ideas while elaborating and reflecting on their own. In this process, "collective wisdom emerges that would have been impossible for any of the participants on their own" (Brookfield & Preskill, 1999, p.3). The goals of discussion depict a democratic atmosphere whose goal is to "nurture and promote human growth" (Brookfield & Preskill, 1999, p.3).

In the UAE two additional unanticipated consequences mentioned by faculty members were regression of students' performance, and empowerment of students. The students' regression could only be explained on the grounds that nurse educators were not adhering anymore to the philosophy of CBL. One might assume that with the caliber of secondary students accepted to the nursing program being the same as before, there was a regression of faculty's performance and a deviation from the case-based philosophy. The regression of students' performance in the UAE could be due to the high turnover rate among faculty, and the departure of the external change agent and lack of supportive structures handling concerns of faculty members in general, and novice faculty members in particular.

Students in the UAE solely mentioned unanticipated consequences, which were similar to the hindering factors mentioned before, that is, inability to locate information, confusion related to presentation and the length of time spent in preparation. Another issue which surfaced focused on the students' concern that examinations were centered on only the textbook, and not discussion or preparation. This concern seems to defeat the purpose of self-directed learning as advocated by Knowles (1975). It seems that students were reinforced throughout their scholastic

years by examinations as the only criterion of measuring accomplishment. At the Institutes of Nursing, though the change in curricula changed the assessment scheme, the emphasis was still on examinations. Students still failed to see the value of self-directed learning. The progression to SDL is not easy and the onus falls mostly on the teacher who needs to be trained to be able to facilitate learning (Dolmans et al., 2002; Hewitt-Taylor, 2002).

Conclusion

The major differences noted between the UAE and Bahrain were mainly related to leadership style and the stakeholders' approach to change. The commitment of key stakeholders in a hierarchical organization at all levels seems to be critical for the success of change in the Arab Gulf countries. The Chairperson of the nursing division at the College of Health Sciences in Bahrain in handling the process of change attempted to bypass one level at the top of the hierarchy, which did not work out well. Denying support from any key person in the hierarchical chain would hinder the change process. The UAE faculty on the other hand, had full support from the board of administration that helped in initiating and implementing change. The change was facilitated further in the UAE by creating a common meaning and vision from the outset among all stakeholders in the hierarchy.

In Bahrain, the issue was further complicated by the resentment of faculty members and students of compulsory change. Faculty members and students, as major stakeholders in the process of change, were overlooked in planning change and were expected only to obey directives issued by management. Proper intervention at the micro level was not considered and led to feelings of powerlessness of faculty members and students. In the UAE, faculty members were actively involved in the process of planning change and helped in the choice of the

new curriculum, which facilitated preliminary acceptance of change and the subsequent initiation.

Leadership style and management in Bahrain seem to follow the Arab management style with regard to planning and implementing change. The management style seems to solicit obedience on the basis of an authoritarian approach rather than a participatory consultative approach. The decision was also a quick decision, which resulted in a significant gap between goals of change and actions taken to tackle the implementation of change. Change was forced on the faculty members without adequately preparing them for change, which lack was perceived by faculty members as a major hindering factor to the diffusion of change. Faculty retaliated by developing an adaptive survival strategy to suit the needs of administration and students whom they perceived to have become powerful under CBC. Planning the process of change was overlooked in Bahrain and it looks as though planning is not yet a standard procedure in institutions undergoing change in the Arab Gulf region.

The chairperson at the nursing division in Bahrain, in initiating change, was driven by zeal and enthusiasm and did not take into consideration the critical elements for the success of change, namely involvement of faculty in the process of change from the beginning. Other critical elements are capacity building of faculty, support delivered before and during the implementation of change. Other hindering factors to the process of change relate to the proper allocation of time and resources. In Bahrain, time was not given for faculty to assimilate and internalize the meaning of change. Resources were not provided to facilitate the transition into a self-directed environment. In the UAE, though planning was initially done through a series of introductory workshops and involvement of faculty, there was an obvious failure to create sustainable systems that could monitor the change process and

tackle faculty and students' concerns, especially after the departure of the external change agent.

One important aspect in the introduction of change to educational nursing institutions is capacity building of nurse educators, which empowers them. Empowerment comes mainly from three sources, access to support, information and resources. Access to support refers to guidance from superiors, information is related to the expertise and training required to function effectively and resources refers to all material resources needed for change to succeed , such as equipment, money and time (Sarmiento, Laschinger & Iwasiw, 2004). If these conditions are not met, faculty members take the matter into their own hands, and each tries to invent ways and means of conducting classroom sessions. Hence an individualized meaning of change develops and their may be a complete deviation from the original plan. The situation developed in Bahrain where faculty did not have adequate support, resources and adequate preparation and information. Hall and Hord (2001) claimed, "when a mandate is accompanied by continuing communication, ongoing training, on-site coaching and time for implementation, it can operate quite well" (p.14). Training and staff development programs seemed to have been overlooked to varying degrees in the UAE and Bahrain. Consequently, although adoption of CBL had taken place in both countries, diffusion had not occurred at the time of data collection.

