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Evaluating Teaching Effectiveness: A Survey of Faculties of Nursing in Iran

by

Mahvash Salsali 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirements for the degree of Doctor of Philosophy

Faculty of Nursing

Edmonton, Alberta

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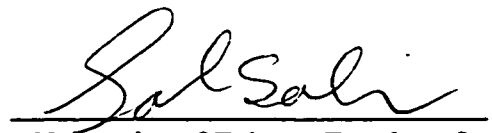

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *Evaluating Teaching Effectiveness: A Survey of Faculties of Nursing in Iran* submitted by Mahvash Salsali in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

The purpose of this study was to gain insight into the perceptions of Iranian nurse educators and students regarding the evaluation of teaching effectiveness in university based programs in Tehran (Iran). An exploratory descriptive design was used. The researcher designed a questionnaire to determine the perceptions of both faculty and students about evaluating teaching effectiveness and an interview guide to elicit data from Deans of faculties of nursing regarding evaluation policies and procedures. The entire population of nurse educators employed as full time educators in nursing faculties of the three universities in Tehran comprised the study sample of educators (approximately 200). A stratified random sampling procedure was used to select 80 (10%) of the undergraduate students, and the entire population of graduate students (approximately 36) from Tehran University.

The findings of this study indicate that although educators prefer self evaluation and students prefer student evaluation, both reported limited use of multiple evaluators and multiple approaches to the evaluation of teaching. Teaching centred values were viewed as the most common beliefs perceived by educators and by students. Pedagogical values were seen as the least common beliefs by both groups.

Educators and students reported that all criteria for evaluating input, process, and output were of great or very great importance. Also, they shared similar perceptions regarding the use of different criteria for evaluating teaching effectiveness. Instructor personality, instructor experience, and the psychological

environment were important elements considered to have an impact on the evaluation process.

Through the process of interviewing, the nursing Deans were offered the opportunity to speculate about the strengths and weaknesses of their teaching evaluation system and about what they thought should be instituted to improve evaluation practices. They perceived shortcomings in present evaluation practices and expressed a desire to improve teaching effectiveness. The Deans also emphasised the importance of evaluation, of the evaluation results, and of having these evaluations done by different individuals. They stressed that systematic and continuous evaluation as well as staff development should be the primary goals for the faculty evaluation process. The ultimate goal is the improvement of teaching by nurse educators.

To my parents, for their support and never ending love for me, the treasured song in my heart, and the dear friends who are wonderful to know.

To my husband, whose encouragement, support, and never ending patience helped me to achieve my goal

To my sons, who have grown up while I have been following my dreams

To my committee, for their encouragement and for allowing me the privilege of working under their guidance

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CHAPTER 1

Introduction and Statement of Problem

Evaluation of teaching like student evaluation is at the heart of the educational process. Teaching effectiveness evaluation is an important part of faculty evaluation and must be viewed in that context. Any teaching effectiveness assessment system should meld with the faculty evaluation system of the institution or program (Van Ort, 1983). The purposes of teaching evaluation are to improve the quality of teaching, assist faculty to self-evaluate, improve accountability in education, meet the criteria for the approval of the academic institution, and identify the content areas for faculty development programs (Gien, 1991). In general, the evaluation of teaching appears to have improved over the years. Griffin and Brown (1992) and Seldin (1984) in their studies found that the process for evaluating teaching is becoming more structured and systematic. Further, the use of more data sources such as peer and self-evaluation signals a fundamental shift toward a more comprehensive evaluation.

Evaluation of faculty performance in higher education focuses on teaching, service, and scholarship. The emphasis on each of these faculty roles reflects the value placed on them by various types of institutions (Johnston, 1996). Teaching in nursing encompasses instruction in the classroom and clinical area as well as other related functions such as informal interaction with the students before and after teaching sessions, individual student counselling and tutoring, and curriculum development. Thus, as suggested by Gien (1991), evaluation of teaching should be based on several sources of data such as student ratings of classroom and clinical teaching, peer evaluation, and the analysis of instruction-related materials. Zimmerman and Westfall (1988) assert that evaluation of teaching plays an important role in the teaching-learning process both for the student who is evaluating the instructor, and for the instructor who is seeking improvement. The review of evaluation data can identify areas of effectiveness, as well as problem areas in teaching. In the clinical milieu, the student applies theory learned in the classroom, but must learn to do so with real patients in situations often involving life and death situations. Effective or

ineffective teacher behaviours will enhance or obstruct learning in these settings (Knox & Mogan, 1985). Also Patterson and Keel (1976) mention, the nurse educator's influence on a student nurse's development is multiplicatively reflected in the future nursing care that will be received by hundreds of patients/clients. It is assumed, as suggested by Sieh and Bell (1994), that effective nurse educators produce effective students and increase satisfaction and competence in both nursing students and patients.

The question of what constitutes an effective teacher or effective teaching has for generations caught the imagination of sociologists, psychologists, and educators. The issue has been pondered intensively, discussed vigorously, and, more recently, examined empirically. Unfortunately, however, the characteristics of effective teaching remain elusive (McMurty, 1993). Part of the difficulty associated with the development of an adequate program for the measurement and prediction of teacher effectiveness arises from the facts that teaching means many different things to different people and that the teaching act varies from person to person as well as from situation to situation. Fundamental to the problem of evaluating teaching is, as Westbury (1988) proposes, the fact that people do not always share the same value system. What is judged good teaching by one may not be similarly judged by another. In addition to individual values are those shared by different communities, or by proponents of a competing paradigm.

deTornyay (1988) mentions that today in many schools of nursing, excellence in teaching is unrewarded. The attitude that the evaluation of teaching performance is more subjective, less reliable, and less accurate than the evaluation of scholarly work has contributed to neglect in rewarding teaching performance (Ward & Brown, 1992). In addition to the institution's belief system, Arreola (1984) claims that the single most profound conflict in the area of faculty evaluation revolves around the fact that faculty members are hired and receive their pay cheques for teaching, but are promoted and tenured for doing research.

Since nursing includes a practice component, it has additional challenges with regard to the evaluation of teaching performance. Nursing educators are expected to be competent both in nursing practice and in teaching (Karukije, 1986). College and

university faculty members, who typically have little or no formal preparation for the teaching role, have been largely left to "do their own thing" within broadly defined ethical and/or social limitations. Familiar with this situation, the academic nurse can understand the dilemma of program graduates who as practising nurse suddenly become aware of educational deficiencies when faced with the demands of day to day practice (Patterson & Kell, 1976).

In Iran, there are the additional stresses of increasing student/faculty ratios and decreasing availability of clinical facilities. As well there is a shortage of qualified nursing instructors. Faculty evaluation is often disorganized, inconsistent, and punitive. An associated issue is that sometimes faculty members may feel threatened, frustrated or confused about the process of faculty evaluation. Also, sometimes nurse instructors are dissatisfied with the standards used, the factors measured, the way the appraisal is done, or how the results are used. Selection of participants in teaching effectiveness evaluation and who should do the evaluating, are other issues. However, some of these issues facing nursing education in Iran may be similar to the issues in Canada.

The problem under discussion involves many psychological considerations as well. First of all, those who attempt to measure teacher effectiveness make assumptions relative to the nature of human abilities. A critical point in the study of human abilities will be found in the sensory process and perceptions. Much attention was given to the testing of the sensory processes at the turn of the century in attempts to measure intelligence but these did not meet with overwhelming success. Those studying the matter did find that individuals differed, and thus laid the basis for further investigations. As this matter has been pursued further, and with better investigative procedures, much new information has become available (Jonson, 1987).

In a certain sense, sensory perceptions are learned in the first few years after birth and during the pre-school period. Also, because perceptions are affected by sensory experiences, they will change over the time. The nature and functioning of perception needs careful study as it relates to teacher effectiveness. Some research has already been conducted with reference to such matters as social perception, self perception, and the

teacher's perception of all sorts of teaching situations. Arnold and Boggs (1995) mention that "perception is a personal construct by which a person transforms external sensory data into personalized images of reality. Perception is the first gate keeper of self-concept" (p.50). Perception is a function of the mind and not of the senses. Perception differs because people develop mind sets that automatically alter sensory data in specific personal ways (Arnold & Boggs, 1995). Because the teacher and student may not be looking at the same phenomena, validation of perceptual data is needed. Jonson (1987) concludes that perceptions are obtained through experiences rather than reflection or intuition. He also mentions that behaviour occurs in response to perceptions. Objective reality can be known only through the filter of perceptions. Perceptions allow individuals to understand, anticipate, and react to environmental circumstances, events, and the behaviour of others. Arnold and Boggs (1995) assert that intelligence, culture, socialization, personality characteristics, physical condition, age, gender, and expectations have an effect on perceptions.

Whitman and associates (1992) mention that the importance of teaching as a part of nursing has been recognized for years. Yet there is some evidence that perceptions about the teaching role are not consistent among nurses. For example, the results of studies reported in the literature suggest there is confusion on the part of some nurse educators about their preparation for teaching. Questions have been raised as to how committed some nurse educators are to the teaching role and the extent to which they should be involved in the teaching and learning process. If nurse educators are legally and professionally expected to teach and are committed to that role, they must be adequately prepared (Boyd & Hollander, 1988).

Gracas and associates (1986) propose that many individuals and groups are concerned about how to improve university teaching; among these are university administrators, educators, students, and some members of the general public. Each of these groups may hold different perceptions regarding the purposes and reasons for their concerns. Administrators often rely on evaluation data as an aid in making personnel decisions, whereas educators may manifest their desire to understand and improve university

teaching for purposes of diagnosis and self-development. Students' interests are very clear and direct since they are the ones who will or will not benefit from the quality of their instructors performance. Students' opinions and perceptions about their educators may be used by themselves and by others to make better choices of courses and of instructors.

Taking into consideration the complexities of the teaching process, as well as the many factors influencing the improvement of university teaching, one might agree, without minimizing the importance of other aspects, that administrators', educators', and students' perceptions are very important components which should be included in any comprehensive understanding of university teaching or organizational efforts intended to contribute to improving university teaching.

Assuming the value of assessing teaching effectiveness, one of the difficulties facing any program planner is the choice of an appropriate evaluation method. Hence, the purpose of the study was to examine the perceptions of Iranian nurse educators and students with respect to actual and preferred evaluation methods, including identification of the criteria for evaluating teaching effectiveness. Gien (1991) indicates that evaluation is a complex process. Thus, a perfect tool for evaluation has not been designed, nor will it ever be. There is no universal criterion of effective teaching. However, some guidelines could be used in selecting or developing procedures and indicators to meet the needs of a particular situation. The researcher hopes this study provides an opportunity to carry out some exploratory research on these aspects. Since many nurse educators functions are in both classroom and nursing practice settings, the evaluation of nurse educators may be especially complex. It seems appropriate to ascertain in more detail what nurse educators and students themselves perceive concerning various aspects of the process involved in evaluating the teaching effectiveness of nurse educators.

Purpose of the Study

The purpose of the study was to gain insight into the perceptions of Iranian nurse educators and students with respect to evaluating teaching effectiveness in nursing faculties of the universities in Tehran that are supported by Ministry of Health and Medical Education. In particular, the investigator wished to explore perceptions regarding actual and preferred evaluation methods, beliefs about the teaching and learning process, evaluation elements, and the criteria for evaluating teaching effectiveness. The study results will be used to help provide (1) a better understanding of those dimensions of a university teachers' teaching effectiveness program that nurse educators and students believe are important and (2) a body of information useful in developing and implementing programs for the improvement of university teaching.

Research Questions

1. What are the actual and preferred methods of evaluating the teaching effectiveness of Iranian nurse educators as perceived by students and nurse educators in nursing programs with respect to (a) who evaluates teaching effectiveness (b) who evaluates input, process, output criteria in evaluating teaching effectiveness, and (c) evaluation practices employed?

2. What is the degree of agreement and what are the differences regarding the actual and preferred methods of evaluating the teaching effectiveness of Iranian nurse educators as perceived by nurse educators and students?

3. How do personal and professional variables relate to the perceptions of the nurse educators and students concerning evaluation methods?

4. What are the beliefs of Iranian nurse educators and students with respect to common beliefs about the teaching and learning process and how do they differ in these beliefs?

5. How do personal and professional variables relate to the beliefs of the nurse educators and students about the teaching and learning process?

6. What are the perceptions of the nurse educators and students with respect to selected criteria for evaluating the teaching effectiveness of Iranian nurse educators and

how do they differ in these perceptions?

7. How do personal and professional variables relate to the perceptions of the nurse educators and students concerning selected criteria for evaluating teaching effectiveness?

8. What are the perceptions of the nurse educators and students with respect to the influence of selected elements on evaluating teaching effectiveness of Iranian nurse educators and how do they differ in these perceptions ?

9. How do personal and professional variables relate to the perceptions of the nurse educators and students concerning the influence of selected elements for evaluating teaching effectiveness?

10. What are the perceptions of three Deans of different faculties in Tehran about current evaluation policies and procedures?

Significance of the Study

The study is important because of the vital role nurse educators perform in nursing programs and in society. Generally the challenge now is how to improve the quality of education for every nursing student. Our educational system is based on the belief that something important happens when teachers meet students in the classroom or learning lab. Most of any nursing faculty's budget is allocated to the costs of instruction and yet instruction receives very little attention from faculty administrators and instructors - not because they do not think it is important, but because they do not quite know what to do about a number of things. Faculty instructors, for instance, are deemed to be authorities in their specialities. No one else at the institution is likely to know as much about their particular specialties as they do, so there is an understandable reluctance to tell faculty what or how to teach to achieve effectiveness in their teaching.

There are a set of questions that have not been answered to the satisfaction of many: What constitutes effective teaching? Who should evaluate nurse educators? How should they be evaluated and on the basis on what criteria? Most of us believe that the quality of student learning depends in large measure on the quality of instruction. Therefore we have to decide what effective teaching is and how to evaluate it.

Keller and associates (1991) stated that the components of teaching effectiveness and its evaluation have not only been an area of interest to teachers and students alike, but are also a focus of considerable research. Recent years have witnessed the growth of faculty development centres for teaching in addition to inquiry and research on "effective teaching." In fact, organized efforts have resulted in several well-attended conferences and workshops as well as publication outlets for research efforts on teaching effectiveness (Eison, 1987).

According to Griffin and Brown (1992) effective evaluation depends on a clearly defined connection between institutional goals and the individual faculty member's goals. Consequently the criteria and procedures on which faculty will be evaluated need to be identified clearly and must be known well in advance. Newton and Braithwaite (1988) found that teachers saw little actual purpose to evaluations, though the teachers' own perceptions placed a high value on evaluations. Also, Brown (1981) notes that students are part of a new generation who are concerned with faculty competence and quality of education. In many schools, students are demanding the right to express their ideas and opinions about the competence of individual faculty members.

The present study is significant in that it examines the perceptions of Iranian nurse educators and students about the actual and preferred evaluation methods and secondly, it investigates their perceptions regarding the criteria for assessing teaching effectiveness, the impact of evaluation elements, and their beliefs about the teaching and learning process. The information should be of interest to those concerned with the evaluation of nursing instructors and nursing instruction. In particular, the study provides an indication of the degree to which Iranian nurse educators and students see evaluation of teaching effectiveness as a major concern. In addition, the study develops comparisons of the perceptions of nurse educators and students who are involved in the research. The analysis of the relationship between and among educators and students' perceptions regarding evaluation and the personal and professional variables included in the study may be of interest to those administrators and educators who are involved in the development or modification of an evaluation program.

Having access to a broad variety of data from the population of nurse educators in all three nursing faculties of the universities in Tehran and a representative sample of nursing students provided opportunity to examine the systems of nurse educator evaluation in this city. This study provides descriptive information of interest to nurse administrators, nurse educators, and students. Based on information gathered from pertinent literature regarding the evaluation of teaching effectiveness and the perceptions of Iranian nurse educators and students provide opportunity for the exploration and design of future nurse educator evaluation instruments. Administrators may consider utilization of the findings of the study for educator evaluation purposes. Nursing educators must attempt to bridge the gap between what educators and students perceive as characteristics of the effective teacher. The ultimate goal is improvement in teaching.

Definition of Terms

Theoretical Definitions

Perception: is an internal process which defines the importance and impact of external events. It is a continual dynamic process of learning, judging, interpreting, and reacting to the environment. Because perception depends on the interaction of effective stimuli and the personal experience of the individual, each person's perception of an effective stimulus is, at least to some degree unique (Murch, 1973). Perceptions shape human attitudes and behaviour; their impact is pervasive and unavoidable. They provide the bases for understanding reality-objects, events, and our responses to them (Jonson, 1987).

Belief: confidence in the truth or existence of something not immediately susceptible to rigorous proof or the reliability of something (Webster's Encyclopaedic Dictionary, 1989).

Evaluation: to determine or set the value or amount of something (Webster's Encyclopaedic Dictionary, 1989). Aiken (1982) describes evaluation as a process by which one judges the value of an individual's behaviour from a composite of test scores, observations, and/or reports. Two kinds of evaluation are: formative evaluation and summative evaluation. The formative phase is the ongoing process of documentation,

conferencing, and growth. It is the "developmental" phase of the evaluation system. The formative phase includes: identifying performance expectations, documenting performance, conferencing about performance, and developing plans to improve performance. The summative phase is the decision-making process and making personnel decisions based upon performance (Valentine, 1992).

Teaching effectiveness: effective teaching produces beneficial and purposeful student learning through the use of appropriate measurement tools (Centra, 1983).

Operational Definitions

Teacher evaluation method: is the method for assessing teacher effectiveness by somebody or by a measure of rating, or ranking that is currently being used or preferred in faculties of nursing in Iran.

Criteria for evaluating teaching effectiveness: the components that constitute the basis on which a judgment is made, specifically, input criteria (e.g., student characteristics, teacher characteristics, course characteristics), process criteria (e.g., classroom atmosphere, teacher behaviour), and output criteria (e.g., student achievement) that take into account the context of the teaching (Braskamp, 1984).

Beliefs about the teaching and learning process: in this study, belief is operationally defined as Iranian nurse educators' and students' responses to different questions concerning the philosophy of teaching and learning, the andragogical, and pedagogical approaches to the teaching and learning process.

Evaluation elements: the components that may influence the basis on which a judgment is made. The components include teacher characteristics, student characteristics, physical environment, and psychological environment.

Iranian nurse educators: educators who, at the time of study were employed as full time educators in nursing faculties of the universities in Tehran.

Student: one who was enrolled in a faculty of nursing in Tehran and will receive a baccalaureate or master's degree in nursing upon graduation.

Perception: The theoretical definition of perception is provided above. For this study,

perception is operationally defined as Iranian nurse educators' and students' responses to different questions concerning the actual and preferred evaluation system used in faculties of nursing as outlined in the questionnaire.

Assumptions

This study was based upon the following assumptions:

1. The perceptions of Iranian nurse educators and of students in faculties of nursing regarding the evaluation of teaching effectiveness provide an accurate picture of actual and preferred teaching evaluation practices.
2. The perceptions of Iranian nurse educators and of students in faculties of nursing concerning the evaluation of teaching effectiveness influence their behaviour as educators and as students.

CHAPTER 2

Study Context, Review of Literature and Conceptual Framework

This chapter has three sections. First, nursing and nursing education in Iran are reviewed, second, the literature related to the study is discussed, and third, the conceptual framework for the study is outlined.

Nursing and Nursing Education in Iran

"Nursing is a highly respected profession which if pursued with religious and humanistic zeal will be a profession beyond all callings" (Imam Khomeyni, 1983).

The main purpose of this section is to provide some insight into the underlying social and cultural forces that, over the centuries, have influenced the development of nursing education and the nursing profession in Iran. There is increasing consensus about major dimensions along which the role of nurse has changed and continues to change. This section has five parts describing the health care system in Iran, the history of nursing education in Iran, nursing education in Iran at present, the expansion of nursing education in Iran, and finally a review of the current challenges and issues facing nursing in Iran.

Health Care in Iran

The Islamic Republic of Iran consists of 25 provinces (Fig. 1). The land area is about 1,648,000 sq. km. and 64% of the population live in urban areas. The population of Iran is 66 million. According to the national census in 1986, the percentage of people under 16 years was 45.6 and the birth rate in the same year was 2.9 per 100. For a variety of reasons, including family planning, the rate dropped to 1.5 in 1995 (the latest data available). At the same time, life expectancy over the past two decades has increased. For example, in 1975, life expectancy in rural regions among males was 60.4; by the year 1995, it had increased to 67.6, an increase of about seven years within the twenty year time span. Among females for the same time period life expectancy increased about eight years, from 61.4 to 69.6 (Maddah & Ghorbani, 1997). For the country as a whole the life expectancy for females in 1996 was 69 and for males it was 65.

Figure 1. Map of Iran

In Iran taxpayers are eligible for health insurance, which covers both physical care, hospital care, and drugs. Most of the pharmacies and physicians employed by the Ministry of Health and Medical Education are willing to bill the insurance companies directly; however, many medical specialists do not direct bill. University hospitals and health clinics which are considered public hospitals and clinics admit everyone regardless of insurance status. These institutions are widely viewed as reliable and inexpensive and, as a result, have long waiting lists. However, the story is different for private hospitals and clinics whose facilities are considered to be much better. Patients pay for treatment in cash. Then if they are covered by insurance, they are eligible to claim for the costs based on the government schedule of payment which is much lower than the patients actually pay in the private hospitals. In addition, the military have their own hospitals, health centres, and physicians, and their own training programs for physicians, nurses, practical nurses, and licenced practical nurses.