Both countries lacked a team approach to change. Initially, the UAE had a shared decision approach to change, through involvement of faculty. Representation in the curriculum committee was open to senior managers, a counselor and an elected faculty member. In Bahrain the communication structure at the nursing division did not facilitate the dissemination of change. All decisions were in the hands of the academic council which has the chairperson of the nursing division as a

representative. Restructuring the lines of communication by proper representation of coordinators, faculty and managers in teams is a prerequisite to the success of change. The teams should have a certain degree or autonomy, trust and delegated authority to allow them to adapt to get the job done. Failure to institutionalize change at the educator's level will lead to failure at the classroom level.

A remarkable finding evident mostly in Bahrain was the absence of expertise among initiators of change. Initiators did not have the necessary knowledge and understanding to tackle the big shift in the educational philosophy that they advocated. This hindered the dissemination of change especially in the absence of an expert who could guide faculty at least in the initial process of change. The situation led to chaos in implementation. The absence of expertise was perceived as a major hindering factor by faculty who implemented by "trial and error". The situation was aggravated by the absence of technological resources.

Proposed Framework for the process of Change

in Nursing Education in the Arab Gulf region

It is believed that this study sheds some light on the local and contextual issues surrounding change, impeding it or facilitating it, using the perceptions of people affected by the change, in addition to the attempt to create and promote an atmosphere of shared understanding and dialogue within the Arab Gulf region. The analysis of innovation in a nursing education context led to the development of a framework for introducing change in nursing educational institutions within the context of the Arab Gulf region. The framework should help decision makers to have a deeper understanding of the micro and macro issues surrounding change. It is hoped that such a framework would help them address change in a structured and coherent manner, thus facilitating effective implementation.

Figure (1) presents a graphic representation of the proposed framework for the process of change in nursing education in the Arab Gulf region. Perhaps, because of the nature of the social system in the Arab Gulf, which embraces observance of hierarchical governance practices, any educational change will need the sanctioning of top management and/or key political stakeholders in order to succeed. Faculty and students as major stakeholders in the change process should be involved early in the change process to give them feelings of ownership. The study undertaken by the researcher has highlighted clearly the vital role played by the director in planning change in educational institutions. The context of the innovation (the larger societal system and the institutional context) and the leadership style of the director determine the success or failure of an educational innovation.

The context is related, but not limited, to the societal and institutional cultural and governance practices, the cultural and social background of nurse educators, students and the director. In the Arab Gulf, creating a collaborative and cooperative culture would require dismantling the traditional hierarchical structure. Dismantling the hierarchy would create space for shared participation and shared decision-making. A systemic process of conscietizing relevant leaders regarding the significance of democratic leadership principles and practices in planning and implementing a major educational innovation cannot be overly emphasized. In the Arab Gulf region, leaders need to be trained to delegate authority and responsibility and create a democratic environment conducive to progressive change.

Several models have highlighted the importance of the behavior of top-level administrators in facilitating or hindering the change process and triggering resistance. Organizational resistance triggered by leadership style has been cited as a major source of resistance in the dissemination of change by Zaltman and Duncan (1977). The ability to involve people at all levels in the change process, provision of technological resources and continuous monitoring of change efforts will help to send unequivocal message of the importance of change to all individuals. Leaders have the responsibility of securing a climate of mutual trust and ability to overcome resistance triggered by cultural, social barriers and organizational barriers.

Ely's conditions for change model (1990) supports Zaltman and Duncan (1977) in their emphasis on the importance of leadership in planning and implementing change. Leadership to Ely means among other things, ensuring expertise and skills among adopters. Other necessary conditions are provision of time to implement change, soliciting collective participation, shared decision-making and commitment. Political support of stakeholders and leadership exhibited in active involvement of leaders are critical to the success of change. Ely further claims that

individuals in an organization want "firm and visible evidence that is endorsement and continuing support for implementation" (1990, p. 301).

Planning constitutes the framework of all change efforts since it sets the direction for change. Planning for educational change should be done through creating the right climate for change by taking into consideration stakeholders' support, capacity building of nurse educators, allocation of resources and the institutional culture. Creating the right climate for change is a necessity for the change process to succeed. Different approaches, may be used, including cooperating and interacting with all faculty members, teaching and coaching and inviting faculty members to share their experiences in the new innovation with all faculties (Hall & Hord, 2001). Time should be allowed for all adopters to reflect on the new innovation to make it succeed.

Planning change has been the focus of many educational models. In his force field model, Lewin (1951) claimed that planning is considered the cornerstone of the three stages of change. In the unfreezing stage, goals are planned followed by an analysis of the restraining and driving forces. In the moving and refreezing stages, appropriate strategies are planned and implemented gradually. Planning was also emphasized by Havelock and Zlotolow who proposed the C-R-E-A-T-E-R model in 1995. Havelock and Zlotolow (1995) looked at change as a process that involves the whole system and is focused on planning in six cyclical stages. Planning is directed towards building relations, identifying problems and opportunities, arranging resources, providing professional development and looking at all possible alternatives.