Almost all hospitals are located in big cities and for the country as a whole the ratio of physicians to population is low. Higher education is very competitive and students are admitted based on their rank on entrance examinations. There is no tuition fee if students accept the obligation to work in Iran for the same length of time as their university studies. This stipulation does not apply to attendance at fee-paying private universities. Medical students usually accept this obligation; however, they have to work in public medical institutes, where the salary is much lower than it is in private offices and private hospitals. After fulfilling their obligation, physicians choose where they wish to work. Usually they work for salary in the morning at public hospitals and fee-for-service in the afternoon in their own offices or private hospitals.

In exchange for free education, nursing students also accept the commitment to work in Iran. After graduation, the Ministry of Health and Medical Education determines where they will work within the country. These assignments are in public hospitals and public clinics. Graduates of master's degree programs often work as faculty members in one of the faculties of nursing.

Early History of Nursing Education in Iran

The development of nursing education and of the nursing profession in Iran has been influenced by economic, historical, religious, and cultural changes that have occurred in the country. Iran is an ancient civilization whose recorded history dates back to approximately 1100 BC. It is known that centres of learning existed in Iran between 200 BC and 100 BC (Fisher, 1980). A medical school was established in 241 AD. It was here that Greek physicians were the first to teach the Hippocratic system of medicine. The institution at which this happened was the university of Jundi Shapur (Culican, 1965). Although no mention was made of nursing education, this institution serves as a focal point for illustrating the influences that have affected education in general in Iran. In 1935 a university incorporating some existing professional schools was opened in Tehran, Iran's capital. In 1949 universities were opened in the major cities of Tabriz, Isfahan, Mashad, and Shiraz. By 1966 four additional universities had been opened (Mura & Mahrm, 1995).

Records of the development of nursing in Iran indicate that until about 70 years ago, nursing care of patients was in the hands of the women of the household and the sick were cared for by members of the family or by servants. Due to lack of basic education and the cultural status of women, nursing practice remained at a very low standard for many years. Hospitals and clinics had to be staffed with untrained people (Moghadassy, Ravati, & Shahinpour, 1972).

As early as 1915 an attempt was made to introduce nursing education in Iran. In that year the American Presbyterian Missionary Society endeavoured to train a few nurses in a small missionary hospital. In 1916 the same missionary group established the first three-year nursing school in Tabriz. This is considered the beginning of modern nursing in Iran. A majority of the first nursing students were girls, despite the primarily religious taboo that generally held it inappropriate for women to engage in any profession, and especially one such as nursing that required close contact with male patients. The social values which had permeated Iranian society and culture in the aftermath of the Arab invasion of 642 AD were still prevalent (Mura & Mahrm, 1995).

The nursing school at Tabriz is considered as the founder of modern nursing in Iran

and has continued its work to the present time. However, early graduates of this and a few other mission schools were few. In 1935, along with other steps taken to improve social conditions in Iran, the government obtained the services of three American nurse educators. These nurses were assigned to nursing schools established in three different cities. A two-year program of study was developed for these government schools and the students admitted had a minimum of nine years of education.

To raise the prestige of nurses in the eyes of the public the graduates of these schools were called "doctors' assistants" as doctors had always been well respected in Iranian society (Moghadassy, Ravatie, & Shahinpour, 1972; Riahi, 1968). Following the second world war, a school named Princess Ashraf School of Nursing was built and a teaching staff of nurses from England was appointed. The admission requirement for this school, which was higher than that of other nursing schools, was eleven years of general education and preferably twelve (full high school education). The school was affiliated with the university of Tehran Medical School which gave it additional prestige. At this time another nursing school was established by the Red-Lion and Sun Organisation (The Iranian Red Cross). A nursing education team from the WHO assisted the teaching staff in its early years of development.

In 1952, the establishment of a nursing division in the Ministry of Health helped Iranian nurses receive recognition as a profession, largely made up of women. The division consists of four sections each with a consultant, in the fields of public health, nursing education, hospital nursing service administration, and nursing resource and registration. The Nursing Division has contributed greatly toward the education of nurses in the country by setting up standards for the education of nurses and by the services of its nurse educators. These nurse educators are able to give assistance to nursing schools in the development of school administration and policies, planning and implementing curricula, and improved methods of testing and evaluation (Riahi, 1968).

Another important landmark in nursing education was the First Grand Nursing Conference held in Tehran from August 27th to September 6th in 1956 to evaluate the status of nursing and to clarify the role of nurses in Iran. The five main subjects discussed

were: the profession of nursing, basic nursing education, auxiliary groups, post-basic education, and midwifery and its relationship to nursing (Moghadassy, Ravati, & Shahinpour, 1972). At this conference nurses from all health organizations of Iran were represented in addition to several nursing resource persons from abroad. As a direct result of the conference the nurses of the country undertook to raise the standards of education for nurses, and develop constitutions for professional and practical nursing schools.

Upon the approval of these constitutions in May 1958 by Iran's High Council of Education, the educational requirement for professional nursing schools was raised to the 12th grade of general education, which is the same as for any university school in the country. The program of study for these schools was extended to three calendar years. Entrance requirements for schools of practical nursing were set at the ninth grade of general education and the program of study set at two calendar years. Because fully-qualified nurses were few in number it was officially recognized that a combination of professional and auxiliary nursing personnel was essential to provide needed services.

The Nemazee School of Nursing in Shiraz, founded in 1954, was the first school in Iran requiring its applicants to have the minimum of 12 years of high school education and the first nursing school qualified by the ministry of education to award its graduates a certificate of practice. In 1958 two guide books setting minimum standards for nursing school curricula were prepared by the leading nurse educators of the country. These curriculum guides have improved the programs for both professional and practical nursing schools and have been followed by all schools since 1958 (Riahi, 1968).

Despite these improvements in nursing qualifications, it was recognized that nurses graduating from the three-year diploma program were not qualified to assume responsibility for teaching, administration, or supervision in schools of nursing or health agencies. Since 1956 there has been great interest in post-basic nursing education. The minister of public health for Iran requested the assistance of the WHO in 1963 to advise on the establishment of a post-basic program.

In June 1965, officials at Pahlavi University in Shiraz announced their readiness to

establish such a program and asked the WHO to assist. Early in 1966, the WHO Regional Nursing Advisor made a visit to Iran to assist with planning the program. The first class was admitted in October 1967. The department of nursing education at Pahlavi University offered a post-basic program of study for registered nurses leading to a Bachelor of Science (BSc in nursing) degree. The purpose was to prepare qualified nurse teachers and administrators for nursing schools, practical nursing schools, hospitals, and public health agencies. This program for both men and women, required students to complete 128 credit courses over five semesters and used the problem-solving approach as the method of teaching (Moghadassy, Ravati, & Shahinpour, 1972). Schools of nursing in Iran in 1968 were of three kinds: (a) schools preparing practical nurses whose program of study was two years in length (Behyars), (b) those which offer a three-year diploma program in nursing, and (c) those with a four-year program of study which leads to a BSc degree in nursing.

Preparation beyond the basic preparation for nurses in Iran became available for the first time in 1954 as midwifery training. Prior to this date a midwife was not required to be a nurse. Midwifery as a branch of higher education for women was established and taken over by the University of Tehran. The training program was three years in length and the position of midwife was more highly respected than that of nurse. In 1954, the midwifery program at the University of Tehran became a post-basic program of 18 months duration open only to graduate nurses. Later the program was shortened to 12 months. Today, many nurses upon graduation seek midwifery training so they can engage in private practice. In addition to midwifery, a post-basic program for nurses was established in 1967 at the Pahlavi University, Shiraz, to prepare nurses as teachers, administrators, and supervisors (Riahi, 1968).

Nursing Education in Iran at Present

In 1935 the women of Iran were required to unveil by government order (Riahi, 1968), but some years later many women returned to the veil again. After the 1979 Iranian revolution, higher education was made available in different universities for women as well

as men. Today there are many more educational opportunities available for girls and women than there were 20 years ago. The role of clothing as a means of non-verbal, symbolic communication within Islamic societies plays a significant part in defining social roles and defining the social distance between genders.

The regime that followed the Pahlavi dynasty and remains in power is the Islamic Republic of Iran, initially under the leadership of its founder, Ayatullah S. Ruhullah Musavi Khomeyni (1979). In 1981, his regime undertook the task of reorganizing the ministries responsible for education and health care. All nursing programs under the jurisdiction of the old ministry of health were transferred to the newly reformed ministry of health and welfare. Under this ministry new institutions of medical education were established, some existing institutions expanded and steps were taken to develop programs beyond the Master's degree level for nurses. Current requirements for entrance into a nursing education program are: a 12^{th} grade certificate of general education with a major in natural sciences, mathematics, or equivalent of Behyari (practical nurse), and acceptance in the National University Entrance Examination.

At present the nursing curriculum offers a four year baccalaureate in nursing accredited by the High Council of Medical Education, of the Ministry of Health and Medical Education. The curriculum is designed as a *community oriented nursing program* with the philosophy of "*health for all*" and employs *primary health care* (PHC) strategies. Also, the concepts of primary, secondary, and tertiary prevention are integrated throughout the nursing curriculum. It is worth mentioning that currently the four year nursing education program consists of three years of theoretical education in which courses are pursued in different faculties of nursing and one year of clinical practice in hospitals. Following completion of their nursing education program, nurses participate in the nursing comprehensive examination under the supervision of the Ministry of Health and Medical Education. These examinations are the equivalent of the North American RN examinations and serve as nursing licensing/registration examinations. Passing them allows nurses to practice professional nursing in Iran (Maddah & Ghorbani, 1997).

Nursing graduates of BSc degree programs may enter MSc programs if they pass the

entrance examination. The nursing specialisations in the MSc programs include: Educational management and education in medical-surgical, psychiatric, community health, and paediatric nursing. For undergraduate, each program has a faculty member assigned as the head of group. At present there are 148 nursing education centres offering the BSc degree, 12 centres offering the MSc degree, and three centres offering a PhD program in nursing (Maddah & Ghorbani, 1997). Three of the faculties of nursing and midwifery are located in Tehran, the capital of Iran. One is at the University of Tehran, one at Shahid Beheshti University and the third at the Iranian School of Medical Sciences. The remaining BSc and MSc programs are dispersed.

The Ministry of Health and Medical Education recently began sending graduates of Iranian Master's degree programs (sixteen students) to Canada, Australia, and Great Britain to earn doctoral degrees in different areas such as epidemiology, psychology, public health, industrial health, nursing education, etcetera. Currently there is a PhD program in health administration available at the Azad Islamic University in Tehran. The University of Tabriz and the University of Tarbiat Modaress also have PhD programs in nursing. Plans are underway for the University of Tehran to also offer a PhD program in nursing. Table 1 and 2 provides a summary of the latest information available on developments in nursing education in Iran.

Expansion of Nursing Education in Iran

Presently, to solve different problems and continually improve and expand nursing education programs, nurse leaders within Iran have come to realize that their long and hard efforts and the keen co-operation of various health and educational resources, particularly the support of the government, are essential. They have also realized that they must proceed in accordance with modern methods and seek co-operation from international sources. They hope that the future will see nurses who are not only technically qualified, but also well educated. The following are some successes achieved in nursing in the last four years.

Table 1. Statistics on Developments in Nursing Education in Iran, 1993-1995

Numbers of Nursing Education Centres in Iran

Years	BSc Degree	MSc Degree	Ph. D Degree
1993	135	9	----
1994	145	10	1
1995	148	12	3

Numbers of New Nursing Graduates

Year	BSc	MSc
1993	2698	91
1994	2957	155
1995	3828	112

Numbers of Nurses at Work

Year	Estimated Number
1993	25800
1994	28800
1995	31300

Table 2. Numbers of Iranians Receiving Services From Nursing Personnel

Year	Estimated Number
1993	3,800,000
1994	3,900,000
1995	4,000,000

(Maddah & Ghorbani, 1997)

- The establishment of a number of nursing schools in the country.
- Increases in student enrolment.
- Progress in the development of nursing services in both rural and urban areas of the country.
- The establishment and implementation of a comprehensive program of community-based nursing education throughout the country. Confronted with changing health care goals (from disease oriented to health oriented), nursing educators must visualize nursing and nursing education from a different perspective. Students must be prepared to meet the needs of populations rather than institutions and form new partnerships in the community if they are to be prepared for health care in the next century. This makes communication between academia and community clinical settings essential.
- Implementation of a theoretical approach to nursing education employing Problem Based Learning (PBL) with a health to disease point of view considering rehabilitation in the three areas of primary, secondary, and tertiary prevention.
- Increased opportunities for student nurses to practice in clinical settings and community agencies, including city health centres. Both rural and urban health centres throughout the country have been transferred to the universities, and are under their supervision. This allows both students and their educators to have better access to community settings.
- Increased educational opportunity for nurses with emphasis on community oriented nursing education, primary health care, client education, and research methodology for the improvement of nursing service, etc. Also continuing education for nursing personnel is being provided.
- The establishment of a Nursing Council. The members of the council were appointed by the Ministry of Health and Medical Education. The main purpose of the council is to improve the quality of health care in Iran.
- The establishment of a Board of Nursing under the High Council of Medical Education, and the Deputy Minister of Education, Ministry of Health and Medical

Education for the purpose of supervising nursing education and practice.

- The establishment of a committee under the direction of the undersecretary for research in the Ministry of Health and Medical Education. Initiatives in nursing research have taken a variety of forms: conducting and supervising research projects, providing nurses with facilities to conduct research projects at the hospital, country, or universal level, providing books and journals on nursing research, and providing facilities for nursing faculties to conduct scientific seminars and congresses in nursing (Maddah & Ghorbani, 1997).

Current Challenges and Issues Facing Nursing in Iran

Nearly all countries are experiencing shortages in all types of health personnel and the situation is no less acute in Iran. This has led to a number of challenges for the profession.

- Increasing the enrollment of students in master's and doctoral programs in nursing. As previously noted (Table 2) there are twelve centres offering a master's degree and three centres offering doctoral programs in nursing which is considered insufficient to meet the demand for qualified teaching staff in the faculties of nursing. Also in the provision of nursing services in hospitals and health clinics, there is often a gap between the theories recommended in the faculties of nursing and actual practice in the clinical settings.The practice settings for nursing students are not always satisfactory in regard to the quality of the facilities, personnel, and services provided. Further, continuing education opportunities while now offered to some extent, are insufficient especially for certificate courses (e.g., geriatric nursing, rehabilitation nursing, factory nursing, flight nursing, etc) that extend from six months to a year.
- Motivating nurse educators to undertake more research and to increase the variety of research done, as well as increased training opportunities for nurses to gain research skills and competencies on the job.
- Strengthening and activating the High Council of Nursing and the Board of Nursing. Leaders in the field of nursing are trying to persuade the government to make private nursing care active under the permission and supervision of the Nursing Council.

Private nursing care in Iran refers to the delivery of nursing care outside of government funded/supported care environments. Most nurses in Iran are employed in hospitals and a small number in health clinics and there is virtually no provision for home care nursing.

- Improving the integration of the health care system, particularly the linking of primary health care (PHC) and community based rehabilitation.
- Changing community attitudes toward the elderly.
- Educating people, using the problem-based learning (PBL) method, in order to identify the health care needs of society (Madah & Ghorbani, 1997).

Review of Literature

The purpose of this section of the chapter is to review the literature on evaluating teaching effectiveness. In this regard the evolution and philosophy of teaching will be described, as well as learning theory including the methods and criteria for evaluating teaching effectiveness. The focus of this review is on four key areas: input criteria, process criteria, output criteria, and concerns related to evaluators. The review of literature includes information for the period 1970-1998. There was no available research on teaching effectiveness in nursing in Iran.

Evolution of Teaching

The study of teaching effectiveness seems to have had three distinct periods: early research on teaching effectiveness (1896-1957), the middle period of research (1957 to the early 1970s), and the third period which focus on process-product research (1970 10 current). In the early period most researchers attempted to formulate teacher presage or prediction criteria that would identify the good teacher. Data for most of these studies were collected, not from classroom observations of the teaching process or from student achievement but from data collected during interviews with educational experts, principals, and administrators, regarding their views of teacher presage criteria that would depict the teaching effectiveness of a teacher (Graham & Heimerer, 1981). The middle

period of research from 1957 to the mid 1970s has been termed the modern period of research on teaching effectiveness. In this period research was undertaken to identify the perfect teaching method based on the study of learning theories and psychology but again not based on teacher observation. The current period with its emphasis on process-product research, is based upon the systematic observation of teachers actually teaching. Researchers utilizing this research design, observe the teaching process to determine its relationship to student learning. Graham and Heimerer (1981) presented three distinct subphases of process-product research: ***subphase one***- search for generic variables (e.g., clarity, enthusiasm, criticism), ***subphase two***- search for situation-specific variables (e.g., subject matter, grade level, student opportunity), ***subphase three***- search for ways to enhance student interaction with criterion materials (e.g., instructor feedback, questioning).

Although there are many different metaphors of teaching in the literature, three have been chosen for critical examination. These three metaphors are ***teaching as technical expertise*** (a combination of teaching as labour and teaching as craft, these two approaches were combined because they are not distinguishable in studies of teacher evaluation), ***teaching as an art*** and ***teaching as professional judgment*** (Haughey et al, 1993; Wise et al, 1985).

The underlying assumptions about the nature of teaching as technical expertise are that teaching is a highly skilled activity and learning to teach involves acquiring, through practice, a set of complex skills. In the writings of Pratt (cited by Warren, 1988) this metaphor is labelled "teacher as skilled manager and performer." A good teacher has a large repertoire of skills and knows which is most effective in any given circumstance (Wise et al, 1985). Teaching effectiveness, a core element in this conceptualization, is based on the belief that it is possible to identify, define, and prescribe the skills that comprise good teaching. The teacher is then responsible for executing these skills well and appropriately (Haughey et al, 1993). In the Wise and associates (1985) study, the areas encompassed by teaching effectiveness are teaching procedures, classroom management, knowledge of subject matter, personal characteristics, and professional responsibility. The

approach to teacher evaluation which is consistent with the metaphor of teaching as technical expertise requires (a) identification and description of the characteristics of effective teaching, (b) development of indicators or other measures of teaching effectiveness, and (c) design of procedures that are fair to the teacher and as objective as possible. In the teaching as technical expertise metaphor, the person conducting the evaluation plays a key role, regardless of the instrument used, and the teacher plays a relatively passive role. From this point of view both the process and the report lie in the hands of the evaluator. Such approaches express high levels of concern about fairness issues and about qualifications of the evaluator for the task.

The metaphor of teaching as art rests on recognition of the importance of "intuition, improvisation and expressiveness" to good teaching. The individuality of the teacher and the uniqueness of each class of students is acknowledged. Furthermore, a fundamental element of this conceptualization of teaching is the empowerment of teachers (Gitlin & Smyth, 1990). According to the teaching as art metaphor, teaching is highly individualistic, dependent on the personal resources of the teacher and on his or her interactions with students, individually and as a class (Wise et al, 1985; Gitlin & Smyth, 1990). The emphasis in this approach is on self-awareness, understanding, and insight. Perhaps the most important characteristic is that the substance or matter of evaluation is rooted in the teacher's own practice rather than on externally imposed criteria. Gitlin and Smyth (1990) have argued that the very nature of the scientific process of deriving indicators of teaching effectiveness ensures that the least interesting and significant questions are addressed and the most pressing ignored. The separation of knowing from doing is a critical issue as well.

Regarding teaching as a science or an art Davis (1993) mentions that some say that teaching is a science. Those who do stress the scientific aspects of teaching and focus on ways to systematize the communication between teacher and student. It is possible, through careful selection and pacing of materials, to regulate interactions among the students, the teacher, and materials to be learned, thus reducing the possibility that learning occurs by chance. Others say that teaching is an art and "scientific" teaching ends

up in formalized, cookbook approaches that force students to perform and bureaucratize learning. Besides, effective teaching depends on high levels of creativity, sound judgment, and insight. Perhaps the controversy about teaching should not be cast as an either-or debate. It would be more accurate to say that teaching involves artistic judgments that depend on science. As Davis (1993) notes, there is a scientific basis for the art of teaching.

The metaphor of teaching as professional judgment has been highlighted in recent years. Its emphasis on professional judgment and the collaborative involvement of teachers in structuring the nature of their work and their work place is appealing to teachers (Haughey et al 1993). A similar metaphor is supported by Pratt (cited by Warren, 1988) who discusses the effect of personal knowledge and beliefs on teaching practice, for example, the link between teacher's subjectively held beliefs and their thinking, and the effect of these on their teaching. Pratt also identifies a third metaphor of teaching as problem solving, whereby effective teaching is a function of ability to solve complex, ambiguous, and often unpredictable teaching/learning problems. The third metaphor of Pratt appears to have some relationship to teaching as technical expertise and to teaching as professional judgment.