Getting the support of stakeholders is a major responsibility, and the onus for this falls on the director. The director needs to engage in intensive dialogue with all stakeholders at different levels in the hierarchy, in addition to service personnel

exploring the suggested innovation and staying flexible to suggestions. In the Gulf region, change will not survive in educational institutions unless all stakeholders are involved actively in the process of change. Stakeholders need to be kept informed at all times because "Stakeholders who are not kept informed are likely to believe the worst" (Ellsworth, 1999, p.204). Stakeholders need to have a clear idea of the innovation, to be able to support it. Miller claims that stakeholders' involvement is critical and should be consistent to ensure that the change agent is "able to spend more professional energies paving a new path for learning rather than in waging battles for survival" (cited in Ellsworth, 1999, p.206). At the societal or political level, getting stakeholder support requires skilled negotiation, patience and clear vision of what it is that the Institution seeks to achieve. Critical external leaders will need well articulated expected educational outcomes and envisaged benefits for the quality of the country's health human resources. At an institutional level, stakeholder support can be achieved by involving managers and faculty in teams in the planning stages to help individuals understand each other's background and facilitate the dissemination of adoption by widening the critical adopter's base.

Creating a common understanding of the change among all those concerned is a critical step in introducing change. The director, coordinators, students, faculty members and service personnel should have the same understanding of the goals of change .In getting the support of key stakeholders at the top of the hierarchy, it is essential to lay out the whole change process, strategies, resource allocation and the implementation plan. Hall and Hord (2001) claimed "picturing the change in operation provides the target for beginning the change journey" (p.108).

The emphasis on involving all stakeholders in the introduction of change is not a new concept. Fullan and Stiegelbauer's (1991) meaning of educational change model focuses on the major players at both the institutional as well as the regional

level. Fullan and Stiegelbauer claimed that change will only succeed if the change agents interact effectively with all stakeholders (the teachers, the principal, the students, the district administrator, the consultant, the parents and the community and the government) to develop a clear collective common meaning of change. To Fullan and Stiegelbauer, change needs to be orchestrated from inside the institution and outside. The relationship between all stakeholders would help them to construct a common meaning through interaction, participation and sharing meaning.

In addition to understanding the reasons for and the meaning of change, the innovation attributes have to be evaluated well before introducing change. Attributes of the innovation such as relative advantage, compatibility with the cultural and social background of the students and the faculty, and complexity should be taken into consideration. The correlation study in both UAE and Bahrain found a significant relationship between innovation attributes and desirable consequences at 0.01 level of confidence.

Capacity building of nurse educators is an integral part of the planning process of any educational innovation. Ely (1990) claimed that professional development and continuous training of faculty is essential for the innovation to succeed. Without developing the expertise to carry out the innovation, change will fail. Fullan and Steigelbauer (1991) claimed "Educational change involves learning how to do something new ... if there is any single factor crucial to change, it is professional development" (p.289).

Communication throughout the change process should flow from the sender to the receiver and vice versa. Rogers (1995) highlights the role of communication by claiming that "The nature of the information exchange relationship between a pair of individuals determines the conditions under which a source will or will not transmit the innovation to the receiver and the effect of the transfer" (p.18). The findings in

the correlation statistics in this study emphasized the positive correlation between the communication channels and desirable consequences at 0.01 level of confidence. With proper communication, participation will flourish among all parties. A major element that can help in the initiation of innovation is the active participation of all faculty members in the introductory workshops. Modeling the new innovation was regarded highly by the faculty members in the UAE who claimed in the interviews that peer simulation allowed them to understand the innovation in a non-threatening atmosphere. Feedback given by the external agent was perceived to be a major facilitating factor in the adoption of the innovation. The Bahrain faculty members also supported the importance of peer simulation in the self-administered questionnaire.

In the implementation of change, another condition vital for the change to succeed is to build effective structure around it to make it work. The new structure might lead to the establishment of new departments and redefinition of roles and responsibilities and establishment of different lines of communication. In an educational setting, the new structures established should provide for "shared decision making, communication among all parties involved and representation where individual participation is difficulty" (Ely, 1990, p.301). Jenlik et al. claimed that for change to succeed, other changes should accompany it and support it. "Desired changes in one part of the system are accompanied by changes in other parts that are necessary to support ... designed changes" (cited in Dirkson & Tharp, 1997, p.2).

In implementing change, it is important to monitor the concerns of students and nurse educators. To assess concerns, it is useful to build structures around teams whereby concerns of faculty and students are tackled. Monitoring concerns will enable the change agent to provide constructive feed back and plan activities

required to meet the resistance. Data on staff concerns should help to verify gray areas, correct misconceptions and provide the necessary support. Monitoring staff and student concerns should be coupled with monitoring competence and fidelity in implementation practices so as to help advocates and/or initiators of a new educational programme deal with problems timeously and strategically. Pre-planned periodic monitoring and feedback to implementers provides a platform for reflecting and collective re-versioning of the process of implementation in line with the realities of the context of change.

An important aspect in initiating change is the expertise of the initiator. In the absence of expertise it is critical to have an expert to coach faulty members in the dynamics of the innovation, and to tackle their concerns as they emerge. The presence of a supportive expert during the initial year(s) of initiating the change helps faculty members to adopt the innovation.

Lastly, evaluating the effectiveness of the planned innovation in attaining the institution's articulated educational goals is essential to ensure that, change is not taken as change for its own sake, but rather change for improved teaching and learning toward the provision of quality health human resources.

Societal Political Context

Political Stakeholders

Faculty

Students

Clinical Personnel

Culture

Norms

Values

Attitude

Governance Practice

Evaluation

- Attainment of expected educational outcomes
- Faculty and students' satisfaction.
- Perceived quality of graduates.

Participatory decision making

Partnership building

DEMOCRATIC

LEADERSHIP

Communication

Team building

Planning

- Establishing the need for change.
- Assessing perceived attributes of innovation.
- Creating a common meaning for change among all stake holders.
- Recruiting an expert consultant.
- Capacity building for faculty and students.

Implementation

Building support structures to:

- Monitoring faculty's and students concerns.
- Monitoring service personnel perceptions.
- Build competence with and fidelity to agree upon teaching practices.
- Avail expert coaching for the initial implementation.

Recommendations

1. Duplicate the study in other nursing colleges in the Arab Gulf region, for comparison of findings across countries providing empirical evidence to validate the suggested framework for introducing change in the Arab Gulf countries.

2. Conduct research on leadership styles in other nursing colleges for shedding light on possible areas of intervention. The research should focus on management practices and the environmental, cultural, and organizational factors affecting these management practices.

3. Conduct evidence based research on the perceptions of key political stakeholders in nursing colleges towards change. Key political stakeholders include all personnel in the hierarchy that could affect the implementation of change.

4. Conduct leadership-training workshops for leaders of nursing colleges for the purpose of enabling them to change their environment into a collaborative and cooperative one.

5. Conduct studies in the Gulf countries for exploring the views of the leaders of Nursing colleges regarding their perceptions on planning, shared decision making, staff development and the process of initiating, implementing, and evaluating change.

6. Develop structured processes and procedures to monitor the change process and the concerns of relevant parties.

7. Develop a continuing staff development program that prepares faculty for handling change and any incurred future consequences. The program is expected to target teachers' growth and focus on classroom activities. The program should give the opportunity for teachers to practice, evaluate, reflect and have a follow up discourse with a supportive expert.

8. Build teams at nursing colleges that have multi-disciplinary representation of faculty, students, coordinators and senior managers for the purpose of planning, implementing and monitoring the process of change.

9. Establish goals of change from the beginning and share it among stakeholders. The change should aim at resolving issues with clear established guidelines, implementation and monitoring structures in place.

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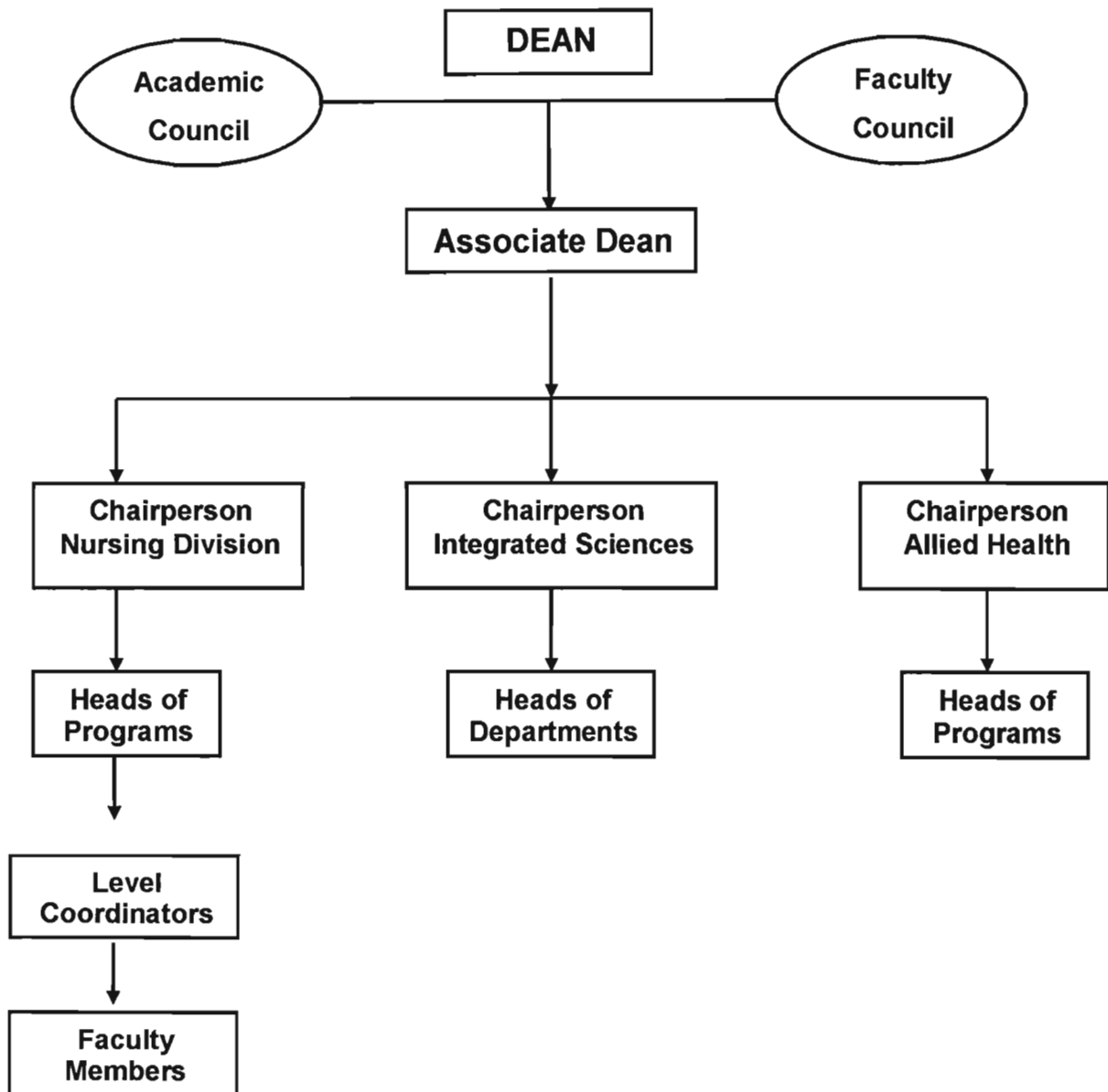
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APPENDIXES