Knowledge is as critical to conceptualizations of teaching as professional judgment as it is to conceptualization of teaching as art, although there is greater emphasis on a shared body of knowledge from which a set of professional standards can be developed and less emphasis on political analysis. For example, "to exercise sound professional judgment, the teacher must master a body of theoretical knowledge as well as a range of techniques" (Wise et al, 1985, p.65). The purpose of evaluation, from the perspective of this metaphor, is to encourage teacher reflection and dialogue about practice, in order to contribute to the development of shared working knowledge. There is an expectation that "standards of professional knowledge and practice can be developed and assessed and that their enforcement will ensure competent teaching" (Wise et al, 1985, p.65). Teachers, however, are involved in setting those standards, the focus is on judgment rather than skills, and the context within which teachers make pedagogical judgements is integral to the assessment of teacher performance (Haughey et al, 1993).

During the 1970s, formal evaluation of teaching was initiated as a response to student demands for accountability (Coleman & Thompson, 1987). With an increasing focus on excellence in nursing education in the 1990s, faculty are continuing to make demands for a more visible and equitable evaluation system (Eble, 1984). Efforts to document teaching effectiveness in nursing are essential in order to demonstrate nursing education's accountability to the profession and the public it serves.

Nehls (1995) proposes that teaching is more difficult than learning because what teaching does is "to let learn." The real teacher, in fact, lets nothing else be learned than learning. To be effective, we need to know what is known about how people learn. The researcher believes that scientific knowledge and a keen sense of how to apply it are both required for making well-informed professional decisions about teaching.

Philosophical Perspective

Philosophy and education are so closely connected that the interdependence of education and philosophy should be fairly obvious. Indeed, there is no aspect of education that does not depend on philosophy, and no teacher can neglect the integral relationship between philosophy and education without jeopardizing both the individual student and the society of which he/she is a member. The philosophy of nursing education encompasses a philosophy of nursing as well as a philosophy of education. In the philosophy of education, emphasis is placed on the student objectives and means necessary to educate the student. However, in a philosophy of nursing the emphasis is placed on the patient-objectives and means necessary to give nursing care to the patient. Thus a philosophy of nursing education must consider both, since the purpose of nursing education is to prepare a person who fulfills the role functions and the responsibilities of a professional nurse within and for society (Heidgerken, 1965).

The curriculum revolution in nursing has encouraged educational reform through the use of alternative pedagogies (Allen, 1990; Diekelmann, 1988). One approach, recently proposed as an alternative to the predominant behavioural paradigm, is narrative pedagogy (Diekelmann, 1993). Nehles (1995) mentions that behavioural pedagogy is

metaphorically compared to a machine in that it efficiently transmits knowledge from teacher to student. In contrast, narrative pedagogy embraces a number of different philosophical frameworks, including phenomenology, pragmatism, feminism, postmodern, and critical social theory. Diekelmann's work (narrative pedagogy) is based on Heideggerian phenomenology. This philosophical view posits that humans are self-interpreting or always in the process of creating meanings of the situation in which they are involved (Heidegger, 1962). Diekelman (1989) has argued that the primary concern of phenomenological models of education "is the communicative understanding of meaning....The main goal is to understand how and in what ways one becomes a nurse" (pp.142-143). Other educational theorists such as Clandinin (1991), Hopkins (1994), and Noddings (1992), have also used phenomenological principles to describe the meaning and practice of teaching. Emphasizing the centrality of the lived experience as revealed in narrative, these authors have developed alternative educational approaches based on dialogue and attention to caring practices.

Although phenomenology, or the study of the lived experience, is the philosophical underpinning of narrative pedagogy, other philosophical views have influenced and continue to influence its ongoing development. One influential approach is pragmatism. Pragmatism asserts that educational experiences must be attuned to the interests of learners. If the experience is meaningful to the learner, it will be used to construct and reconstruct past and future experiences (Nehls, 1995).

In addition to pragmatism, feminism, postmodern, and critical social theory are evident in narrative teaching and learning. Feminist, postmodern, and critical social pedagogists have attended to the presence of power and oppression in the classroom (Apple &Smith, 1991; Giroux, 1991; & Simon, 1992). In so doing, they have created a new vision of the classroom environment in which empowerment, community, and leadership are key concepts (Diekelmann, 1988). Empowerment seeks to rid the classroom of teacher-dominated power; community emphasizes mutuality, not individualism; and leadership provides the means to move the empowered community beyond the classroom walls (Shrewsbury, 1987). Thus, unlike behavioural pedagogy, which is based on a single theory

of human behaviour, narrative pedagogy has as its basis a number of different theoretical frameworks. For nursing education, narrative pedagogy evolves from and creates the lived experiences of teachers and students. Diekelmann (1991) concludes that narrative pedagogy presupposes that teachers-are-learners and learners-are-teachers. Teachers of narrative pedagogy seek to establish partnerships with students in a lifelong quest for knowledge.

Another perspective in adult learning is andragogy. Fuzard (1995) mentions that andragogy is an important aspect of nursing. Health care organizations assert the need for strategic, sensitive individuals to effectively deliver health care services to the consumer. It then is extremely important to maximize these behaviours among nurses and nursing leadership. Andragogy is the art and science of helping adults learn. Knowles (1984) believes that a climate of mutual respect is most important for learning-trust, support, and caring are essential components. Learning is pleasant and this should be emphasized.

With these basic suppositions in mind, the choices of teaching approaches will depend on various factors, including the size, expertise, and purpose of the learning group, as well as the philosophical bias of the teacher. As nurse educators, and in the practice of nursing, we have engaged in a variety of teaching activities. If nurse educators are expected to provide effective teaching, they must have an understanding of the teaching process and of learning theory. The quality of teaching is influenced by nurse educators' use of appropriate teaching strategies and knowledge of the teaching and learning process.

Learning Theory

The purpose of this section is to provide an organized description of theoretical perspectives that may guide nurse educators in their teaching. Health education content includes a variety of topic areas in the cognitive, affective, and psychomotor domains. Whitman et al (1992) mention that the cognitive domain deals with the intellectual or knowledge area. The affective domain consists of attitudes, feelings, and interests one has toward a given topic, while the psychomotor domain encompasses physical skills or sensory motor activities. It is therefore important for nurses to have a repertoire of

teaching approaches based on how individuals learn.

Many theories of learning exist, developed by learning psychologists, psychotherapists, and educators. Before the 1950s several grand theories of learning were purported. From the 1950s to the present, research in learning theories has concentrated more on smaller, narrower scopes of theory building, rather than one grand theory of learning (Bigge, 1982; Larfrancois, 1988). The nature of the type of learning also calls for different approaches. Theorists of today differ not so much in their views about the nature of learning as in their opinions on areas of study and methods used. There is some interest now in combining several models to combat multifaceted problems (Whitman et al, 1992).

Kolb (1984) defined learning as "the process whereby knowledge is created through the transformation of experience"(p.38). Kolb (1984) proposed the holistic "experiential learning theory" which has the advantage of combining experience, perception, cognition, and behaviour, thereby integrating behavioural and cognitive theories. For Kolb, learning is a process grounded in experience that violates the expectations of learners, thereby initiating them into a new way of viewing the world (Heinrich & Scherr, 1994). Inherent in Kolb's definition are the following precepts: (a) the emphasis is on process rather than content or outcomes, (b) knowledge is a transformational process, being continuously created and recreated, (c) learning is subjective and objective, and (d) learning rejects the notion that learning should be defined on the basis of outcomes alone, postulating that failure to modify ideas as a result of experience is maladaptive (Arndt & Underwood, 1990). Nurse educators can recall examples from practice where students understood content but did not or could not apply the learning outside the class.

Some theorists or interpreters claim that there is much basic disagreement in definitions of learning. What is agreed upon is that experience is the source of learning and that to learn is to change. Whitman et al (1992) conclude that common to discrepant viewpoints is the following definition: "learning is a change in the individual, caused by the person's interaction with the environment, whereby he or she is more capable of dealing with the environment. In health teaching, health beliefs, attitudes, and behaviours are the target of this change" (p.52). Arndt and Underwood (1990) also propose that traditionally

in nursing, learning is said to occur when there is a change in behaviour. Such a definition places emphasis on outcomes or product rather than process. The researcher believes that learning should be viewed as a process-product and approached from this point of view may lead to more effective learning.

Active participation by the learner in the learning process contributes to effective learning (Milazz, 1980; Owens et al, 1978). Such thinking is congruent with perceptual existential theorists who propose that learning is an interactive process between the learner and environment (Van Hoozer et al, 1987). Pavlish (1987) mentions that nurses need to vary teaching approaches rather than rely on one approach or base change on intuition without cognizance of the rationale.

Whitman et al (1992) with emphasis on three major perspectives of learning theory (behavioural, cognitive, humanist) argue that behaviourists believe that learning has taken place when changes in behaviour can be observed, when new habits of behaviour are shaped by events in the environment. Cognitive theorists believe that learning is an internal process, not necessarily observable, in which information is integrated or internalized into one's cognitive structure. Humanists stress the incorporation of the affective realm (attitude, feeling, interest) as well as the cognitive in self-directed learning.

Teachers need to be prepared to help students meet the challenges of facing a dynamic environment by showing trust and acceptance of the student as good, of value, striving for self actualization, free to make choices and basically, a unique, affective being (Combs, 1987). This means being whole. It also means being dependent on and independent of others. Humans are active, not passive, deciding the directions their behaviour will take. Whitman et al (1992) mention that humanists, although concerned with the mechanics of the cognitive learning process, place more emphasis on the development of selfhood. Learning is viewed as a function of the whole person;"real learning" cannot take place unless both the cognitive and affective areas are involved. Motivation for learning is seen as intrinsic to the individual. Learning is self-initiated, self-evaluated, and, as contrasted with the behaviouristic school, not fully subject to environmental controls.

Central to the consideration of most humanists is the concept of personal autonomy,

that is, the individual's capacity for self-determination. Humanists believe that persons are free and their behaviour is a consequence of human choice. This implies a great responsibility to others and a great responsibility for the educator of adults. Humanistic educators are concerned with the development of the whole person. The educator may take on the role of facilitator, helper, and partner in the learning because humanistic education is learner centred and learner controlled with a basic aim of developing people (Darkenwald & Merriam, 1980). Human"being"as a lifelong process is andragogy - the vehicle for openness and self-directed learning (Carlson, 1979). Therefore, andragogy is a specific application of humanism to the process of teaching adults.

The andragogical education according to Knowles (1980) is to produce competent people-people who are able to apply their knowledge under changing conditions...the foundational competence that all people must have, is the competence to engage in lifelong self-directed learning. The focus of education is on learning and the major purpose of the educator of adults is to help people satisfy needs and meet goals. One of these goals is maturity and one of these needs is the development of the student's full potential. Andragogy's focus is also on student involvement, allowing students to cope and discover their own system of internal rewards and their own system of feedback for the retention of the values and attitudes the student wishes (Knowles, 1980).

Knowles's model of andragogy is a set of assumptions about adult learning, including the following four: (1) adults desire and enact a tendency toward self-directedness as they mature; (2) adults experiences are a rich resource for learning. They learn more effectively through experiential activities such as problem solving; (3) adults are aware of specific learning needs generated by real life; and (4) adults are competency-based learners who wish to apply knowledge to immediate circumstances (Fuszard, 1995).

Knowles (1980) believes that a climate of mutual respect is most important for learning. Trust, support, and caring are essential components. Andragogical approaches urge nursing education leaders to base curricula on learners' experiences and interests. The learner's self-concept as being an adult with the responsibilities and privileges adult possess, allows for the process of maturation to take place throughout their life time.

Adults learn best when: their past experiences are respected, they take full responsibility for the learning, they are allowed freedom of expression and perceive the "teacher" as helper or facilitator in their learning. The student as a person is highly valued and respected. The concept of andragogy states human learners actively participate in the planning of the learning activity (Knowles, 1980).

Tibbles (1977) mentions that theories of adult education belong in nursing and nursing education. Personal responsibilities for continued learning is essential for every nurse but many schools of nursing do not prepare the nurse for self-motivation. If educators are to be successful in assisting and encouraging nurses to continue their education for effective teaching, they must develop a philosophy of education that includes theories of adult learning.

In the frame of adult learning theory (andragogy) and as a practical guide to evaluating teaching, the researcher proposes that a good strategy for defining excellence in teaching initially is to consider three major areas that can be emphasized in defining teaching. They are input, process, and product (Braskamp et al, 1984; Van Ort, 1983). However, some authors classified criteria influencing teaching effectiveness as presage, process, and products and others categorised it as preactive, interactive, and postactive (O'Neil, 1988; Krichbaum, 1994). When these criteria are compared, they appear, however, to be very similar.

Input Criteria: are the learning environment and those characteristics that teacher and learner bring to the learning environment. Input measures may include the teacher's educational background and clinical expertise, the student's grade averages or class level, instructional materials, characteristics of the learning climate, and any organizational variables affecting the learning environment (Braskamp et al, 1984; O'Neil, 1988).

In conceptualizations of teaching-learning situations, affective characteristics and cognitive characteristics are seen as one cluster of determinants of the interactive and learning processes established in the classroom. Affective processes are associated with the satisfaction of need states and with the motivation of behaviour including, in educational contexts, the learning and performance of students. Theory and research in

educational contexts have focused on several groups of motives having particular relevance for classroom learning and behaviour. One important group is closely related to the maintenance and enhancement of self-esteem, and consists of anxiety and achievement motivation. A second group includes motives such as curiosity that are associated with exploratory behaviour and the need to know and understand. A third group consists of social motives such as the need for praise, recognition, and attention. Much research has demonstrated that such student cognitive characteristics as general mental ability or prior level of achievement do explain a sub-achievement, but only more recently has research focused on relationships between cognitive characteristics of students and the process variables of classroom behaviour (Dunkin, 1987).

Within the classroom setting individual students differ substantially in attention and task engagement, level of participation in classroom activities, and the extent to which they initiate contacts with the teacher and fellow students or participate more passively in response to opportunities afforded by the teacher (Dunkin, 1987). Some researchers have sought to explore the presence of relationships between (a) such cognitive characteristics of students as intelligence, prior achievement level, or cognitive-style variables, and (b) classroom behaviour. Such relationships, however, are unlikely to be direct and generalizable in view of the range of interacting variables contributing to the establishment of patterns of classroom behaviour.

Van Hoozes et al (1987) explains that the teacher's role is learner oriented, recognizing and respecting students' needs and potential needs. The teacher becomes a facilitator, helper, and colleague. The teacher should provide learning experiences that motivate and assist the learner. The teacher should plan and arrange for conditions under which the learner will be free to learn.

In an andragogical approach Knowles (1980) proposes that the setting of the learning climate is the single most important facilitative action. The physical environment needs to be comfortable with pleasing temperature, colour, and size. In the review of several studies Feldman (1984) noted only a very weak positive correlation (r, 0.09) between class size and student ratings, with a tendency of instructors teaching smaller classes to

receive slightly higher ratings. No significant relationship in ratings given by students in large or small classes was reported by Hoffman (1978), Feldman and Mazuca (1979), and Romeo and Weber (1985). The reason for their concern may be due to the myth that faculty teaching large classes are rated lower. The result is that instructors incorrectly emphasize the need for smaller classes. However, research strongly supports that the size of the class will have little effect on the students' rating of teaching effectiveness. The psychological environment shows an understanding of mutual respect, support, caring, friendliness, sharing, and trust with an emphasis on learning. Learners are greeted, introduced, oriented, and treated by the instructor in a way that defines the mutuality of the relationship. Also there is open space or informal classrooms more than closed, self-contained, formal, or traditional classrooms. Rogers' view (1969) of self-directed learning involves two basic steps. The first step is for the teacher-facilitator to create a climate of trust and openness in which self-direction can occur. The second step is for the individual or group to work out a self-directed plan. The teacher does not dominate or control the teaching situation but lets unfolding occur.

There has been strong support for the view that qualities of teacher personality are important determinants of successful teaching. Over the previous two decades, some studies attempted to predict teacher effectiveness from the personal characteristics of teachers. A number of major obstacles to this approach were identified. These concludes problems associated with (a) the wide range of meanings assigned to the term personality; (b) difficulties associated with the selection of appropriate measures of personality; (c) the difficulty of establishing teacher effectiveness criteria; (d) limitations of the criterion-of-effectiveness model as a basis for research; and (e) inadequate theoretical underpinning of the research (Dunkin, 1987). Although each of these problems is worthy of consideration and very little is known for certain about the relation between teacher personality and teacher effectiveness, the researcher concludes some of the criteria that seem to be important in the process of teaching and learning.

Some criteria that affect evaluating teaching effectiveness have been identified. Teaching experience is conventionally regarded as an asset, presumably positively related

to teaching success. A sampling of some of the findings of studies since the early 1960s indicates that experience is neither easily nor effectively defined nor measured (Dunkin, 1987). Cadman (1977) reported that amount of teaching experience and age of the nurse educators have some effect on perceptions of them in evaluating teaching effectiveness. For example, preference for the use of student gain increased directly with the amount of teaching experience. Perhaps as teachers gain experience they become more confident in making a self- assessment by judging the performance of their students or in having others assess their performance in terms of the progress of their students. Also the age of the study participant had an effect upon the specific preference for those criteria identified as product measures in evaluating teaching effectiveness by means of factor analysis. According to Kerr (1991) the literature shows a progression of role expectations which have changed dramatically over the last three decades in which nurse educators graduated from their basic nursing education. Also, Morris (1995) mentions that inexperienced nursing faculty members are not adequately prepared for today's complex nursing faculty role in the academic setting. In addition, sufficient attention has not been given to the orientation and socialization of inexperienced nursing faculty members. Teaching experience is frequently included as a variable in educational research, but no clear picture of its effects has emerged.

Regarding instructor characteristics Seldin (1984) proposes that gender, professional rank, and grading standards of faculty members have minimal effect on student ratings. Is there a relationship between student ratings and instructor personality? Most researchers conclude that the instructors who display energy, humour, and enthusiasm and are content oriented tend to be rated highly by students. Since they turn out to be the same professors who arouse student interest in subject matter and presumably, greater student learning, it is appropriate that they receive the laurels from their students.

Research into the differences in classroom behaviour between male and female teachers has focused upon three aspects of behaviour. First, some researchers have asked whether the behaviour of male and female teachers differs in terms of the leadership style or classroom climate established. Second, differences of a pedagogical type involving

questioning, answering, and correcting have been explored. Third, a few researchers have focused upon linguistic variables and gathered evidence of differences between men and women teachers in their use of language (Dunkin, 1987). Studies of the leadership styles of male and female teachers have sometimes found that male teachers are more direct or dominant than female teachers.

Adams and Biddle (1970) found that male teachers' classrooms were more centrally organized and teacher dominated than female teachers' classrooms. They also found that the male teachers in their study talked more than the female teachers and that the males were more likely to be disseminating information than were females. The latter gave more attention to intellectualizing than did male teachers. Good et al (1972) concluded that female teachers in their study were "generally warmer", and more tolerant of misbehaviour. Their classes seemed more relaxed and disposed towards discussion. Male teachers seemed more active, more highly structured, and more oriented to mastery of content. Centra (1980) mentions that male and female teachers are occasionally rated differently, but the differences do not have much practical significance.

Cadman (1977) in her research found that there is a significant difference in perceptions between instructors in diploma and baccalaureate nursing programs concerning the evaluation systems. The difference may be due to an increased exposure on the part of those teaching in the baccalaureate programs. Also, Sieh and Bell (1994) in their research indicate that analysis of variance between diploma, ADN (Associate Degree in Nursing), and BSN (Bachelor of Science in Nursing) basic preparation of faculty for effective teaching showed a significant difference between basic level of education and responses by their students. ADNs rated teaching ability and interpersonal relationship significantly higher than BSNs at the $p<0.05$ level of significance.

Thomson and Handley (1990) showed a positive relationship between teacher self-concept and teacher efficacy. A positive self-concept was associated with better teacher efficacy, but no causal relationship was inferred. A survey of 594 undergraduates in a small southeastern American university found that nontraditional (younger) students viewed personality and interaction behaviours as indicators of effective teaching, whereas

traditional (older) students focused on behaviours that could specifically enhance grades (Keller, 1991). Research findings clearly reveal that well-organized teachers are the most effective teachers. Teacher knowledge still appears to be an important prerequisite to effective teaching. Also curricular materials comprise the learning resources, assignments, and projects related to the course of study (O'Neil, 1988).

Heidgerken (1965) in her extensive work on the characteristics of teachers, identified three types: the warm, friendly, understanding teacher; the responsible, systematic teacher and the stimulating, imaginative, and creative teacher. In this regard Brown (1981) mentions that professional competence, relationship with students, and personal attributes are important in teachers. The significance of faculty intrinsic motivation for improving teaching was implied in findings from one of the first large-scale studies of faculty development practices. When good teachers voluntarily seek out and participate in teaching improvement programs without any promise of extrinsic rewards, intrinsic motivation is apparently high (Ward, 1995). Numerous studies and research show that student motivation, background and experience, interest, mental ability, personality, and culture affect the behaviour of the learner. In order to be of maximum assistance to the student in the process of learning, the teacher must familiarize herself/himself with what the student brings to the learning situation (Heidgerken, 1965).