Appendix 1: Organizational Chart of the Institutes of Nursing/U.A.E
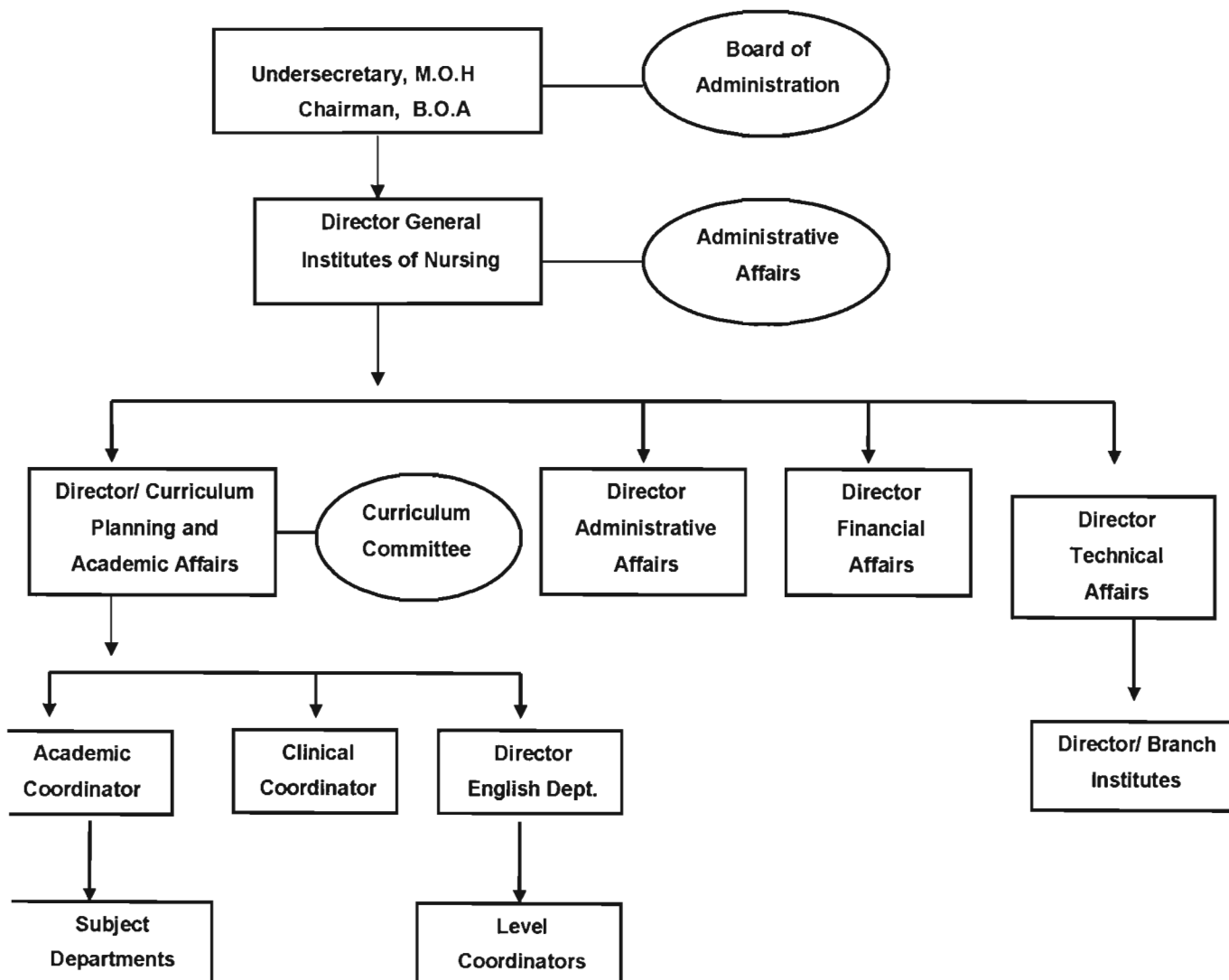
Appendix 2: Organizational Chart of the College of Health Sciences / Bahrain

```
        Academic            ┌──────────┐            Faculty
        Council             │   DEAN   │            Council
                            └──────────┘
                                 │
                         ┌───────────────┐
                         │ Associate Dean │
                         └───────────────┘
                                 │
     ┌───────────────────────────┼───────────────────────────┐
     │                           │                           │
┌──────────────┐        ┌──────────────┐          ┌──────────────┐
│ Chairperson   │        │ Chairperson   │          │ Chairperson   │
│ Nursing       │        │ Integrated    │          │ Allied Health │
│ Division      │        │ Sciences      │          │               │
└──────────────┘        └──────────────┘          └──────────────┘
     │                           │                           │
┌──────────┐             ┌──────────┐               ┌──────────┐
│ Heads of │             │ Heads of │               │ Heads of │
│ Programs │             │Departments│              │ Programs │
└──────────┘             └──────────┘               └──────────┘
     │
┌──────────┐
│  Level   │
│Coordinators│
└──────────┘
     │
┌──────────┐
│ Faculty  │
│ Members  │
└──────────┘
```