Cultural influences on classroom management, though often among the most pervasive and potent, are difficult to identify. They involve phenomena such as norms, values, and beliefs about the young, authority, society, and learning. Classroom management is subject to cultural influence through the expectations that teachers and students bring to class (Dunkin, 1987; Valentine, 1992). Heimlich and Norland (1994) with emphasis on beliefs, values, and attitudes in teaching-learning exchange mention that "understanding your beliefs about teaching and learning and discovering how to operationalize those beliefs in the exchange will improve both your instruction and the effectiveness of your instructional activities"(p.48). When a teacher understands his/her own beliefs about instruction, he/she is more able to adopt methods to his/her belief system that will satisfy divergent learning strategies.

Process Criteria: are those criteria which promote or inhibit teaching-learning interactions. Research has shown that varied criteria affect the process of teaching and some of them are mentioned by the researcher. The implications of learning styles on the teaching- learning process has received considerable attention in the literature. Ishler and Ishler (1980) discuss a method of teacher development that increases awareness and builds competence in teaching behaviour through the activities of diagnosis, goal setting, and training in observation techniques. The authors mention that with carefully planned programs teaching styles and behaviours can be improved to increase teaching effectiveness. Several criteria affect process and the results of some of them will be addressed. The teacher's style, the teacher-student interaction, or environmental variables such as weather, time of day, learning climate or time of year may affect the learning outcomes (Van Ort, 1983; Braskamp et al, 1984). Environmental variables seems to be input as well as output. Enthusiasm, clarity, time-on-task, organization, flexibility and expectations in teachers are the other important variables that affect the teaching process (O'Neil, 1988).

In "substance versus style" Simpson (1991) criticized the notion that the teacher's knowledge of subject matter is sufficient for good teaching. Roueche and Baker (1987) in their research have described thirteen characteristics of superstar teachers. Commitment, goal orientation, integrated perception, positive attitude, reward orientation, objectivity, active listening, empathy, individualized perception, teaching strategies, knowledge, and innovation are necessary for superstar status in teaching. Money (1992) in her research paper in titled " A survey of student and teacher perceptions of teacher effectiveness" reported that "knowledge of subject matter"scored highest, "communication" was second, "well organized material" ranked third, "motivation, friendly, and open" tied for fourth, "the ability to inspire interest" scored fifth, and "classroom control" was sixth and the least important. The faculty scored communication and motivation significantly higher than did the students, whereas the students want their teachers to "know their stuff" and to be organized. A comparison of the thirteen factors identified by Roueche and Baker (1987) and the seven factors that were used in the survey of Money (1992) show that all

thirteen of the Roueche and Baker factors were considered under six of the headings used in the Money's survey.

Feldman (1976) reviewed a group of studies in which students were asked to describe "good", "ideal" or "best" teachers. He found eight characteristics that were usually ranked high in all studies: concern for students, knowledge of subject matter, stimulation of interest, availability, encouragement of discussion, ability to explain clearly, enthusiasm, and class preparation. Knox and Mogan (1985) in their research compared the importance of five categories of clinical teacher behaviours as perceived by university nursing faculty, students, and practising baccalaureate graduates. A survey tool, developed for this study, contained 47 items, each item describing a clinical teacher behaviour. Participants were asked to rate the importance of each item on a seven-point Likert-type scale. Results showed similar perceptions of the importance of clinical teacher behaviours among the three groups of participants. However, significant differences were found between groups when the perceptions of students in each of the four years of the nursing program, faculty, and graduates were compared. These results indicate a greater variability among students than between students and faculty and between students and practising baccalaureate graduates.

Krichbaum (1994) in her research has described effective clinical instruction in relation to nursing student learning outcomes, focusing particularly on the teaching process variable, activation of established (teaching) routine and planned actions of clinical teachers (critical care staff nurse preceptors' effective use of specific teacher behaviours found to be correlated with student learning) and on the nursing student product variable, "nursing students' immediate responses" (performance on two measures of student learning in critical care-the Clinical Evaluation Tool [CET] and the Basic Knowledge Assessment Tool [BKAT], a standardized test of critical care nursing knowledge). Clinical teacher behaviour effectiveness is thus described as it relates to baccalaureate nursing student learning in a critical care practice. Results of this analysis suggest that effectiveness in clinical teaching is similar to effectiveness in other setting. Correlations of teacher behaviour effectiveness with two different measures of student learning provide

empirical evidence of the kinds of teacher behaviours that clinical teachers should use in order to teach nursing students effectively. Correlates of the cognitive learning measures indicate the teacher behaviours that support the learning of knowledge underlying nursing practice in critical care. On the other hand, correlates of nursing students' clinical performance on the CET measures reflect the importance of those teacher behaviours that foster students' abilities to apply that knowledge in the care of critically ill clients. Empirical evidence from this study points to the need for further investigation of teacher behaviours that relate to different types of student learning outcomes. Perhaps nurse educators need to increase opportunities for observation followed by practice in order to facilitate both cognitive and performance learning outcomes for baccalaureate nursing students. Perhaps what we need is to learn to ask better questions and to talk with students in more meaningful ways about their learning.

In a review of studies supporting a relationship between teacher behaviour and student achievement, the results of the different studies indicated four attitudinal variables: teacher enthusiasm, teacher classroom behaviour, teacher indirectness, and teacher warmth. These were high-inference variables generally based upon rating scales. Significant results relating teacher enthusiasm to student achievement on at least one criterion measure were obtained in most of studies (Dunkin, 1987).

Centra (1980) found correlations in the 1960s and 1970s between scores on final exams and student ratings of "overall teaching effectiveness" and "value of the course." Also there were significant positive correlations between students' achievements and positive course ratings. Another test of the validity of student ratings is to relate student ratings to teacher behaviours in the classroom. Erdle and Murray (1986) found that teachers who received high student ratings did, according to classroom observation, teach differently from teachers who receiving low ratings. Highly rated teachers were well-organized, expressive, lucid, interacted more with students, related subject matter to student interests and, in general, demonstrated the same classroom behaviours that students report for good teachers.

VanArsdale and Hammons (1995) mention that nursing students often feel

overwhelmed by the amount of information given to them to learn. As in other fields, some instructors will have higher standards and expectations for performance. Many nursing faculty anticipate lower ratings in courses perceived as difficult by students. However, Marsh (1984) found a positive correlation between student ratings and course workload/perceived difficulty. Students gave instructors higher ratings in difficult courses requiring hard work. Students are able to discriminate between meaningful work and busy work. Some instructors argue that students will give more thoughtful and detailed responses when rating forms are signed. Nevertheless, studies have repeatedly shown that student ratings of instructors are higher when students are asked to sign the rating forms (Braskamp et al, 1984; VanArsdale &Hammons,1995).

As the result of growing societal concern about teacher accountability, there has been a greater emphasis placed on utilizing various methods of evaluating teaching effectiveness. Some nursing faculty have felt threatened by this development fearing that students may rate them lower if they knew the potential impact on the instructor's salary or career advancement. However, several studies have found when the students were informed that the results of their evaluations would be used for administrative purposes they rated the instructor more favourably (Braskamp et al, 1984; Romeo & Weber, 1985). Many faculty believe there are variables beyond their control that influence student ratings of their teaching effectiveness, but research has repeatedly shown that relatively few characteristics influence student ratings. Nursing faculty tend to be predominantly women, with a wide range of age distribution. When differences have been found in ratings, they tend to be negative. For example, older faculty receive lower ratings (Feldman, 1983). Centra (1980) identified several reasons why this may be true. Some teachers may acquire substantial administrative responsibilities, causing a decrease in teaching involvement. However, the slight decline in ratings is not enough to be considered a source of bias. VanArsdale and Hammons (1995) concluded that an instructor's gender, age, teaching experience, and personality have little or no relationship to student ratings. However, faculty rank and enthusiasm are factors that do influence student rating results (Centra, 1980).

Studies of teaching over the past two decades have yielded descriptive data about the linkages between specific teacher behaviours and student learning outcomes (Krichbaum, 1994). Results point to a number of specific teacher behaviours that are correlated with student learning. For example, use of learning objectives, effective questioning and answering of questions, giving feedback, and role modelling have been empirically associated with student learning outcomes (Brophy & Good, 1986; Rosenshine & Stevens, 1986).

VanArsdale and Hammons (1995) proposed that teaching and research are often seen as the major foci for university nursing faculty. Differing opinions exist regarding the relationship of research to teaching effectiveness. Some believe that faculty members cannot be first rate teachers if they are not actively involved in research. Others believe that poor classroom instruction often occurs from faculty neglecting their teaching responsibilities as a result of the amount of time devoted to research and publications. Research findings support neither position. After a review of 43 articles on this topic, Feldman (1987) demonstrated only a very weak positive correlation (r, 0.12) between research productivity and overall teaching effectiveness as assessed by students.

It is common in nursing programs for an instructor to have a student for more than one course or a clinical component of a course, or both. Some of these instructors have concerns about characteristics of students that may influence student ratings of teaching effectiveness. Again, research has uncovered relatively few sources that influence student ratings. Conclusions of Cashin's review of relevant research (1988) shows that expected grades and student motivations are factors that do influence student rating results. Numerous studies have shown little or no relationship between a student's personality, age, gender, grade point average, or academic level and student's ratings of teaching effectiveness.

Centra (1980) mentions that students give slightly higher ratings to their majors or electives than to courses taken to fulfill a college requirement. Their motivation and their personal interest in their major courses and in subjects they have chosen to study would lead them to rate the courses as more valuable and effective. In addition, some teachers

have less interest in lower-level, college-required courses, and thus put less effort into their teaching. Regarding subject matter Centra (1980) proposes that in comparing thousands of classes in each of the fields of study, slightly higher student ratings of course value and teacher effectiveness are found in the fields of the humanities than in the social sciences and the natural sciences.

Research has consistently found positive associations between teacher enthusiasm and student achievement (Anderson, 1981; Land, 1980). Evidence overwhelmingly shows that well-managed classrooms are strong determinants of student learning (Anderson, 1981; Doyle, 1981). Numerous studies have found a positive relationship between teacher clarity (much emphasis on content and clear transition) and pupil achievement (Bell et al, 1984). Evidence clearly reveals that the amount of time spent on a task powerfully predicts student achievement (Anderson, 1981). Research indicates that effective teachers continually monitor learning experiences and, in turn, adjust the pace (fast or slow) according to student needs (Anderson, 1981; Brophy & Evertson, 1978). Although the value of flexibility is not strongly supported by research, the term does appear occasionally in discussions on effective teaching (O'Neill, 1988). Research into teacher expectations reveals that they are associated with student achievement and that some teachers treat low-and high-achieving students differently (Brophy, 1979). O'Neill (1988) mentions that teachers should strive to optimize as many factors as possible rather than focus on one or two variables for teaching effectiveness. For example, time-on-task by itself is important, but teaching effectiveness is maximized when applied in conjunction with the other factors. Gracas et al (1986) in their research identified six factors in the students' description of effective university teachers: 1) student participation; 2) classroom organization and management; 3) teacher clarity; 4) acceptance of students; 5) punctuality; and 6) systematization. These factors were further clustered under three foci for staff development; improving interpersonal relationships, improving organization, management, and evaluation, and enhancing knowledge and understanding.

The concept of andragogy states human learners internally select and choose their own learning; therefore, a problem centred orientation to learning is necessary for the adult

student who wishes to apply new learning. The learner actively participates in the planning of the learning activity. Because the learner's experiences are considered and because the learner will learn more from an active personal experience rather than a passive one, learning techniques are experiential like group work and discussions, simulation exercises or guided design problem solving experiences. Teachers create real life conditions and help learners discover their own need to know. This allows learning to expand outward from the learner's needs. The relationship among teacher and learners in andragogy is relaxed, trusting, and mutually respectful. There is much informal conversing. Teachers take the time to know and understand the learners and call them by their first name. Most importantly, teachers use the technique of active listening to show respect to the learner. Students take precedence over things because the teacher is the helper and the learner is of prime importance (Knowles, 1980).

The nurse educator as an educator of adults is responsible for creating a safe learning environment by accepting the adult as responsible and self-directing; by acknowledging the adult's experiences as learning resources; by examining adult readiness in terms of social roles; and by providing immediate application to new knowledge. This is accomplished through good planning and good teaching in a problem-centred, experience-centred environment (Knowles, 1984).

Output Criteria: are those factors which indicate the results of the teaching-learning interaction. Teachers self evaluation, student progress, success of graduates, and student achievements are some examples of these measures (Braskamp et al, 1984). The following are some of the output measures.

I. Assessing Teaching on the Basis of Learning Outcomes: When learning outcomes are to be used as the criterion of teaching quality, the elements on the documentary record take the form of scores earned by the teacher's pupils on measures of the knowledge, abilities, and other characteristics that pupils are supposed to acquire as the result of teaching. Because the records in this case consist of pupils' scores on tests and self-report questionnaires, there are no technical problems in obtaining them beyond those involved in any testing program. This particular use of the tests suggests they be administered at both

the beginning and end of the school year in which the evaluation is to take place, so that changes during the year can be assessed (Dunkin, 1987).

II. Assessing Teaching on the Basis of Teaching Behaviour: Most of the evaluation of teaching that goes on in today's schools is process based on the behaviour of the teacher in the classroom. Process assessments use records of how the teacher teaches rather than of the effect that the teaching has on pupils. There are two advantages in using teacher behaviour as the criterion for evaluating teaching effectiveness: the evaluations obtained are diagnostic and they are timely. If the quality of a teaching performance is low, it is possible to examine the record to ascertain what the teacher is doing-or failing to do-that makes her or his score very low. This can be done promptly as soon as the evaluation is complete. And when the record does become available it contains no description of the teaching behaviour being evaluated, no clue as to what the teacher should do differently in order to get a higher score next time. At present the amount that is known about the nature of effective teaching is woefully inadequate, and process records must be and are scored mainly to reflect someone's best judgment rather than verified research findings.

The device used in almost all formal evaluations of teaching since the early twentieth century has been the ***teacher rating scale.*** A teacher rating scale essentially consists of a list of dimensions or aspects of teacher behaviour to be assessed, and provision for recording the assessments, usually by entering a number or marking a point on a graphic scale for each item to be rated. Much thought and research has been devoted to the selection of the dimensions of teaching that should be included as items in a rating scale in order to maximize its validity (Dunkin, 1987).

The usefulness of the rating scale in the evaluation of teaching is limited primarily by the fact that it attempts to bypass entirely one of the three essential phases of the assessment process: the creation of the record of performance. Until fairly recently, no alternative procedure for assessing teacher performance was available. An alternative is the ***structured observation system,*** a form of instrument developed for use in process-product research. Process-product research is a form of research which seeks to establish

correlations between measurements of classroom behaviour (process) and measures of pupil learning (product) in the same classroom, and to learn something about the nature of effective teaching from these correlations. Because the observer's function is merely to observe and code, not to evaluate, when a systematic observation system is used, it is not necessary and probably not desirable to use expert teachers or researchers or highly trained professionals as observers. When rating scales were used to evaluate teaching, the professional expertise of the rater was critically important, since the validity of the ratings depended on the quality of the rater's judgments (Dunkin, 1987).

When coding of teaching behaviour are being collected for use in teacher evaluation, the most efficient strategy is (a) to make as many visits per classroom as possible, (b) to have only one observer code behaviour in a classroom at any one time, and (c) to have a different observer code behaviour on each visit to the same teacher. Increasing the number of visits increases the reliability of the assessments much more rapidly than increasing the length of a visit or the number of coders per visit; using a different observer on each visit may lower the reliability of the measurements, but it will do so by reducing the effect of the biases that individual observers may develop. It seems clear that in order to be able to do this, the expert must have at least as full and complete an understanding of the context in which the teacher works as the teacher has. The rater must know as much as the teacher does about the pupils, about their personal characteristics, the interpersonal relationships among them and their previous experiences in this class and out of it. The rater must also know the teacher's intensions and the resources available for carrying them out, which include the teacher's own personal strengths and weaknesses as well as the materials, media, and so on available (Dunkin, 1987).

III. Assessing Teaching on the Basis of Pupil Behaviour: In the past, pupil behaviour has been used in teacher evaluation in combination with teacher behaviour. Most rating scales include ratings of pupil involvement and the like along with those of teacher characteristics as do many observation systems. But it seems worthwhile to separate pupil behaviours from teacher behaviours. It might appear logical to say that only those pupil behaviours which are known to relate positively or negatively to learning

outcomes should be used in teacher evaluation (Dunkin, 1987).

The output of any component of the system may serve as feedback to that same component or to another one. In a teaching-learning situation, feedback may come from the learner, or a product of the system, and may supply information to either the teacher or the learner or both. Feedback may come to the learner, from the learner himself/herself, in the form of subjective data. This information may be physiological, psychological, or both. It may indicate fatigue, anxiety, curiosity, disinterest, satisfaction, or any other reaction to learning. Given this feedback, the person learns how he/she is reacting to the situation. Feedback may come to the learner in the form of objective data from some product or behaviour that can be measured, from something he/she has done. The learner can compare this product or performance with a set of standards or criteria to determine what progress he/she has made. Feedback may come to the learner from another person who has assessed the product or performance and who shares his/her observations and perceptions with the learner (Narrow, 1979).

Brophy and Good (1986) support the idea that regular and continued feedback correlates with higher student achievement. Also their research indicates that mild criticism or correct feedback can actually enhance achievement among students. Evidence suggests that feedback is most effective on a regular or systematic basis (Anderson et al, 1980; O'Neill, 1988). Historically speaking, praise has been liberally prescribed by educators as a facilitator of effective teaching (Brophy & Evertson, 1976; O'Neill,1988). But recent data suggest that correlations between praise, however defined, and learner gains are weak and mixed in direction (Brophy, 1979; O'Neill, 1988). In fact, too much or inappropriate praise may not facilitate learning at all (O'Neill, 1988).

Regarding teacher criticism O'Neill (1988) mentions that teacher criticism " refers to negative teacher responses to student behaviour which go beyond whatever level of simple feedback (negation) is needed to indicate that behaviour is inappropriate or answers are incorrect"(p.176). Research indicates that effective teachers minimize criticism as it consistently correlates negatively with achievement (Bennett, 1978; Brophy, 1979; O'Neill, 1988).

When using this categorization system (input, process, product) we must keep in mind that the categories do not stand still nor are they mutually exclusive. That is, items may be inputs at one point and outputs at another. For instance, student's grade average may be input at the beginning of a course and an output in terms of achievement at the end of the course (VanOrt, 1983).

Efforts to improve the quality of teaching in the schools depend for their effectiveness on the availability of accurate, detailed, and objective evaluation of teaching. However, Knowles (1980) proposes that evaluation in andragogy is criterion referenced. It needs to be creative, practical, feasible, and artistic rather than objective, sterile, and inadequate. Learner collected evidence is validated by peers, facilitators, and experts. In andragogy, the evaluation is a self evaluation where teachers help adults learn what their progress has been in terms of their own goals. This also means that the program or teacher is evaluated by how well or poorly it met the learning needs of the student were met and the evaluation of teaching effectiveness is based on the process and product approach. Narrow (1979) mentions that while feedback to the learner is important, feedback to the teacher is equally important. The effectiveness of teaching depends largely upon the reaction of the learner, either positive or negative. This feedback enables teachers to decide whether to proceed, review, explain, or even drop the subject for the moment.

Concerns Related to Evaluators

All of us seek information about ourselves, about the ways in which we affect other people, and about the quality of our performance. The information thus obtained enables us to monitor our behaviour, maintaining or modifying it as needed. Teachers felt that evaluations, while assessing their abilities, must lead to feedback and improvement in their own profession (Narrow, 1979). This author, as well as Buttram and Wilson (1987), suggested that evaluations may best be used to identify the more effective approaches used in teaching, and then using this knowledge should be used to drive staff development and possibly teacher training at the college level. The most common components of teaching effectiveness evaluation are ***student*** evaluation, ***peer*** evaluation, ***self*** evaluation,

and ***administrative*** evaluation (Applegate, 1981).

Student evaluation: Students' ratings of teaching effectiveness are commonly collected in United States and Canadian Institutions of higher education, and are widely endorsed by students, faculty, and administrators. The purposes of these evaluations are variously to provide: a) a source of diagnostic feedback to faculty about the effectiveness of their teaching; b) a measure of teaching effectiveness to be used in tenure/promotion decisions; and c) a source of information for students to use in the selection of courses and instructors (Dunkin, 1987; Marsh, 1984). While the first purpose is nearly universal, the second two are not. At some universities, student input is required before faculty are even considered for promotion, while at others the inclusion of students' evaluations is strictly optional. The reliability of student ratings is most appropriately estimated with coefficients of interrater agreement (agreement among different students rating the same course). The interrater reliability depends upon the number of students ratings a class. Given a sufficient number of student responses (20 or more), the reliability of student ratings compares favourably with the best objective tests (Dunkin, 1987).

Hundreds of studies have used a variety of approaches to examine the influence of many specific background characteristics on students' evaluations of teaching effectiveness, and a comprehensive review is beyond the scope of this paper. Hence, the validity of student ratings will continue to be questioned until criteria are utilized that are both applicable across a wide range of courses and widely accepted as a indicators of teaching effectiveness. Researchers, using a construct validation approach, have attempted to demonstrate that student ratings are logically related to a variety of other indicators of effective teaching. Within this framework, evidence for the long-term stability and the generalizability of student ratings support their validity (Dunkin, 1987; Marsh, 1984).