Appendix 3: Consent Form

Dear Participant,

Consent to participate in a study on the process of change at the Institutes of Nursing in the UAE, Bahrain and Qatar.

You are being requested to participate in this 3-phase cross-national study that aims at exploring the process of change at the Institutes of Nursing in the United Arab Emirates, Bahrain. The study aims at developing a better understanding of the experiences of faculty and students undergoing change in the Nursing Institutes. The data collected in the first 2 phases will be qualitative requesting your frank and honest opinion and description of your experience during the process of change. The data will be collected from heads of schools, faculty and students. This is why you have been requested to be a participant in the study. A further quantitative data will be collected at a later date to validate the findings from the qualitative data. Please do not hesitate to express your frank and honest opinion as this will be highly appreciated.

Your participation in the study is voluntary, and while your consent to participate is required, you have the right to withdraw, and you are at liberty to withdraw your participation at any point in time if you so wish not to continue with your participation at any stage of the study. All information you provide will be treated confidentially, and access to the data will be restricted to only those closely involved in the study. The data will be destroyed upon the completion of the study. Your identity will be protected and you can be assured that the final report will not identify you in any way. I shall refer to you in the tape using a false name that you pick at the beginning of the interview. In the future you shall be informed of the results of the study, if you ask for it.

Kindly sign a copy of this document to indicate your consent to participate in the study.
Yours sincerely,

_____

Najah Mustafa (Mrs)
Director Institutes of Nursing,
P.O. Box: 3798,
Abu Dhabi, UAE.

My signature below indicates that I have read and understood the information above, and I agree to participate in the study.
Consent to participate:

_____

Participant & date

Appendix 4: Interview Schedule for Heads or Directors of Nursing Education Institutions

1. I understand your department or school introduced change in its degree or diploma program in the last four years. Can you tell me about it? What exactly did the change involve?

2. Can you please describe factors that led to this change? That is, what exactly was   explicitly stated as the reason for change?

3. What did the country and/or the institution hope to achieve with this change?.

4. Can you describe the events and/or activities that preceded the implementation of this change?

5. What do you see as the factors that helped in introducing and implementing the change?

6. Describe the conditions that posed difficulties in the process of implementation.

7. Describe the expected consequences of change, were they achieved, if not state the reason.

8. Did you introduce changes into the new curriculum since its inception? What were these changes – and what were the reasons for introducing them.

9. What does case based education mean to you?

Appendix 5 : Interview Schedules for Nursing Faculty at all Nursing Education Institutions:

1. Describe your background in teaching before adopting the new curriculum? Did it facilitate the adoption or hinder it?

2. Think about your role in the present curriculum. How does your present role in the new curriculum compare with your past role as a teacher?

3. How was the new curriculum introduced to you? That is how did you get to know about it?

4. From the time it was introduced, how long do you think it took you until you finally felt comfortable applying the new curriculum?

5. How did you react to the new curriculum at the very beginning – describe the process you went through leading to your adoption /acceptance of the new curriculum and your reaction in each stage. Cover all your responses to the change (feelings, reactions – whether positive or negative.

6. a. What are the things that you have witnessed in the introduction of the new curriculum that facilitated its adoption?

   b. What are the things that you think have hindered its adoption?

7. From your perception, how do you compare the case based curriculum with the traditional one in terms of complexity, advantage and compatibility with your past experience and need.?

8. Who do you go to for advice in case you have issues with the curriculum? What effect does this have on your implementation of the new curriculum?

9. What concerns do you have at present with the new curriculum? What are you doing to address them?

10. Describe the cultural, social and political factors (internal or external) that either facilitated or hindered the process of change during its initiation or implementation.

11. From your experience as a teacher, how will you describe the effects of the curriculum on the culture of the educational institution. That is the way things are done with regard to:

- Student-teacher interaction
- Student-student interaction
- The teaching/learning process, including student assessment.
- Process of decision making in the Institute/College concerning implementation and evaluation of curriculum.

12. The previous question tackled the effects or outcome of the case based curriculum on the culture of the educational institution, were all consequences of effects anticipated, did you have any unanticipated consequences, what are they? Was there a way to prevent these consequences in the planning and implementation stage.

13. What does case-based curriculum mean to you?

Appendix 6 : Students' Interviews

1. What are the positive aspects of the case-based curriculum?

2. What are the negative aspects of the case-based curriculum?

3. What difficulties have you faced with the new curriculum? Were you able to overcome them? How did you overcome them?

4. What do you think of the teaching-learning process that takes place in case-based courses in comparison with the lecture-based courses? What are its positive and negative aspects?.

5. How do you think the case-based curriculum has changed the way things are done in the School – that is (dwell on the positive and negative aspects):

   - Student-teacher interactions

   - Student-student interaction

   - Views about teaching and learning

   - Student assessment?

6. Any other comments you would like to mention regarding the positive or negative aspects of the case-based curriculum

Appendix 7 - Faculty's Questionnaire in the UAE & Bahrain

Please read the following statements concerning the case based curriculum carefully, indicate your degree of agreement or disagreement with the opinion expressed by the following statements.

The scale ranges from Strongly Agree to Not Applicable. Strongly Agree –S.A (5), Agree –A (4), Disagree –D (3), Strongly Disagree –SD (2), Not Applicable (1).

	S.A (5)	A (4)	D (3)	S.D (2)	N.A (1)
REASONS FOR CHANGE					
1. Dissatisfaction with the old curriculum.					
2. Better caliber of students joining Nursing.					
3. Vast changes in the health care sectors demanding a self learner.					
4. Health services' dissatisfaction with the graduates.					
5. Local and international changes in curricula demanding a self directed learner.					
6. High drop out rate in the first year of Nursing.					
7. Quality improvement and reduction of cost of the program.					
FACILITATING FACTORS **Innovation Attributes:** **8.** The case curriculum creates a lively atmosphere in the classroom.					
9. Trains students to be critical thinkers.					
10. Helps students to retain information..					
11. Improves tutors' teaching methodologies.					
12. Promotes self directed learning.					
13. Allows students to relate theory to practice.					
Communication Channels: **14.** Interpersonal communication amongst peers facilitated the change process.					
15. Simulated practice in front of peers was a facilitating factor.					

	S.A (5)	A (4)	D (3)	S.D (2)	N.A (1)
Time : 16. Group work and group discussion facilitated change.					
17. The introduction of workshops prior to implementation helped in the adoption of change.					
18. The presence of an external consultant during the implementation phase facilitated change.					
19. Availability of reading material facilitated change.					
20. Staff involvement from program inception to implementation facilitated change.					
Social System:					
21. The relationship with the external consultant during the implementation stage helped in the change process.					
HINDERING FACTORS: **Innovation Attributes:** 22. Case based is more complex than a didactic traditional curriculum					
Time: **23.** Lack of clarity on the part of the faculty in regard to their role in the classroom or clinical areas hindered adoption.					
24. Student's English proficiency hindered adoption.					
25. Background and teaching styles of tutors hindered adoption.					
26. Academic & social background of students hindered adoption.					
27. Passivity of teachers in the classroom hindered adoption.					
28. Lack of support from the clinical areas hindered adoption					

	S.A (5)	A (4)	D (3)	S.D (2)	N.A (1)
29. Lack of preparation of faculty at the beginning hindered adoption.					
30. The suddenness of change hindered adoption.					
31. Inadequate planning leading to unstructured curriculum hindered adoption.					
32. Lack of resources hindered adoption.					
Social System:					
33. Involvement of Management in Classroom Observation hindered adoption.					
34. Non negotiable & forced change by top management with in the school hindered adoption.					
35. Lack of support from institutional top management outside the school hindered adoption.					
36. Lack of identifiable change agent who is knowledgeable about case based during implementation hindered adoption.					
37. Freedom given to students under Case Based Curriculum hindered adoption.					
38. Inflexibility of classroom observers regarding the teaching/learning process in Case Based Curriculum hindered adoption.					
39. Perceived helplessness and defenselessness regarding decisions about change hindered adoption.					
CONSEQUENCES **Desirable** 40. Enhanced student – student interaction					
41. Enhanced student – teacher interaction					
42. Improved the teaching learning process.					

	S.A (5)	A (4)	D (3)	S.D (2)	N.A (1)
43. Improved the students' assessments					
44. Empowered faculty's decision making through the various committees and departments.					
45. Developed students as self-learners.					
Undesirable:					
46. Deficiency of clinical skills among students in the clinical areas.					
47. Lack of integration of students between theory and clinical.					
48. Less content and knowledge given in the case based curriculum.					
49. Student's burn out in Case Based Curriculum.					
50. Lack of cohesion in groups in the classrooms due to religious issues.					
51. Tardiness in taking decisions concerning courses.					
Unanticipated Consequences:					
52. Regression of student's performance over the years.					
53. Lack of motivation among students.					
54. Insufficient time to cover the objectives.					
55. Lack of preparation by students.					
56. Inconsistency among tutors in the application of Case Based Curriculum.					
57. Copying of students from senior students answers to triggers (in the cases they study).					

Additional Comments:

_____

_____

_____

Appendix 8 - Students Questionnaire in UAE & Bahrain

Please read the following statements concerning the case based curriculum carefully, indicate your degree of agreement or disagreement with the opinion expressed by the following statements.

The scale rages from Strongly Agree to Strongly Disagree

Strongly Agree –S.A (4),   Agree –A (3),   Disagree –D (2),   Strongly Disagree – SD (1).