Student evaluation is the most commonly gathered evidence of teacher effectiveness. From 1978 to 1983 the use of systematic student ratings increased, while use of informal student opinions has decreased (Dunkin, 1987; Menges, 1984). Today, student evaluations are almost routine procedures in schools of nursing. While some faculty members still question the students' capability to be reliable judges of teaching

effectiveness, the majority of authors support the students ratings as one source of data as long as it is not the only source of evaluative information (Wood & Matthewman, 1988; Griffin & Brown, 1992).

In terms of validity, the central issue is whether effective teachers are also rated highly by students. We would hope for a high correlation between student evaluation of teaching effectiveness and student learning. However, the influence of student level of learning is somewhat difficult to measure because of confounding variables. For example, the student's motivation to learn as well as the student's interest and ability may contribute at least as much to learning outcomes as does teaching effectiveness (Van Ort, 1983; Wood & Matthewman, 1988; Marsh, 1986). Hence, student test scores are a useful approach for evaluating teaching effectiveness, but we must be cautious about confounding variables such as student's background regarding the course, motivation, etc.

In terms of reliability and validity, several other factors correlate with student ratings. Class size has been found to have a minimum effect on student ratings of teaching effectiveness. Gender composition of the class, class level, academic rank of faculty, whether the course is required or elective, and student grade average have affected student evaluation of teaching effectiveness (Van Ort, 1983; Wood & Matthewman, 1988; Griffin & Brown, 1992; Marsh, 1986).

There is general agreement, however, that student evaluations should focus on the teaching-learning process and not on the educator's competence in the subject matter, whether the content is appropriate, accurate or properly sequenced (Andrusyszyn, 1990). Student evaluation of nursing educators must include an assessment form for the clinical area as well as for the classroom setting. Development of assessment forms should utilize tools that are valid and reliable. In some areas such as college based nursing schools, educators are forced to use forms which have been developed for other divisions in the system. These forms cause difficulties for nurse educators. For example, forms that are used to evaluate teachers in the laboratory setting of a computer course have little relevance for teachers in clinical nursing (Wood & Matthewman, 1988). In addition, it is very important to remember that student ratings are the most reliable reflection of

classroom teaching, especially if we use more specific items such as "the instructor presented the material in an interesting and helpful manner" more than general items.

Peer or colleague evaluation: constitute a second important component for evaluating teaching effectiveness (Van Ort, 1983). Peers, especially those teaching within the same course, are frequently in a position to evaluate fellow faculty members teaching effectiveness (Griffin & Brown, 1992). Seldin (1984) indicates that colleagues are the best prepared source for evaluating a teacher's credentials, knowledge of the subject, objectives, bibliographies, and examinations. Although peers can offer valid evaluations few have the time to devote themselves to the class visitations to obtain the necessary information.

However, peer evaluation is not without problems. deTornay (1988) states that the time and effort required for peer review may prevent its implementation. Peer appraisal of clinical teaching has special concerns due to the different schedules, specialities, and setting (Harwood & Olson, 1988). Evaluators may also find it difficult to appraise their colleague's teaching performance due to lack of understanding of other faculty members' clinical expertise. According to Brannigan and Burson (1983) although the intent of peer evaluation is to create positive feelings about professional growth, the evaluation by one's peers may produce anxiety and fear. Also friendship may possibly influence the ratings. So, the effect of colleague bias is a serious issue which must be considered in peer evaluation. Van Ort (1983) includes three types of evidence which are desirable in peer evaluation: classrooms visitations, examination of instructional materials, and student achievement validation.

Classroom visitation is the most controversial type of peer evaluation. Many instructors believe that the classroom is their private domain and that classroom visitation is threatening to their interaction with students. In this regard Gien (1991) mentions that the interaction between the teacher and evaluator must be pre-planned and objective criteria used. Also it would not be statistically reliable unless several visits to each class are made by, at least a dozen colleagues. Instructional materials to be examined may include the course objectives, teaching methods, student assignments, course syllabus,

examination, or lecture notes. Evaluators may also review clinical assignments and student evaluation criteria. Any or all of these materials may be evaluated by peers (Van Ort, 1983). A third type of peer evaluation evidence may be an examination of student achievement. For instance is there evidence that the teacher is fair and reasonable in evaluating student achievement ? How do students perform in the clinical area ? These student progress indicators can be very useful as one component for documenting teaching effectiveness (Fuzzard, 1995; Van Ort, 1983).

Peer ratings, based on actual classroom visitation, are often proposed as indicators of effective teaching and hence a criterion for validating student evaluations. In studies where peer ratings are not based on classroom visitation, ratings by peers have correlated well with student ratings of university instructors, but it is likely that peer ratings were based on information from students. Dunkin (1987) and Marsh (1984) correlated student ratings, student achievement, peer ratings, and supervisor ratings in a large multi section course. Student ratings correlated with achievement, supporting their validity. Peer and supervisor ratings, although significantly correlated with each other, were not related either to student ratings or to achievement, which suggests that peer ratings may not have value as an indicator of effective teaching. Most research reported good correspondence between student ratings and instructor self-evaluations, but neither of these indicators was positively correlated with supervisor ratings (Griffin & Brown, 1992; Marsh, 1984).

In nursing many courses that have clinical components are team taught, and as a result colleagues are often present during another instructor's lecture. This places them in a position to spot teaching weaknesses and offer suggestions for improvement. Some nursing programs include peer review as part of the process for evaluating the teaching abilities of faculty. Van Arsdale and Hammons (1995) include that there is a consistent relationship between students' and colleagues' ratings. Feldman (1989) reviewed 14 studies comparing student and colleague ratings and found an average correlation of (r, 0.55). Since student ratings provide only one source of data in evaluating teaching effectiveness it is of value to have a comparison with other sources of rating data. In addition, the positive correlation between student ratings and colleague ratings

strengthens the use of student ratings in evaluating teaching effectiveness.

In summary, peer ratings based on classroom visitation do not appear to be substantially correlated with student ratings or with any other indicator of effective teaching. Although these findings neither support nor refute the validity of student ratings, they clearly indicate that the use of peer evaluations of university teaching for personnel decisions is unwarranted. Research in comparing student ratings and peer ratings show peer ratings to be (1) less sensitive, reliable, and valid; (2) more threatening and disruptive of faculty moral; and (3) more affected by non-instructional factors such as research productivity than student ratings (Marsh, 1984).

Peer evaluation is a complex process and tends to be "the most controversial of all types of input for faculty evaluation" (Bell et al, 1984, P. 23). Peer review is seen as an "accepted method for documenting excellence in scholarly pursuits" (Harwood & Olson, 1987, P, 379) and is now receiving increasing recognition as a method of performance appraisal for teaching effectiveness. The success of peer evaluation depends on planning, open communication, training, feedback, and trust (Seldin, 1984). In spite of the apprehension and reluctance to fully implement peer evaluation systems, the literature emphasises that an effective peer evaluation system is valuable and offers an essential ingredient for faculty development and personal decisions (Brown & Griffin, 1994).

Faculty self-evaluation: is helpful for faculty growth and development. However, the process of self-evaluation is usually not as valuable as it might be, because the questions asked are not precise (Sullivan, 1977). Although some faculty members assess their teaching performance on a regular basis, systematic, and comprehensive manner, according to Bell et al (1984) formalized and conscious procedures for improving and refining self-evaluation of teaching effectiveness are needed. Marsh (1984) mentions that instructors can be asked to evaluate themselves with the same instrument used by their students, thereby testing the specific validity of the different rating factors. Marsh conducted the studies where faculty were asked to evaluate their own teaching on the same multifaceted evaluation instrument completed by students. In both studies separate factor analyses of teacher and student responses identified the same evaluation factors;

student-teacher agreement on every dimension was significant and mean differences between student and faculty responses were small and not statistically significant for most items, and were unsystematic when differences were significant (i.e., student ratings were higher than faculty self-evaluations in some areas but lower in others).

Administrator evaluation: The final source of input for teacher evaluation is administration. In the past, administrators held the dual role of supplying information and making judgments about teaching competence. As a data source, subjectivity and bias were common since administrative evaluations were based primarily on second-hand data or from isolated incidents (Applegate, 1981; Sullivan, 1985). Consequently, scholarly productivity became a vital consideration as a component of the administrator's evaluation of teaching effectiveness. Today, the role of the administrator in teacher evaluation remains unclear. As a data sources, it is unlikely that administrators are in the best position to provide objective evidence about teaching performance (Griffin & Brown, 1992). Also various authors emphasis that a few visits by a supervisor or administrator as an observer to the classroom may not be enough and they recommend a longer observation period and/or team teaching approach to obtain more valid assessment. The purpose of such an evaluation could be diagnostic: to aid the instructor to improve the teaching performance. Further, it would provide information which would be useful for making decisions on promotion. It may also simulate research for teaching (Fuszard, 1995).

In summary, the use of student, peer, and self as data sources of teacher evaluation has gradually increased in importance over the years. While there is general agreement that students, peers, and self do not supply sufficient evaluative information on their own, together they provide a comprehensive evaluation. Although administrators rarely supply valid evaluative information, they are appropriate recipients of teacher effectiveness data.

Basically, there are three ways to describe the effective teacher: 1) we can describe their characteristics-training, experience, and knowledge of subject matter, 2) we can describe their behaviours in the classroom whether they ask provocative questions, call students by name, encourage discussion, and student participation, and 3) we can describe what students are able to do as a result of the teacher's effort--how much they know, how

well they think, their attitudes toward learning, etc.

First and most importantly, in nursing, nurse educators are natural role models for students in learning how a nurse should act. Educators influence their students tremendously not only by teaching cognitive and psychomotor skills, but by realizing that, "if they hope to train and educate students to perform as warm and caring nurses, they themselves must be accountable for exhibiting these qualities" (Johnson, 1976, p.118). Teachers model respect for themselves and their students by allowing for the students' own worth and teaching sensitivity, flexibility, and reality (Sandlik, 1978).

Nursing education can provide for humanistic practice by being a helper and facilitator in the learning process. The facilitation of learning has been the subject of a number of studies. With emphasis on learner in the process of teaching-learning Veith, Price, and Franck (1975) found that as learners increased independence and learners centred control over the content outcomes, scores increased. McGugin, Merkel, and Hofing (1979) showed that andragogical principles of learning were utilized with the results of an increase in knowledge, skill, and attitude toward the problem-oriented recording method.

Cooper (1983) and Darkenwald and Merriam (1982) mention that adult learners are more self motivated, serious, and self-directed than the less mature learner. The effectiveness of adult learning varies with ability but is also affected by the facilitators approach to learning. The nurse adult learner needs to be recognized as a person with background in learning. This resource of learning abilities needs to be guided and encouraged to develop. Fuszard (1995) mentions that some ways the nurse facilitator can engender participation are to stimulate thinking, seek ideas, consider learning theories and concepts, and encourage discovery. One must remember that even the most independent learner at times needs assistance and/or permission to be the learner.

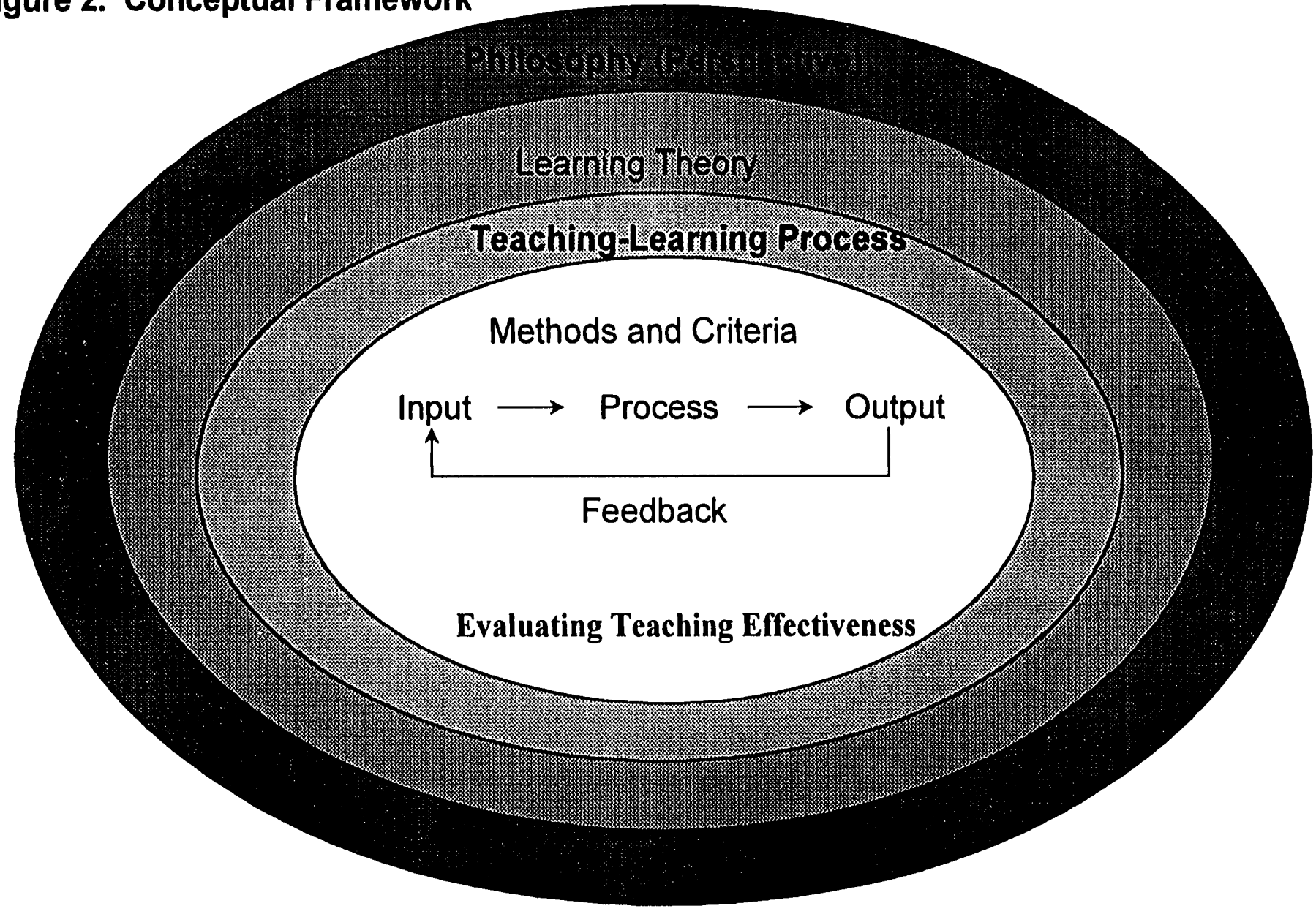
Ultimately, the goal of nursing education should be to provide students with the skills for lifelong learning. Such skills include the ability to view problems in a variety of ways, the ability to gather appropriate information to solve them, and the ability to generate alternative solutions. Thus, educators must strive to challenge students beyond their present capabilities by exposing them to new ways of learning (Thompson & Crutchlow,

1993). Because definitions of effective teaching are often so broadly stated, they are extremely difficult to apply in evaluation. Like many other fields and professions, teaching seems to have a scientific basis but requires artistry to achieve the greatest effect. Much agreement exist about the characteristics of good teaching. Whether nurse educators realize it or not, most of them have a theory about how learning takes place and teach accordingly. The literature in the area of nursing education clearly showed that no one set of teaching techniques is appropriate for all aspects of the teaching of student nurses. Since the choice of teaching approaches will depend on various factors, evaluation of teaching effectiveness will remain an important part of overall faculty evaluation, and a controversial issue.

Conceptual Framework

The conceptual framework for this study is based on the review of literature on the evaluation of teaching effectiveness. The model in Figure 2 is a physical representation of this conceptual framework. This model consists of four concentric rings, each representing a greater degree of abstraction as one moves outward from the centre. The outer ring of the model reminds us of the importance of the general philosophy and specific beliefs that are brought to bear on the teaching and learning process. This philosophy helps us fashion and understand the learning theory that guides teaching and learning, which forms the second ring in the model. Both philosophy and learning theory have a direct effect on the teaching and learning process, the third ring in the model. At the centre of the model is the evaluation of teaching effectiveness the prime focus of the current study. Included are methods (including who evaluates and how), criteria and elements associated with assessing the effectiveness of teaching. Also, contained in the inner ring is a modified systems model identifying the inputs, the process, the outputs, and the feedback of teaching effectiveness assessment. In the present study, the entire model applies to a given context. Although not explicitly mentioned in the model, this must be understood. That is, the study was undertaken in a specific country, Iran, and in three nursing faculties each within a different university in the capital and largest city of Iran.

Figure 2. Conceptual Framework



There are a number of explanations as to why we expend considerable time and resources on the very formal, often rewarding but sometimes punishing process of evaluating the effectiveness of teaching. Carey (1983) cites four common reasons (1) the law requires it; (2) it leads to improvement in the overall quality of the instructional program; (3) it leads to improvement in the performance of individual educator; and (4) the process provides the documentation necessary to support administrative decisions affecting personnel.

Success in teaching, however defined and assessed, is highly contextual. Therefore, if evaluation of teaching is to serve meaningful and useful purposes, it must not only identify and define all the mitigating contexts but must also take into account their influences, both constructive and negative, in determining success (Millman, 1981). According to Litwack, Linc and Bower (1985) evaluation is an integral part of nursing education. Determining what criteria are to be used for evaluation consists of identifying the knowledge, skills, and abilities that are believed to be relevant and important within a program. These are derived from the institutional and program goals and objectives. If evaluation is to be conducted in a professional manner, then agreement must be reached upon what is important or critical within a course or program.

The review of the literature indicates that most publications centre on teaching effectiveness criteria and the idea that teacher evaluation is a complex issue, with many diverse factors identified as influencing the educational outcomes in the classroom today. If evaluative feedback is to be converted into teaching improvement, a faculty development program needs to be a vital component of the system which provides ongoing educational opportunities and resources. Also, as Griffin and Brown (1992) mention, nurse educators must become more involved and committed to the development and implementation of a better evaluation system. If sufficient time and effort are assigned to the assessment of and research on teaching effectiveness, perhaps the teaching component of faculty evaluation will in future be recognized.

The researcher proposes that the perceptions of faculty members and students provided in this study along with the current literature on the assessment of teaching

effectiveness will assist in the development of effective means to evaluate teaching effectiveness. The major value that the researcher imposed on this search for criteria of teaching effectiveness is that the findings be generalizable to Iranian nursing education. It is important that Iranian nurse educators and students be aware of the complexities associated with evaluating teaching effectiveness. An evaluation system for nurse educators should include mechanisms to document and reward effective teaching, facilitate the improvement of instruction, and promote data-based personnel decisions that recognize the importance of effective teaching in nurse education.

Chapter 3

Methods

Research Design

An exploratory descriptive design was used to gain insight into the perceptions of Iranian nurse educators and students regarding the evaluation of teaching effectiveness. It is the belief of the researcher that this approach is appropriate to the purpose of this study since very little is known about the perceptions of these educators and students, and no previous studies have been conducted in this area. The researcher designed a questionnaire (closed items) to determine the perception of participants and to collect information reflecting the characteristics of the respondents. Additionally, personal interviews were conducted to elicit data from the Deans of three Universities in Tehran regarding evaluation policies and procedures.

Research Setting and Sample

Three nursing faculties of the universities in Tehran comprised the setting for this study. These universities are controlled by the Ministry of Health and Medical Education. At the time of the study, the entire population of nurse educators currently employed as full time educators in nursing faculties of the three universities in Tehran comprised educators' study sample (approximately 200 educators). Full time was recognized as 30 or more hours per week. A systematic stratified random sampling procedure was used to select 80 undergraduate students representing all four years in the Faculty of Nursing, University of Tehran program (10 % of the student population (879) with power .80, medium effect size, 5, and $\propto$, 0.05). A two stage sampling process was used. First, a random sample of 80 was drawn from the total students population. Each of the four groups (year in program) contained the same number of students (N=200). The second stage involved the selection of 20 students from each of the four years. In order to select a systematic sample, a start point was designated by choosing a random number from 1-10. Thus, the student population was stratified on the basis of year in program (1-4). The

entire population of graduate students in the University of Tehran (36 graduate students) participated in this study as well. It is worth mentioning that students in the study were chosen from one university, Tehran University, whereas the educators were from three universities. Students were selected from one university for reasons of convenience and the uniformity of entrance standards, curriculum, and education qualifications across these faculties of nursing. Comparisons between students and educators were done using the entire student and educator samples following an ANOVA test which identified no statistically significant differences among.

In total, 143 educators, 40 undergraduate students, and 30 graduate students returned the questionnaires providing a response rate of 71.5% for educators, 50% for undergraduate students, and 83.3% for graduate students. Each of the Deans of Nursing from the three Universities in Tehran was interviewed.