	S.A (4)	A (3)	D (2)	S.D (1)
FACILITATING FACTORS				
1. Developed cooperative learning and participation.				
2. Bridged theory and practice.				
3. Build skills in presentation.				
4. Improved proficiency in English language.				
5. Challenged us to be self learners.				
6. Promoted self learning.				
7. Increased over self confidence and self esteem.				
8. Enhanced effective communication.				
HINDERING FACTORS				
9. Passivity of teachers in the classroom.				
10. Different styles of teachers delivering Case Based courses.				
11. Difficulty in doing or understanding presentation.				
12. Inability to locate information in books.				
13. Lack of resources hindered us.				
14. Managing time was an obstacle.				
15. Our poor English background hindered us.				
16. Long time spent in preparation hindered us.				
17. Difficulty and lack of clarity of some tasks in cases hindered us.				

	S.A (4)	A (3)	D (2)	S.D (1)
DESIRABLE CONSEQUENCES				
18. Enhanced student-student interaction.				
19. Enhanced student-teacher interaction.				
20. Improved assessment in the courses.				
21. Made the teaching- learning process more active.				
22. Created a lively atmosphere in class.				
UNANTICIPATED CONSEQUENCES				
23. Inability to locate information and understand it.				
24. Confusion related to presentation and group discussion.				
25. Exams centered on text book.				
26. Waste of time in preparing tasks.				

Additional Comments:

_____

_____

_____

Appendix 9 - Documentary Analysis Checklist

- Curriculum committee minutes.

- Circulars.

- Clinical committee minutes.

- Staff meeting minutes.

- Board meetings.

- Consultant reports.

<u>Appendix 10: Case Study Protocol</u>

Case Study Protocol

Country

Type of Innovation

Year of Inception

Duration of Programme

Participants' Characteristics

Reasons for Changes

- Educational, political and social reasons

The Nature of Innovation:

- Facilitating Factors

    - Innovation Attributes (Relative Advantage, Complexity, Observability, triability, Compatibility)

    - Communication Channels (Media, Interpersonal etc)

    - Time (Innovation decision making process, Innovativeness, Rate of Adoption)

    - Social System

- Hindering Factors

    - Innovation Attributes (Relative Advantage, Complexity, Observability, triability, Compatibility)

    - Communication Channels (Media, Interpersonal etc)

    - Time (Innovation decision making process, Innovativeness, Rate of Adoption)

    - Social System

- Consequence (desirable and/or undesirable consequences)

Appendix 11: Bracketing

I feel that the teachers now in the UAE are more concerned with content than ever. I have failed somewhere, I do not know where ... I feel teachers are not enthusiastic anymore about the case-based curriculum, and would prefer to go back to the traditional didactic rote learning. I believe the change to case-based curriculum was the best thing the institutes have done. I shall limit my bias towards my perception of change by playing the tape of each respondent at least twice, one in typing it and another time afterwards to check. After typing it, I shall read each text twice before attempting to analyze it.

I do feel that the perceptions of teachers in Bahrain are going to be very positive. I have met the chairperson of the nursing division at the College of Health Sciences and many senior people in many conferences. I believe they are very educated and keen to have a leading teaching educational institution in the region. I shall pay attention to minimum non-verbal experiences on my part during the interviews in Bahrain and I shall only ask clarification questions in case things are ambiguous.

التاريخ: ٢٠٠٥/٥/٢٣

الموضوع:

تحية طيبة وبعد ،،،

UNITED ARAB EMIRATES

MINISTRY OF HEALTH

دَولة الإمارات العربية المتحدة

وزارة الصحة

التاريخ: ٢٠٠٣/٢/٨

سعادة الدكتور عبد الرحيم جعفر   الموقــــــــر

وكيل وزارة الصحة

وزارة الصحة ـ ابوظبي

تحية طيبة وبعد ،،،

كما تعلمون سعادتكم ، فقد خضع التعليم التمريضي في بعض دول الخليج العربية في السنوات الأخيرة الماضية إلى مراجعات وتغييرات جذرية وذلك لمواكبة الأساليب المعاصرة في التعليم التمريضي. ومن هذه الدول التي شهدت هذا التغيير في محتوى المساقات التمريضية وفي عملية التعلم والتعليم ، دولة الإمارات العربية المتحدة ، ودولة البحرين.

وككل عملية تغيير، فإن من الأهمية بمكان رصد التغييرات التي طرأت على عملية التعلم والتعليم عن طريق القيام بدراسات علمية ومتابعة هذه الدراسات من منظور الهيئة التدريسية والطلاب. كما يجب رصد الأحداث والنتائج الايجابية والسلبية التي رافقت عملية التغيير. ومن المتوقع أن تفيد هذه الدراسات أصحاب القرار في الكليات التمريضية لمراجعة المناهج التمريضية بطريقة علمية مدروسة ، كما أنها ستكون مفيدة للكليات الأخرى التي ترغب في إجراء تغيير في مناهجها.

ولهذا ، فإنني أقوم حالياً بالتحضير لرسالة الدكتوراة حول هذا الموضوع بهدف الوصول إلى وضع مخطط عام لعملية التغيير والتي قد تكون مرجعاً مفيداً ومهماً لدول الخليج العربية مستقبلاً في أي عملية تغيير في المناهج التمريضية.

لذا ، أرجو من سعادتكم الموافقة على إجراء البحث في معاهد التمريض.

شاكرين لكم حُسن تعاونكم ،،،

وتقبلوا فائق الاحترام والتقدير ،،،

نجاح مصطفى

مدير عام معاهد التمريض