Questionnaire Construction

The questionnaire was developed by the researcher after a thorough review of the literature pertaining to both nursing and education, and consultation with professionals with expertise related to this subject. The developed items relating to the teaching learning process in general were intended to represent methods of evaluation, evaluation practices, beliefs about teaching and learning, criteria in evaluating teaching effectiveness, and evaluation elements. Where possible, questions were formulated to represent a Likert-type scale. Pilot testing of the questionnaire was conducted with a convenience sample of nurse colleagues from Alberta and Iran. The purpose of the pilot was to assess clarity of the items and determine average completion time. Some revisions to the questionnaire were made on the basis of the pilot.

The researcher distributed the final questionnaires to the heads of each group who were instructed to distribute one to each faculty member in their group. For both graduate and undergraduate students, the sealed questionnaires were given to the respective student offices for distribution.

In *Section I* of the instrument, participants were asked to provide specific personal and

professional data. In that prior social and cultural experiences as well as organizational factors affect perceptions (Jonson, 1987), the researcher considered these factors in her study. *Section II* had two parts. In part *A* of the questionnaire, participants (both educators and students) were requested to select from a list of five categories of individuals, those who were involved (actual) in the process of evaluating educators and those who they believed ought to be involved (preferred). Five choices for the extent of involvement and a "do not know" alternative were provided [Response key: very limited involvement (1), some involvement (2), moderate involvement (3), great involvement (4), very great involvement (5), and do not know (6)]. The five categories of potential evaluators were administrators (Associate Dean), heads of groups, peers, self evaluation by educators, and students. In part *B of Section II* participants were requested to rate the actual and preferred involvement of each of the five categories of individuals in terms of three aspects of evaluation representing input, process, and output.

In *Section III*, participants were requested to rate evaluation practices in terms of their perceptions of the use to which each practice was given (actual) and should be given (preferred) in the evaluation of teaching effectiveness [Response key: very limited use (1), some use (2), moderate use (3), great use (4), very great use (5), and do not know (6)].

In *Section IV*, participants were requested to respond to a list of 14 belief statements about teaching and learning in terms of their degree of agreement with each belief statement. [Response key: strongly disagree (1), disagree (2), undecided (3), agree (4), strongly agree (5)]. In *Section V* of the questionnaire, participants were requested to rate from a list of 31 criteria their perceptions of the importance with which each criterion was given in evaluating teaching effectiveness [Response key: very limited importance (1), some importance (2), moderate importance (3), great importance (4), very great importance (5), do not know (6)].

In *Section VI* of the questionnaire, participants were requested to rate their perceptions of the importance of each of 12 elements in terms of their influence on the outcomes of evaluation [Response key: very limited importance (1), some importance (2), moderate importance (3), great importance (4), very great importance (5), and do not

know (6)].

Validity and Reliability

The researcher reviewed the literature and utilized ideas from prior research in designing the instrument. The assessment of content validity involved an organized review of the survey's contents to ensure that it included everything it should and did not include anything it shouldn't. Once generated the items were assembled in a usable and established format. The instrument and domain specifications were then presented to a panel of seven experts in both Canada and Iran. The experts were asked, as a part of the content validity assessment, to identify areas of omission and to suggest areas of item improvement or modification. No omissions were identified and the suggestions for enhancing clarity were acted upon.

Test retest was used to estimate reliability. Test retest reliability assesses the consistency of a measure on repeated applications. A sample of 10 faculty members and 10 students were given the questionnaire at two time periods of two weeks apart. Correlation coefficients(r values) were then calculated to compare the two sets of responses (r value, 0.87 for educators; r value, 0.79 for students).

Data Analysis

Frequency tabulations of variables arising from the data were depicted in tables and graphs. Descriptive statistics, utilizing means for interval data (e.g., mean age) and the mode for nominal data (e.g., gender) were used to describe sample characteristics which arise from the demographic data collected. Also standard deviations and ranking of means were utilized to show the extent of common perceptions of educators and students concerning evaluation methods, evaluation practices, beliefs about the teaching and learning process, evaluation criteria, and evaluation elements.

The t-test and chi-square test were utilized to determine whether differences that exist in perceptions of educators and students concerning actual and preferred evaluation of teaching effectiveness questions, were of statistical significance. Kappa tests were used to show the degree of agreement between actual and preferred perceptions of educators and

students. Multi-linear regression was used to determine the effect which the personal and professional variables have upon actual and preferred perceptions of educators and students. Finally, factor analysis and secondary factor analysis were done using different beliefs and criteria for evaluating teaching effectiveness.

Limitations of the Study

There are a number of limitations to this study which are related to internal and external validity, validity and reliability of measurement, and generalizability of the findings.

Limitations Affecting Internal Validity

A number of factors may have affected internal validity of the study findings. The instrument for gathering data (for educators and students) was a questionnaire. When a questionnaire is developed for research, numerous response sets are possible. Types of response sets are carelessness, social desirability, acquiescence, and extremity of response (Kidder, 1981; & Topf, 1986). Despite the fact that the researcher developed the questionnaire carefully and undertook a pilot test, there likely remain some issues regarding accuracy of responses. The following limitations may also influence the findings of this research.

1) While answering the questionnaire, the emotional condition, family problems, and social circumstances of some of the participants may have affected the responses.

2) The sample size of 80 out of 879 undergraduate students was adequate but limited in terms of representation of the larger group. Since students were chosen from one faculty, this is a further limitation for this study. It is worth noting that even though nursing education in the three faculties is much the same, and students have almost the same level of knowledge (all of the students enter university after successfully completing the same entrance exam and with the almost same level of knowledge), the results for the student part of the study could be different if information were collected from other students.

3) The final survey instrument did not allow participants to provide open-ended responses to any section of the instrument.

4) While the respondents were requested to report their perceptions, no subsequent check was possible to ensure that individual perceptions were reflective of actual practices. Nonetheless, according to the researcher's personal experience and the interviews conducted, the reported perceptions appear to be fairly close to reality.

Limitations Affecting External Validity

The generalizability of the findings may be limited by characteristics of the sample and context and should be addressed through replication with other populations and in other evaluative contexts. The presence of other variables in other populations might result in significantly different findings and conclusions if further empirical research were conducted.

Ethical Consideration

Ethical clearance was obtained from the Faculty of Nursing, University of Alberta (April 29, 1996). Ethical approval was also received in Iran. Permission was obtained from the nursing faculties of the three local universities for the researcher to conduct the study. Completion of the questionnaire implied consent to being in the study. The investigator acknowledged respect for the privacy of respondents and the confidential nature of the information obtained. To maintain confidentiality, no names were linked to the data obtained from the questionnaire. Therefore it would not be possible to match individual respondents with the data. Interview participants were informed of the opportunity to withdraw from the study at any time and the fact that participation in the study was voluntary and that there was no penalty for not participating.

It is planned that the findings of the research will be presented through both seminar and workshop formats in Iran. In compliance with ethical guidelines, the researcher will store the data in a locked cabinet for seven years, after which time it will be destroyed.

Description of Samples

Under the heading personal and professional data the nurse educators were asked to answer 20 questions. Data were obtained from educators concerning age, gender, marital status, highest level of education, total amount of teaching experience (in years), total amount of clinical experience (in years), areas of major teaching experience, type of program for teaching, working hours per weeks, position in the faculty, satisfaction with present position, satisfaction with present evaluation system, classroom and clinical instruction (hours per week), supervision of research (hours per week), preparation for instruction (hours per week) and the extend of their involvement in scholarly activities such as the publication of book or articles, conference presentations, and research studies.

The nursing students were also asked to answer six questions concerning age, gender, marital status, degree of program, year of the study, and satisfaction with the nursing program.

Frequency and percentage distributions were used to summarize the responses to these questions. Table 1 and 2 (Appendix B) present information concerning the respondents. Since there were infrequent responses to some of the items, the data collected from this section of the questionnaire were collapsed into the categories indicated on the table. For the purpose of presentation, the figures have been rounded.

Findings of the study reflect that most of the educators were between the ages of 40 and 49 and 92% of the educators were female. It is important to note that before the Islamic revolution of 1978, approximately 5.0 % of the students entering nursing programs were male. This percentage increased to 50.0 % following the revolution however, it has subsequently decreased to about 20.0 % (1993). It is commonly believed that the decrease reflected a general dissatisfaction among males with nursing as a profession.

Most of the educators were married (75%) and held a masters degree in nursing (89%). The educators teaching experience ranked from less than 10 years to 20 years with the mode years of experience reported to be between 10-19 years (41%). Similarly, clinical experience ranked from less than 5 years to more than 8 years with the mode years

of clinical experience being reported to be greater than 8 years (39%). Most of the educators (94%) were involved in both classroom and clinical teaching and the majority (65%) had teaching responsibilities for the baccalaureate program alone. In addition, most of the educators (55%) were working 37-42 hours per week and held the position of instructor (87%). Regarding satisfaction with their present position, even though the percentages were fairly evenly distributed from somewhat satisfied to highly satisfied, it is slightly higher under the category of quite satisfied (28%). In terms of satisfaction with the present evaluation system, 30% of the educators reported that they were highly satisfied, 28% indicated quite satisfied, and 27% stated they were moderately satisfied.

Regarding classroom instruction, 40% of educators spent four to six hours per week, 28% spent up to three hours per week, 21% spent seven hours or more per week, and 11% of them had not any classroom instruction. In terms of clinical instruction, while 18% of educators had not any clinical instruction, 30% of them spent 2-18 hours per week, 25% of them spent 19-28 hours per week, and 27% of them spent 30-50 hours per week in clinical instruction.

The majority of the educators (80%) were not involved in research supervision. Forty five percent of the educators did not have classroom teaching responsibilities but were involved in clinical teaching with students. While the majority of the educators (75%) had not published any books, most of them (54%) had published one or more articles, and 66% had presented at conferences.

The results of the scholarly activities such as conference presentation, research studies, publishing articles and/or books indicate that about 11% of the educators were not involved in any scholarly activities, 32% of the educators mentioned having just one scholarly activity, 26% of the educators had two scholarly activities, and 21% of the educators had three scholarly activities. The remaining 11% of the educators reported being involved in all of the identified scholarly activities.

The findings indicate that most of the students (74%) were 29 years or younger, female (80.0%) and single (61%). Sixty-one percent of students were enrolled in the BSc degree program with the remaining 38.6% in the masters program. Regarding the year of

the study, 57% of students were in years one to three of the program. While 33% of the students reported that they were highly satisfied with the program, 29% indicated moderately satisfied, and 39% reported that they were somewhat satisfied.

CHAPTER 4

Analysis of Data and Findings

This chapter provides a description of the findings which emerged when different types of analyses were applied to the questionnaire data. The findings of this study are reported and discussed as answers to each of the research questions. In this chapter the findings associated with the first nine research questions are presented; the interview data for the tenth research question are presented in chapter five. Where possible the findings are shown in tabular form and tables to enhance the text explanation.

The initial section deals with findings regarding methods of evaluating teaching effectiveness including the types of evaluators and data gathering practices. The findings on beliefs and criteria for evaluating teaching effectiveness and the influence of selected elements on the outcomes of evaluation are presented in subsequent sections. The reader is reminded that students in the study were chosen from one university, Tehran University, whereas the educators were from three universities. Comparisons between students and educators were done using the entire student and educator samples because ANOVA tests among the three educator groups identified no statistically significant differences among them.

Methods of Evaluation

(Q. 1, 2, 3)

Types of Evaluators

The first three research questions centre on methods of evaluation. The first question of the study was to determine the perceptions of the educators and students about the actual and preferred methods of evaluation. This question has three parts. The purpose of part A was to determine ***the extent to which Iranian nurse educators and students shared or differed on perceptions as to who was and who should be involved in evaluating teaching effectiveness.***

Table 3 presents the mean scores for actual and for preferred involvement by five categories of evaluators as perceived by the nurse educators and the nursing students.

Also reported are the rankings of the means for these five evaluator groups. The statistical information (frequency, percentage,...) is reported in Appendix B.

Table 3 indicates that for educators, students were ranked as being the most important source of actual evaluation ($\bar{x}$, 3.65), while the educators preferred that educators themselves ($\bar{x}$, 4.10), heads of groups ($\bar{x}$, 3.85), and peers ($\bar{x}$, 2.88) have greater involvement than students in the evaluation of their teaching effectiveness. Responses from the students gave the highest rankings to self evaluation by educators for both actual and preferred involvement in nurse educator evaluation (Actual $\bar{x}$, 3.36, & Preferred $\bar{x}$, 4.04). However, students perceived themselves as ranking lowest of the five evaluator groups on actual degree of involvement in nurse educator evaluation but preferred that their degree of involvement be second. The degree of involvement, both actual and preferred for administrators received the same ranking by educators and students. Both groups saw the administrators as the middle group for actual involvement and preferred that their involvement be lowest of the five groups.

Table 3 - Differences between educators' and students' perceptions of actual and preferred nurse educator evaluators

Evaluators	Participants	Actual			Preferred			Differences			
		$\bar{x}$	Rank	SD	$\bar{x}$	Rank	SD	Actual		Preferred	
								t value	P	*t* value	P
Administrators	Educators	2.42	3	1.46	2.81	5	1.26				
	Students	1.91	3	1.26	3.23	5	1.21	2.18	.032*	2.20	.029*
Heads of Groups	Educators	3.48	2	1.21	3.85	2	1.11				
	Students	2.93	2	1.50	3.75	3	1.15	2.51	.014*	0.57	0.56
Peers (Colleagues)	Educators	1.91	4	1.02	2.88	3	0.92				
	Students	1.80	4	0.78	3.58	4	0.99	0.72	0.47	4.77	0.00*
Self (Educators)	Educators	1.75	5	1.31	4.10	1	1.01				
	Students	3.36	1	1.50	4.04	1	1.02	7.22	0.00*	0.40	0.686
Students	Educators	3.65	1	1.44	2.82	4	1.23				
	Students	1.66	5	1.04	4.03	2	0.92	9.88	0.00*	7.66	0.00*

*** Indicates Significantly Different Means at 0.05**

Note: Scale used was: 1= Very limited involvement, 2= Some involvement, 3= Moderate involvement, 4= Great involvement, 5= Very great involvement.

Table 3 also presents the extent of consensus in perceptions for the two categories of respondents, both for the actual and preferred involvement, by presenting the standard deviations for each type of evaluator. The standard deviations were used as measures of consensus since this is a way of determining how much individual responses differ from the mean. The smaller the standard deviation, the more the scores cluster together around the mean. For actual involvement (Table 3), the most consensus existed for educators and also for students concerning the actual use of peers to provide evaluative input (SD, 1.02; 0.78). The least consensus for educators existed concerning the role that administrators played in evaluating teaching effectiveness (SD, 1.46) and for students it was for educators themselves and the heads of groups (SD, 1.50). For preferred involvement, the most consensus existed among educators for the role which peers should play in providing evaluative input (SD, 0.92) and among students for the role students should play in providing evaluative input (SD, 0.92). The least consensus existed for both respondent groups concerning the extent of involvement administrators should have (for educators SD, 1.26 and for students SD, 1.21). It is worth mentioning that the standard deviations for each of the preferred evaluators were smaller than those of the actual evaluators with one exception (student ratings for peer evaluation), indicating that nurse educators and students were more similar in their perceptions of who should evaluate than in their perceptions of the existing involvement of evaluators.

Differences between educators' and students' perceptions of actual and of preferred evaluators. Statistically significant differences existed for actual perceptions between educators and students for four out of five evaluator categories with the greatest differences occurring in the categories of involvement by students (p value, 0.000) and self evaluation by educators (p value, 0.000). For preferred perceptions statistically significant differences existed for three of the five types of evaluators with the greatest difference occurring between educators and students with respect to the use of students (p value, 0.000) and for peer evaluation (p value, 0.000). No statistically significant difference occurred between educators and students for peer evaluation in the actual situation, and self evaluation by educators and evaluation by heads of groups in the preferred situation.

Degree of agreement and differences for actual and preferred evaluators. The study addressed itself to the question of whether or not there were any differences between the perceptions concerning actual and preferred evaluators as perceived by educators and by students and also, the degree of agreement for educators and for students concerning these two sets of perceptions. Table 4 compares the actual and preferred evaluators by utilizing the *t* test. Statistically significant differences existed for educators and for the students between actual and preferred evaluators. An interesting finding is that with one exception, educators and students preferred a greater degree of involvement by all evaluator groups (Table 3). The means for preferred were higher than for actual with the one exception. Educators viewed students as being the most involved of the five groups ($\bar{x}$, 3.65) and preferred that they be less involved ($\bar{x}$, 2.82). It is noteworthy that educators perceived students as most involved whereas the students themselves saw their involvement as being lowest of the five groups.

Table 4 - Degree of agreement and differences between actual and preferred perceptions of educators and of students concerning extent of involvement in educator evaluation by five groups of evaluators

Educator Evaluators	Participants	*t* value (Paired)	Degree of Significance	Kappa Value
Administrator	Educators	2.42	0.018	.090
(Actual & Preferred)	Students	5.33	0.000	-0.30
Heads of Groups	Educators	2.57	0.011	.097
(Actual & Preferred)	Students	4.30	0.000	.069
Peers	Educators	14.87	0.000	.094
(Actual & Preferred)	Students	23.93	0.000	——*
Self Evaluation	Educators	17.17	0.000	.067
(Actual & Preferred)	Students	3.88	0.000	.049
Students	Educators	4.61	0.000	- .023
(Actual & Preferred)	Students	13.14	0.000	——*

***t* value significant at 0.05 level of confidence. Kappa test Sig at -1 to + 1(±.4-.6, Fair; ±.6-.75, Good; and greater than ± .75, Very Good agreement). *Statistics cannot be computed when the number of non-empty rows or columns is one.**

For the degree of agreement between actual and preferred situations the Kappa test was used to assess the degree of consistency since it corrects for chance agreements. Values of Kappa can theoretically range from -1 to +1 (±.4-.6 is fair; ±.6-.75 is good; and greater than ±.75 is very good) (Peh, 1997). Table 4 indicates that there is no agreement between actual and preferred perceptions of educators and of students concerning the five categories of evaluators. Since students were not fully aware of the degree of involvement of peers and perhaps even of students, some did not answer these questions. Thus the Kappa test could not be performed for these two evaluator categories and no entry for them was made in Table 4.

Types of Evaluators Related to Inputs, Process, and Outputs of Teaching

The purpose of part **B** of question one was to determine ***the extent to which Iranian nurse educators and students shared or differed on perceptions as to who was and who should be involved in evaluating three different aspects of teaching effectiveness (Input, Process, Output).***

The findings are presented in three tables. Table 5 pertains to educators' and students' perceptions of evaluators related to inputs while Tables 6 and 7 relate to process and outputs respectively.

Table 5- Frequency and percentage distributions for five categories of evaluators with respect to input criteria

Input	Participants	Missing Yes (%)	Administrator Yes (%)	Heads Yes (%)	Peers Yes (%)	Self Yes (%)	Students Yes (%)
Actual	Educators (N=143)	3 (2.1)	11(7.7)	71(49.7)	16 (11.2)	68 (47.6)	37 (25.9) *
	Students (N= 70)	2 (2.9)	6 (8.6)	31(44.3)	10 (14.3)	42 (60.0)	2 (2.9)
Preferred	Educators (N=143)	3 (2.1)	18 (12.6)	76 (53.1)	44 (30.8)	92 (64.3) *	42 (29.4) *
	Students (N=70)	1(1.4)	16(22.9)	32 (45.7)	14 (20.0)	28 (40.0)	31 (44.3)

Because some respondents marked "yes" for more than one evaluator, row totals exceed 100%. * Chi-square test statistically significant at 0.05 level.

Table 5 reveals that the greatest degree of consensus among educators for perceptions concerning actual evaluators of input criteria was for the category, heads of groups (49.7%) while their preference was for self evaluation (64.3%). Students perceived that inputs were evaluated primarily by educators themselves (60%) while their preference was for heads of groups (45.7%) and students (44.3%) to do this type of evaluation. For evaluating the process of teaching (Table 6) the greatest degree of consensus among educators for actual evaluators existed for heads of groups (44.1%) while they preferred to have self evaluation (62.9%). Among students, two-thirds perceived that educators themselves (65.7%) were the actual evaluators while they preferred to have students (58.6%) as the primary evaluators in evaluating the process of teaching.

Table 6- Frequency and percentage distributions for five categories of evaluators with respect to process criteria

Process	Participants	Missing (%)	Administrator Yes (%)	Heads Yes (%)	Peers Yes (%)	Self Yes (%)	Students Yes (%)
Actual	Educators (N=143)	3(2.1)	9(6.3)	**63 (44.1) ***	11 (7.7)	61 (42.7) *	57 (39.9) *
	Students (N= 70)	1(1.4)	3(4.3)	14 (20.0)	5 (7.1)	**46 (65.7)**	8 (11.4)
Preferred	Educators (N= 143)	3 (2.1)	15 (10.5)	61 (42.7) *	41 (28.7) *	**90 (62.9)**	65 (45.5)
	Students (N= 70)	1 (1.4)	12 (17.1)	19 (27.1)	8 (11.4)	35 (50.0)	**41 (58.6)**

Because some respondents marked "yes" for more than one evaluator, row totals exceed 100%. * Chi-square test statistically significant at 0.05 level.

For evaluating outputs (Table 7) the greatest consensus among educators existed for educators themselves (49.0%); this was also their preference (70.6%). Students perceived that educators themselves were the actual evaluators of output (72.9%) while they preferred to have both students evaluation (60.0%) and evaluation by educators themselves (58.9%).

Table 7- Frequency and percentage distributions for five categories of evaluators with respect to output criteria

Output	Participants	Missing (%)	Administrator Yes (%)	Heads Yes (%)	Peers Yes (%)	Self Yes (%)	Students Yes (%)
Actual	Educators (143)	3 (2.1)	8 (5.6) *	48 (33.6) *	11 (7.7)	**70 (49.0)** *	59 (41.3) *
	Students (70)	1 (1.4)	0 (0.0)	14 (20.0)	5 (7.1)	**51 (72.9)**	8 (11.4)
Preferred	Educators (143)	3 (2.1)	17 (11.9)	58 (40.6)	29 (20.3)	**101 (70.6)**	67 (46.9)
	Students (70)	1 (1.4)	9 (12.9)	23 (32.9)	11 (15.7)	41 (58.9)	**42 (60.0)**

Because some respondents marked "yes" for more than one evaluator, row totals exceed 100%. * Chi-square test statistically significant at 0.05 level.

Differences between educators' and students' perceptions of actual and preferred types of evaluators related to input, process, and output criteria. For estimating the differences between educators and students perceptions concerning evaluators of teaching effectiveness the Chi-square test was used. Table 5 indicates that for the actual evaluation of inputs there are statistically significant differences between educators and students on the perceived degree of involvement of students ($\chi 2 = 16.6$, df = 1, p value, 0.00005) and for the preferred evaluators, for evaluation by educators themselves ($\chi 2 = 12$, df = 1, p value, 0.0005) and for student involvement ($\chi 2 = 4.5$, df = 1, p value, 0.033).

For evaluating the process of teaching within the actual situation the chi-square (Table 6) shows that there are statistically significant differences for student evaluation ($\chi 2 = 18$, df = 1, p value, 0.00002), evaluation by educators themselves ($\chi 2 = 10$, df = 1, p value, 0.001) and evaluation by head of group ($\chi 2 = 12$, df = 1, p value, 0.0005). In the preferred situation there are statistically significant differences for evaluation by peers ($\chi 2 = 8$, df = 1, p value, 0.004) and by heads of groups ($\chi 2 = 5$, df = 1, p value, 0.02). For perceptions concerning preferred evaluators of the output criteria (Table 7), both

educators and students were in agreement, that is, there were no statistically significant differences between the two respondent groups. However, for four of the five evaluator categories there was a significant difference between the two respondent groups in their perceptions of the actual evaluators of output: student evaluation ($\chi 2 = 20$, df = 1, p value, 0.00001), educators themselves ($\chi 2 = 11$, df = 1, p value, 0.0009), heads of groups ($\chi 2 = 4.33$, df = 1, p value, 0.037), and administrators ($\chi 2 = 4$, df = 1, p value, 0.042).

Degree of agreement and differences between actual and preferred types of evaluators related to input, process, and output criteria as perceived by educators and students. For the degree of agreement between actual and preferred perceptions of educators and of students concerning evaluators of input, process, and output criteria of teaching effectiveness, the Kappa test was used. This Kappa test indicates that there is just one area of "fair agreement"and that was for students regarding the evaluation of inputs by peers (Kappa, .59).

Table 8- Degree of agreement between actual and preferred perceptions of educators and of students concerning evaluators of input, process, and output criteria (Kappa Value).

Variable	Participants	Administrator	Heads of Groups	Peers	Self	Students
Input	Educators	.19	.18	.31	.065	.31
	Students	.37	.11	.59*	.15	.005
Process	Educators	.27	.24	.16	.15	.27
	Students	.068	.32	.23	-.019	.063
Output	Educators	.002	.18	.26	.15	.28
	Students	—**	.16	.028	.29	.056

*** Kappa is significant -1 to +1(more than .4)**

****Statistics cannot be computed when the number of non-empty rows or columns is one.**

Evaluation Practices

The purpose of part C of research question one was to determine ***the extent to which Iranian nurse educators and students shared or differed on perceptions as to which evaluation practice was and which should be used in evaluating teaching effectiveness.***

Table 9 indicates the actual and preferred use of various evaluation practices as perceived by nurse educators and nursing students. For both educators and students three of the actual evaluation practices had means between 2 (some use) and 3 (moderate use): performance observation, student achievement, and rating scales. The other two evaluation practices had means between 1 (very limited use) and 2 (some use). Performance observation was seen as the most common evaluation practice as perceived by educators ($\bar{x}$, 2.74). Mean ratings of preference use for all five evaluation practices were near or above 4, and range from 3.82 to 4.48 indicating a preference for "great use" of all five practices This table also reveals that self appraisal was the preferred practice of choice for educators ($\bar{x}$, 4.31).

Students' perceptions indicate that student achievement was seen as the most common method used ($\bar{x}$, 2.43) and preferred as the method of choice for evaluating teaching effectiveness ($\bar{x}$, 4.48). It is worth mentioning that the means for each of the practices increased from the actual to the preferred situation, indicating that the study participants were in favor of more emphasis being placed on each practice, particularly teacher test, and self-appraisal for both respondent groups and student achievement and rating scales for the student respondents

Table 9 reveals the extent of consensus in perceptions concerning the importance to which various evaluation practices were given in the actual and preferred situations by presenting the standard deviation for each. The greatest consensus among educators occurred concerning the actual use of teacher test (SD, 1.08), and self appraisal (SD, 1.15) both of which were rated the lowest in use. However, students' perceptions with the greatest consensus for actual use were self appraisal by educators (SD, 0.83), and secondly, rating scales (SD, 1.09).

Table 9 also shows that among educators, performance observation had the greatest

degree of variance (SD, 1.48) Among students, student achievement (SD, 1.19), and performance observation (SD, 1.15) had the greatest degree of variance as indicated by the standard deviation obtained, although with the exception of the self-appraisal standard deviation, the other four were in a narrow range from 1.09 to 1.19.

Table 9 - Differences between educators and students perceptions of actual and preferred evaluation practices

Evaluation Practices	Participants	Actual			Preferred			Differences			
								Actual		Preferred	
		$\bar{x}$	Rank	SD	$\bar{x}$	Rank	SD	T Value	P	T Value	P
1- Performance	Educators	2.74	1	1.48	3.82	5	1.12				
Observation	Students	2.41	2	1.15	3.90	5	.92	1.70	.09	.54	.59
2- Rating	Educators	2.45	3	1.35	3.85	4	1.04				
Scales	Students	2.05	3	1.09	4.20	3	.85	2.12	.03*	2.29	.02*
3- Student	Educators	2.67	2	1.36	4.05	2	1.002				
Achievement	Students	2.43	1	1.19	4.48	1	.70	1.18	.23	3.18	.002*
4- Teacher Test	Educators	1.67	5	1.08	3.88	3	1.14				
	Students	1.64	5	1.11	4.33	2	.82	.17	.86	2.83	.005*
5- Self	Educators	1.72	4	1.15	4.31	1	.84				
Appraisal	Students	1.75	4	.83	4.20	4	1.05	.22	.83	0.76	.44

Note: Scale used was 1= Very limited Use 2= Some Use 3= Moderate Use 4= Great Use 5= Very Great Use. * Indicates Significantly Different Mean at 0.05.

The most commonly shared perceptions among educators concerning the preferred use of evaluation practices were self appraisal (SD, 0.84), and student achievement (SD, 1.002). Students preferred use of student achievement (SD, 0.70), teacher tests (SD, 0.82) and rating scales (SD, 0.85). Table 9 also indicates that the greatest variance in the educators' perceptions occurred concerning the use of teacher tests (SD, 1.14) and performance observation (SD, 1.12). However, the greatest variance in the students' perceptions occurred concerning the use of self appraisal by educators (SD, 1.05) and performance observation (SD, 0.92).

Differences between educators' and students' perceptions of actual and preferred evaluation practices. Table 9 indicates that for perceptions of actual evaluation a significant difference was found between the educators and students for evaluation of teaching effectiveness by rating scales (P value, 03). Educators perceived more evaluation using this practice than did students. For preferred evaluation practices differences occurred for use of teacher test (P value, 0.005), student achievement (P value, .002), and rating scales (P value, .023). In all three cases, students preferred more use of these practices than did educators. Table 9 shows that the mean for each of these practices increased from the actual to the preferred situation, indicating that the study participants were in favor of more emphasis being placed on each practice. Perceptions on the use of self appraisal (among educators) and of teacher tests (among students) demonstrated the greatest differences between the actual and preferred situations.

Table 10 - Degree of agreement and differences between actual and preferred evaluation practices as perceived by educators and students

Evaluation Practices	Participants	*t* Value (Paired t test)	Degree of Significance	Kappa Value
Performance Observation	Educators	8.57	<0.0001	.15
	Students	9.52	<0.0001	.02
Rating Scales	Educators	8.97	<0.0001	.03
	Students	10.98	<0.0001	—*
Student Achievement	Educators	9.66	<0.0001	.09
	Students	13.12	<0.0001	—*
Teacher Tests	Educators	16.18	<0.0001	.04
	Students	11.92	<0.0001	—*
Self Appraisal	Educators	20.74	<0.0001	.08
	Students	13.20	<0.0001	—*

***t* Value Significant at 0.05 level.**

Kappa is significant at -1 to +1(.4 or more). None of the Kappa values have attained the ± .40 level.

***Statistics cannot be computed when the number of non-empty rows or columns is one.**

Degree of agreement and differences between actual and preferred evaluation practices as perceived by educators and by students. To answer the question of whether or not any differences exist between actual and preferred evaluation practices the *t* test was used. Table 10 indicates that there are statistically significant differences between actual and preferred evaluation practices for educators and students for all five practices. As indicated earlier, educators and students preferred greater use of all five of these evaluation practices. For the degree of agreement between actual and preferred practices, the Kappa test was used. Table 10 indicates that none of the Kappa values attained ± .40 meaning that there is no agreement between actual and preferred perceptions of educators or of students for these evaluation practices.

Table 11 - Contributions of educators' personal and professional variables to their perceptions of actual and preferred evaluators (Multiple Linear Regression)

Educators' perceptions of evaluator category (Dependent Variable)	Personal and professional variables (Independent Variables)	*t* Value	R Square	F Ratio	Degree of Significance
Heads of the Groups (Preferred)			0.299*	2.134*	**0.014***
	Level of education	-2.17			**0.033***
	Clinical experience	2.18			**0.032***
	Classroom instruction time	3.59			**0.001***
Peers (Preferred)			0.248*	1.838*	**0.038***
	Hours worked per week	2.31			**0.023***
	Classroom instruction time	-2.42			**0.017***
	Conference presentation	-2.77			**0.007***
Students (Actual)			0.248*	1.909*	**0.032***
	Age	2.71			**0.008***
	Articles published	-2.86			**0.005***
	Clinical instruction time	2.18			**0.032***

*** Significant at 0.05 level.**

Effect of independent variables on perceptions concerning evaluators.

Educator perceptions. The study was concerned with the effect if any of personal and professional variables on the perceptions of the study participants concerning actual and preferred evaluators. Multiple Linear Regression was utilized. Table 11 shows the significant findings from the regression analysis between 16 educator demographic variables and educator perceptions regarding actual and preferred evaluators. The findings reveal that a statistically significant relationship exists between perceptions of educators about the preferred evaluation by heads of groups and their level of education (negatively related; p value, 0.033), amount of clinical experience (positively related; p value, 0.032), and classroom instruction time (positively related; p value, 0.001).

Table 11 also indicates that a statistically significant relationship exists between perceptions of educators about their preferred evaluation by peers and hours worked per week (positively related; p, 0.023), classroom instruction time (negatively related; p value, 0.017), and conference presentation activity (negatively related; p value, 0.007). Also, there is a statistically significant relationship between perceptions of educators about the actual evaluation by students and educators age (positively related; p value, 0.008), number of articles published (negatively related; p value, 0.005), and clinical instruction time (positively related; p value, 0.032).

Student perceptions. With regard to the relationship between each of four student demographic variables and perceptions of students concerning actual and preferred evaluators, Table 12 shows that in the 10 multiple linear regressions that were undertaken, only one statistically significant relationship was found. A significant relationship existed between the perceptions of students about the actual evaluation by the administrator and the student's year of study (negatively related; p value, 0.007).

Table 12 - Contributions of students' personal and professional variables to their perceptions of actual and preferred evaluators (Multiple Linear Regression)

Students' perceptions of evaluator category (Dependent Variable)	Personal and professional variables (Independent Variable)	*t* value	R Square	F Ratio	Degree of Significance
Administrator (Actual)	Year of study	-2.83	0.239*	3.217*	0.022* (total residual) 0.007*

*** Significant at 0.05**

Effect of independent variables on perceptions concerning evaluation practices. The study was concerned with the effect if any of personal and professional variables on the perceptions of the study participants concerning actual and preferred evaluation practices (performance). Multiple Linear Regression was used to test this relationship.

Table 13- Contributions of students' personal and professional variables to their perceptions of actual and preferred evaluation practices (Multiple Linear Regression)

Students' perceptions of evaluation practices category (Dependent Variable)	Personal and professional variables (Independent Variable)	*t* Value	R Square	F Ratio	Degree of Significance
Performance Observation (Actual)	Year of study	2.41	0.147*	2.578*	0.046* 0.019*
Student Achievement (Preferred)	Satisfaction with nursing program	2.44	0.180*	3.353*	0.015* 0.017*

*** Significant at 0.05**

Educators' perceptions. For the 16 educator demographic variables and the five actual and five preferred evaluation practices none of the ten regression analyses were statistically significant. That is, there appeared to be no significant association between the educator demographic variables and the educators' perceptions of actual or preferred

evaluation practices.

Students' perceptions. For the ten regression analyses performed using the five actual and five preferred evaluation practices as dependent variables and the four student demographic variables as the independent variables, statistically significant relationships occurred for only one actual and one preferred evaluation practice. The details are provided in Table 13. The table reveals that a statistically significant relationship exists between perceptions of students about the actual use of performance observation and their year of study (positively related; p value, 0.019). Also a statistically significant relationship exists between perceptions of students about the preferred use of student achievement and their satisfaction with the nursing program (positively related; p value, 0.017).

Beliefs about the Teaching and Learning Process (Q. 4, 5)

Questions four and five centre on beliefs about the teaching and learning process. The purpose in this section of the study was to determine ***the extent to which Iranian nurse educators and students shared or differed on beliefs about the teaching and learning process.***

Table 14 presents the degree of agreement between educators and students concerning 14 common beliefs about teaching and learning. Educators agreed most strongly with variable number 2 (the instructor's role is to facilitate student learning; ($\bar{x}$, 4.54). Variable number 9 (the instructor should show each student that her/his abilities and experiences are respected and valued; $\bar{x}$, 4.53) is ranked second, and variable number 10 (the instructor should help students choose and develop their own directions for learning; $\bar{x}$, 4,42) is ranked third. Students agreed most strongly with variable number 9 (the instructor should show each student that her/his abilities and experiences are respected and valued; $\bar{x}$, 4.55). This variable is ranked first. Variable number 5 (the instructor should organize the content and sequence of learning students' need; $\bar{x}$, 4.48) is ranked second on degree of agreement, and variable number 6 (the instructor should measure teaching effectiveness by assessing changes in students' attitudes and behaviours; $\bar{x}$, 4.41) is ranked third.

Table 14- Educators' and students' beliefs about the teaching and learning process

Beliefs about the teaching- learning process	Educators ($\bar{x}$, SD, rank)	Students ($\bar{x}$, SD, rank)
1- The instructor should focus on what is sure, reliable, and lasting (i.e., facts)	4.38 (0.71) (4)	4.26 (0.63)* (6)
2- The instructor's role is to facilitate student learning	4.54 (0.54) * (1)	4.18 (1.04) (7)
3- The instructor should focus on intellectual development: the understanding of ideas (concepts)	4.22 (0.78) (7)	4.27 (0.83) (5)
4- The instructor should promote active student participation in deciding what is to be learned and how	4.23 (0.91) (6)	4.08 (0.73) (8)
5- The instructor should organize the content and sequence of learning activities based on student's needs	4.19 (1.01) (8)	4.48 (0.65)* (2)
6- The instructor should measure teaching effectiveness by assessing changes in students' attitudes and behaviours	4.34 (0.79) (5)	4.41 (0.67) (3)
7- The instructor role is to evaluate students' achievements and assign grades	3.39 (1.19) (13)	2.70 (1.13) (14)
8- Students are good sources of ideas for improving teaching and learning	4.07 (0.84) (10)	4.04 (0.87) (9)
9- The instructor should show each student that her/his abilities and experiences are respected and valued	4.53 (0.61)* (2)	4.55 (0.69) (1)
10- The instructor should help students choose and develop their own directions for learning	4.42 (0.62)* (3)	4.31 (0.62)* (4)
11- The instructor should be mainly a transmitter of knowledge in the classroom	3.56 (1.21) (12)	3.64 (1.04) (12)
12- The instructor should make the decisions about what is to be taught, when, and how	4.17 (0.86) (9)	3.72 (1.15) (11)
13- The instructor should inspire students to create their own learning activities and materials rather than always provide them	3.76 (1.19) (11)	3.75 (0.95) (10)
14- The instructor should develop a systematic plan for the course and stick to it	3.01 (1.21) (14)	2.97 (1.00) (13)

Note: The scale used was 1= strongly disagree to 5 = strongly agree

*** Lowest standard deviations.**

Table 14 also provides the standard deviations for each variable indicating the extent of consensus in perceptions concerning these belief statements. The greatest consensus for educators occurred for items 2 (SD, 0.54), 9 (SD, 0.61), and 10 (SD, 0.62) which are the ones ranked highest by the educators; and for students it was for items 10 (SD, 0.62), 1 (SD, 0.63), and 5 (SD, 0.65), in that order, which are among the top six ranked items by students. This table indicates that there was the least consensus among educators for belief items 11 and 14 (SD, 1.21), and for 7 and 13 (SD, 1.19) which are the four lowest-ranked items for educators; and among students for belief items 12 (SD, 1.15), 7 (SD, 1.13), and for 11 (SD, 1.04) which are three of the four lowest- ranked items for students.

A factor analysis was performed on the 14 items using the entire respondent group. The reason for doing so was to facilitate comparisons between the two groups.

Table 15- Factor analysis for beliefs about the teaching and learning process (Equamax rotation)

Items	Communalities	Factor 1	Factor 2	Factor 3	Factor 4
2	0.592	0.747			
1	0.554	0.657			
3	0.491	0.651			
4	0.398	0.480			
9	0.708		0.817		
8	0.653		0.786		
10	0.483		0.586		
12	0.520			0.692	
11	0.519			0.676	
14	0.596			0.620	
7	0.305			0.519	
13	0.674				0.787
6	0.607				0.519
5	0.367				0.518

Factor 1: Learning-centred values; Factor 2: Teaching-centred values; Factor 3: Pedagogical values; Factor 4: Andragogical values.

A four factor solution seemed most suitable. Table 15 identifies the factor loadings for each factor. The four factors were then labeled. The first factor contained four items related to learning-centred values where the educator role is to facilitate student learning; the second factor contained three items representing teaching-centred values where the educator role is to promote student involvement in learning; the third factor contained four items representing pedagogical values where the educator role is to determine learning activities ; and the fourth factor contained three items representing the andragogical values where the educator role is to meet student needs.

Table 16 indicates the degree of agreement of the two respondent groups with each of the four factors. The means for these factors are ranked from high to low indicating strength of agreement with them. Standard deviations are also presented for each factor. Factors 1 and 2 had the highest mean for educators ($\bar{x}$, 4.34) and factor 2 had the highest mean for students ($\bar{x}$, 4.30). It is noteworthy that the range in standard deviations is relatively small for each of the factors and for each of the respondent groups indicating a fairly high degree of consensus in each group.

Table 16 - Differences between educators' and students' beliefs about teaching and learning process

Beliefs	Educators				Students				Differences		
	N	$\bar{x}$	Rank	SD	N	$\bar{x}$	Rank	SD	*t* Value	df	2 Tail Sig
Factor 1 (Learning-centred values)	143	4.34	1.5**	.53	70	4.19	3	.55	1.92	211	*.05
Factor 2 (Teaching - centred values)	143	4.34	1.5**	.53	70	4.30	1	.59	.51	211	.60
Factor 3 (Pedagogical values)	143	3.52	4	.74	70	3.25	4	.69	2.55	211	*.01
Factor 4 (Andragogical values)	143	4.09	3	.69	70	4.21	2	.46	1.33	211	.09

*** Indicates Significantly Different Means at 0.05 level.**

**** Indicates tied ranks.**

Differences between educators' and students' beliefs about the teaching learning process. To test for differences between educators' and students' beliefs associated with the teaching-learning process the *t* test was used. Table 16 indicates that significant differences were found between educators' and students' beliefs on factor 1: Learning-centred values (p value, .05), and factor 3: Pedagogical values (P value, .01). In both cases the nurse educators agreed more strongly with these beliefs. That is they held higher learning-centred values and higher pedagogical values. The two groups did not differ on teaching-centred values or on andragogical values. Although they differed significantly on them, both educators and students agreed more strongly with the learning-centred values (means between 4.0 and 5.0) than with pedagogical values (means between 3.0 and 4.0).

Effect of independent variables on beliefs about the teaching-learning process. The fifth research question was concerned with the effect which personal and professional variables had upon the perceptions of the study participants concerning beliefs about the teaching-learning process.

Educators' beliefs. For the 16 educator demographic variables and four factors related to beliefs about the teaching-learning process, multiple linear regression was used. None of the regression analyses were statistically significant. That is, there appeared to be no significant association between the educator demographic variables and the educators' beliefs about the teaching-learning process.

Students' beliefs. For the five students demographic variables and four factors related to beliefs about the teaching-learning process, multiple linear regression was used. Findings in Table 17 indicate that a statistically significant relationship existed between perceptions of students about factor 1(learning-centred values) and satisfaction with nursing program (p value, 0.03). A one-way analysis of variance was done to determine the direction of the differences in the student group. Those students with the highest satisfaction scores had the least strong agreement with the learning-centred values and those students with the lowest satisfaction scores agreed most strongly with the learning-centred values.

Table 17- Contributions of students' personal and professional variables to their beliefs about the teaching-learning process (Multiple Linear Regression)

Students' beliefs about teaching-learning process (Dependent Variable)	Personal and professional variables (Independent Variable)	*t* Value	R Square	F Ratio	Degree of Significance
Factor 1 (Learning- centred values)	Satisfaction with nursing program	2.21	0.188*	3.471*	0.01* 0.03*

*** Significant at 0.05 level.**

Selected Criteria For Evaluating Teaching Effectiveness (Q. 6, 7)

Research questions six and seven centre on criteria for evaluating teaching effectiveness. The purpose in this section of the study was to ***determine the extent to which Iranian nurse educators and students shared or differed on perceptions concerning selected criteria for evaluating teaching effectiveness.***

Table 18 presents the mean importance ratings for the 31 evaluation criteria and a ranking of the means for all items in which 50% or more of respondents chose the response category "very great importance." For the educators this included the top 12 items whereas for the students it included the top 10 items. For educators item 5 (instructor general level of motivation) is ranked 1 ($\bar{x}$, 4.69). Item 8 (instructor ability to provide clear explanations) is ranked 2 ($\bar{x}$, 4.57), and item 1 (instructor knowledge of subject matter) is ranked as the third most important variable ($\bar{x}$, 4.56).

For students, item 3 (instructor commitment to teaching) is ranked 1 ($\bar{x}$, 4.61), item 1 (instructor knowledge of subject matter) is ranked 2 ($\bar{x}$, 4.56), and item 8 (instructor ability to provide clear explanations) is ranked 3 (x, 4.55). Table 18 also shows the extent of consensus in perceptions concerning the importance which various variables were given by presenting the standard deviations for each item.

Table 18- Educators' and students' importance ratings for teaching effectiveness evaluation criteria

Criteria	Educators ($\bar{x}$, SD, Rank)	Students ($\bar{x}$, SD, Rank)
1- Instructor knowledge of the subject matter	4.56 (0.83) (3)	4.56 (0.78) (2)
2- Instructor involvement in research	3.91 (1.10)	4.00 (1.03)
3- Instructor commitment to teaching	4.55 (0.89) (4)	4.61 (0.70) (1)
4- Instructor establishes clear goal for courses	4.51 (0.83) (5)	4.31 (0.84) (11)
5- Instructor general level of motivation	4.69 (0.79) (1)	4.44 (0.89) (5.5)
6- Students' level of motivation	4.48 (0.91) (6)	4.43 (0.94) (7)
7- Students' general ability in class	4.18 (0.92)	4.21 (0.88)
8- Instructor ability to provide clear explanations	4.57 (0.71) (2)	4.55 (0.73) (3)
9- Instructor time on task (active learning time in class)	4.32 (0.87)	4.18 (0.89)
10- Instructor flexibility	3.97 (1.07)	4.04 (0.93)
11- Instructor sensitivity to student difficulties	3.91 (1.03)	3.88 (1.07)
12- Instructor ability to provide an atmosphere conductive to learning	4.42 (0.82) (9)	4.37 (0.88) (9)
13- Instructor sharing of personal experience with students	4.19 (0.99)	4.15 (1.002)
14- Students' level of success in meeting course requirements	3.97 (0.97)	3.92 (0.93)
15- Instructor evaluation of students based on course objectives	4.01 (1.01)	3.71 (0.98)
16- Instructor classroom communication skills	4.35 (0.82) (11.5)*	4.47 (0.89) (4)

Criteria	Educators ($\bar{x}$, , SD, Rank)	Students ($\bar{x}$, , SD, Rank)
17- Instructor use of organized materials	4.44 (0.73) (8)	4.44 (0.87) (5.5)
18- Instructor ability to inspire student participation	4.35(0.80) (11.5)*	4.20 (0.91)
19- Instructor management and control of class	4.46 (0.82) (7)	4.41 (0.86) (8)
20- Instructor use of multiple teaching strategies in the classroom/clinical setting	4.38 (0.86) (10.5)*	4.36 (0.78)
21- Instructor enthusiasm	4.22 (0.86)	3.97 (1.03)
22- Instructor availability outside of class	3.72 (1.10)	3.71 (1.09)
23-Instructor ability to improve her/his students ability to become self-directed in learning	4.12 (1.03)	3.85 (1.05)
24- Instructor ability to provide clear course expectations	4.05 (0.96)	3.97 (0.88)
25- Instructor ability to inform students of their progress	4.08 (0.89)	3.76 (1.05)
26- Instructor ability to give students criticism in an appropriate manner	4.07 (0.92)	3.75 (0.98)
27- Instructor ability to enhance her/his students' problem-solving skills	4.12 (0.87)	3.95 (1.02)
28- Instructor ability to enhance her/his students' ability to relate theory to nursing practice	4.18 (0.87)	4.07 (0.87)
29- Instructor ability to enhance her/his students' ability to provide individualized nursing care	4.33 (0.81) (12)	4.30 (0.82)
30- Instructor ability to enhance her/his students' ability to recognize their specific strengths and limitations	4.28 (0.87)	4.04 (0.98)
31- Instructor ability to improve her/his students' ability to recognize their responsibilities as future members of the nursing profession	4.38 (0.89) (10.5)*	4.34 (0.87) (10)

Note: Scale used was 1= very limited importance, 2= some importance, 3= moderate importance, 4= great importance, 5= very great importance. * Indicates tied ranks.

Table 18 indicates that the greatest consensus concerning importance ratings occurred for item 8 (SD, 0.71), item 17 (SD, 0.73) and item 5 (SD, 0.79) for educators and item 3 (SD, 0.70), item 8 (SD, 0.73), and items 1 and 20 (SD, 0.78) for students in that order. This table also indicates that participants shared the most differing perceptions concerning items 2 and 22 (SD, 1.10), 10 (SD, 1.07), and 11 (SD, 1.03) for educators and items 22 (SD, 1.09), 11 (SD, 1.07), and 23 and 25 (SD, 1.05), for students.

A factor analysis was undertaken on the 31 evaluation criteria using the entire respondent group of educators and students. A four factor solution seemed most suitable. Table 19 identifies the factor loadings for each factor. Initially the researcher was hopeful that a three factor solution identifying input, process, and output criteria would result. Instead the resulting four factor solution had process-product items for factors 1, 2, and 4, and inputs to the teaching-learning process as factor 3.

Based on the items, factor 1 was labeled "instructor helping behaviour," factor 2 was labeled "instructor teaching behaviour: student engagement," and factor 4 was labeled "instructor teaching strategies." Also items 2, 7, and 21 were moved to factor 3 as inputs in evaluating the teaching-learning process because conceptually they relate to inputs and also the eigenvalues for these items suggested they related strongly to this factor. A secondary factor analysis was conducted on items that seemed to be related to process product factors. The factors resulting from this secondary analysis were difficult to interpret, so further efforts at using these results were discontinued.

Both groups, educators and students, gave highest ratings to factor 3 (input in the teaching-learning process); second highest ratings to factor 2 (instructor-teaching behaviour: student engagement); the third rating was factor 4 (instructor teaching strategies); and the fourth ranked factor was factor 1 (instructor-helping behaviour). An examination of the standard deviations reveals a high consistency in the ratings by educators and by students.

Table 19 - Factor analysis for teaching effectiveness evaluation criteria (Equamax rotation)

Items	Communalities	Factor 1	Factor 2	Factor 3	Factor 4
22	0.697	0.781			
23	0.724	0.754			
25	0.768	0.676			
27	0.665	0.676			
26	0.633	0.669			
21	0.641	0.628			
2	0.614	0.625			
11	0.617	0.585			
24	0.644	0.568			
31	0.672	0.549			
28	0.693	0.524			
16	0.717		0.704		
17	0.729		0.659		
29	0.734		0.643		
15	0.521		0.623		
30	0.702		0.579		
19	0.702		0.572		
18	0.684		0.535		
20	0.681		0.518		
5	0.781			0.805	
6	0.712			0.695	
4	0.653			0.676	
1	0.639			0.671	
3	0.695			0.661	
14	0.607				0.613
7	0.629				0.605
12	0.679				0.563
10	0.612				0.561
8	0.751				0.556
9	0.552				0.529
13	0.629				0.486

Factor 1, 2, 4 = Process - Product

Factor 1: instructor helping behaviour

Factor 2: instructor teaching behaviour: student engagement

Factor 4: instructor teaching strategies

Factor 3 = Input in teaching-learning process.

Differences between educators' and students' perceptions of the teaching effectiveness evaluation criteria. Table 20 indicates that there were no statistically significant differences between educators and students for any of the four categories of evaluation criteria. Conversely, educators and students agreed on the importance ratings for these criteria as reflected by the rankings.

Table 20 - Differences between educators' and students' perceptions about the evaluation criteria

Criteria	Educators				Students				Differences		
	N	$\bar{x}$	Rank	SD	N	$\bar{x}$	Rank	SD	*t* Value	df	2 tail sig
Factor 1 (Instructor-helping behaviour)	143	4.06	4	.79	70	3.93	4	.76	.28	211	.28
Factor 2 (Instructor-teaching behaviour)	143	4.31	2	.74	70	4.24	2	.67	.62	210	.53
Factor 3 (Input in the teaching/learning process)	143	4.55	1	.74	70	4.47	1	.67	.75	211	.45
Factor 4 (instructor teaching strategies)	143	4.22	3	.73	70	4.20	3	.68	.22	211	.82

Effect of independent variables on perceptions of teaching effectiveness evaluation criteria. The seventh research question was concerned with the effect of personal and professional variables on the perceptions of educators and students concerning the importance they assigned to different teaching effectiveness evaluation criteria. The results of Multiple Linear Regression analyses revealed that there were no statistically significant differences between the independent variables (demographic data) and perceptions of educators or of students concerning these evaluation criteria.

Evaluation Elements

(Q. 8, 9)

Research questions eight and nine centre on the influence of selected elements on teaching effectiveness. The purpose of this section of the study was to determine ***the extent to which Iranian nurse educators and students shared or differed on perceptions***

concerning selected elements influencing the outcomes of teaching effectiveness.

Table 21 presents the mean rating given to each of the 12 elements along with the associated ranking and standard deviations. For educators item 4 (teacher personality) is ranked the most important variable ($\bar{x}$, 4.46). Item 12 (psychological environment) is ranked second ($\bar{x}$, 4.37), and item 2 (teacher experience) is ranked third in importance ($\bar{x}$, 4.31). Students rated item 2 (teacher experience) as the most important element ($\bar{x}$, 4.50), item 12 (psychological environment) as the second most important element ($\bar{x}$, 4.44), and item 5 (teacher academic rank) as the third most important element ($\bar{x}$, 4.42).

Table 21 also indicates the extent of consensus in perceptions concerning the importance of each element by presenting the standard deviations for each element. This table shows that the highest degree of consensus concerning importance among educators occurred for item 4 (SD, 0.81), items 2, 7, and 12 (SD, 0.93), and item 5 (SD, 0.96). The order for students based on standard deviation was: item 2 (SD, 0.81), item 5 (SD, 0.84), and item 12 (SD, 0.85). All of these are among the highest-ranked elements.

Differences between educators' and students' perceptions of different evaluation elements. To identify differences between educators' and students' regarding their perceptions of the influence of the elements on evaluation, *t* tests were used. Table 21 indicates that significant differences were found between educators' and students' perceptions for item 5 (teacher academic rank), and item 8 (student age) both with P values of 0.003. Students assigned greater importance to teacher academic rank than did educators, and educators assigned greater importance than did students to student age.

Table 21 - Differences between educators' and students' perceptions of selected elements of evaluation

Evaluation Elements	Educators			Students			Differences	
	$\bar{x}$	Rank	SD	$\bar{x}$	Rank	SD	*t* Value	P Value
1- Teacher age	3.17	8	1.23	3.21	9	1.16	0.25	0.80
2- Teacher experiences	4.31	3	0.93	4.50	1	0.81	1.41	0.15
3- Teacher gender	2.41	11	1.36	2.46	11	1.39	0.24	0.80
4- Teacher personality	4.46	1	0.81	4.30	4	0.95	1.18	0.23
5- Teacher academic rank	4.01	5.5**	0.96	4.42	3	0.84	3.01	**0.003***
6- Previous level of academic achievement of the students	3.84	6	1.10	3.69	7	1.02	0.95	0.34
7- Personalities of the students	4.10	4	0.93	3.79	6	1.20	1.85	0.068
8- Student age	3.16	9	1.39	2.55	10	1.25	3.04	**0.003***
9- Student gender	2.61	10	1.51	2.22	12	1.34	1.84	0.068
10- Student educational level	3.58	7	1.25	3.45	8	1.30	0.66	0.51
11- Physical environment	4.01	5.5**	1.16	4.07	5	1.08	0.39	0.70
12- Psychological environment	4.37	2	0.93	4.44	2	0.85	0.58	0.56

Note: Scale used was 1= Very Limited Importance 2= Some Importance 3= Moderate Importance 4= Great Importance 5= Very Great Importance. * Indicates Significantly Different Mean at 0.05 Level. ** Indicates tied ranks.

Effect of independent variables on perceptions concerning the evaluation elements. The ninth research question was concerned with the effect of personal and professional variables on the perceptions of educators and students concerning the importance they assigned to various evaluation elements associated with teaching effectiveness evaluation. Table 22 indicates that a statistically significant relationship existed between perceptions of students about the psychological environment as the dependent variable and years of study (P value, 0.003). Analysis of variance revealed that the more senior students assigned lower importance ratings for the psychological environment.

Table 22 - Contributions of students' personal and professional variables to their perceptions of selected elements associated with evaluating teaching effectiveness (Multiple Liner Regression)

Students' perceptions of selected factors (Dependent Variable)	Personal and professional variables (Independent Variable)	*t* Value	R Square	F Ratio	Degree of Significant
Psychological Environment			0.193	3.716	0.009*
	Years of the study	-3.121			0.003*

*** Significant at 0.05 level.**

Summary

In this chapter the data gathered from study respondents were analyzed. Frequency and percentage distributions were presented in order to describe the personal and professional characteristics of the study respondents. Correlations between the independent variables were shown. A presentation of means, mean ranks, and standard deviations was used for each of the sections which dealt with evaluators, evaluation practices, beliefs, criteria for evaluation and the impact of selected elements on teaching effectiveness in order to discuss the extent to which respondents shared common perceptions concerning these aspects of nursing educator evaluation. The results of *t* tests

and chi-square tests were used to identify the magnitude of differences between educators and students, while the results of Kappa tests were used to present the degree of agreement between the actual and preferred perceptions of both groups. The results of a factor analysis and secondary analysis were used to present the most suitable categorization of the study beliefs and criteria for teaching effectiveness. The results of multiple linear regressions were presented in order to show the effect which the independent variables had upon perceptions of respondents concerning actual and preferred evaluators, evaluation practices, beliefs, criteria for evaluating teaching effectiveness, and the influence of selected elements on teaching evaluation.

CHAPTER 5

Discussion of the Findings

Study Purpose and Significance

The aim of nursing education is the transmission of nursing knowledge. Other important functions of nursing education include helping the nursing student acquire the necessary skills and attitudes. As with professional preparation generally, nursing education has all these dimensions, the cognitive, the affective, and the psychomotor.

One way to enhance nursing education is to evaluate the effectiveness of teaching in nursing educational programs. Defining what we mean by teaching effectiveness, however, is difficult. Teaching is a complex and demanding activity that involves techniques of organization, control and command of teaching skills. Teaching is comprised not only of instruction, but also of the systematic promotion of learning by whatever means (Owen, 1992; Stenhous, 1988). While these views are interesting they are global and do not indicate the specific skills required for effective teaching. Identifying these skills is necessary if teachers are to improve their perceptions about evaluating teaching effectiveness. Indeed, evaluation of teaching is essential to providing feedback to teachers, and for providing reliable and valid data that contribute to the promotion and tenure process.

In the past two decades as economic realities and accountability mandates have affected higher education, so too has faculty evaluation in nursing education become an important issue. Efforts to document teaching effectiveness in nursing are essential to demonstrate nursing education's accountability to the profession and the public it serves. For teaching to remain a dynamic activity, regular evaluation is vital (Merchant, 1988; Owen, 1992); it is equally important for teachers to develop their teaching by systematic evaluation.

The purpose of this study was to investigate the perceptions of Iranian nurse educators

and students in faculties of nursing regarding actual and preferred evaluation methods, their beliefs about teaching and learning, the importance of selected evaluation criteria and elements that may influence the outcome of teaching evaluation. Also, personal interviews were conducted to elicit data from the Deans of three faculties of nursing regarding evaluation policies and procedures.

The chapter contains six sections each devoted to a discussion of a different aspect of the findings of the study; (a) description of samples, (b) methods of evaluation, (c) beliefs about teaching and learning, (d) criteria for evaluating teaching effectiveness, (e) evaluation elements, and (f) findings and discussion of the interviews with Deans. The chapter concludes with a brief summary.

Description of Samples

Nurse Educators

The data collected revealed that most of the nurse educators were female, married, and between the ages of 40 and 49. Sixteen personal and professional educator variables were used in analysis of the study findings. The results of this study indicate that gender and professional rank were perceived by respondents as having no effect on teaching effectiveness. This finding is congruent with the literature, suggesting that professional rank and gender have minimal effect on teaching effectiveness especially as assessed by student ratings. This finding is also congruent with research in a related field. For instance, one study in which the teaching effectiveness of a group of 43 surgeons was examined over a nine year period failed to demonstrate any significant correlation with age or academic promotion (Cohen, Macrae, & Jamieson, 1996).

In the research reported here, there was a positive relationship between the age of educators and their perceptions about the actual participation of students in evaluation. Older Iranian educators were more likely than their younger counterparts to perceive that students were actively involved in evaluating teaching effectiveness. The contrast to the perceptions of the educators, the students perceived themselves as having limited

involvement. Since older educators tend to spend less time in classroom and clinical teaching, they may be less aware of students' actual involvement.

The majority of educators who participated in this research held Master's degrees. Studies involving more doctorally prepared nurses might well have produced findings that were significantly different from what emerged in this study. It was determined that the higher the level of education of educators, the less their preference to be evaluated by the head of the group. This could be related to the fact that they have more knowledge about various evaluation methods (e.g. student evaluation, self evaluation) and would prefer to have a variety of evaluators and evaluation methods used.

The literature related to educational preparation and teaching effectiveness reveals significant differences in perceptions about the preferred method of evaluation among educators with different levels of education (Cadman, 1977; Morris, 1995). One study (Melland, 1992) in which nursing students were asked to evaluate their instructors' teaching effectiveness, however, revealed that the faculty's level of education had no significant impact on their perceived teaching effectiveness. Also, the number of years in which a nurse educator had been employed in nursing education was negatively related to teaching effectiveness. This suggests that the number of years of employment of faculty may be less important than the degree to which they are perceived to be motivated for teaching.

The majority of educators who participated in this study had 20 or more years of teaching, and eight or more years of clinical experience. A large proportion were involved in classroom and clinical education purely at the baccalaureate level. Findings indicate that clinical experience and classroom instruction time were positively related to preferred evaluation by heads of groups among educators. It is worth mentioning that in Iran heads of groups are heavily involved in clinical and classroom activities. This may contribute to their being viewed by the more experienced educators as highly credible evaluators.

The results of earlier studies show that the amount of teaching and clinical experience

of nurse educators has some effect on their preferences concerning who evaluates their teaching effectiveness (Cadman, 1977; Kerr, 1991; Morris, 1995). According to Benner (1984) novices have had no experience of the situations in which they are expected to perform. The expert on the other hand, "with an enormous background of experience, now has an intuitive grasp of each situation and zeroes in on the accurate region of the problem without wasteful consideration of a large range of alternative solutions" (p.32). Educators in their first year of teaching often perceive inadequacies in their own teaching performance. Inexperienced faculty may also lack confidence and feel threatened by ongoing feedback from students and administrators (Hulsmeyer & Bowling, 1986).

Reviewing the literature related to clinical experience and teaching effectiveness reveals a positive relationship between these two variables. Faculty who maintained their clinical practise ranked practice higher in importance than did non-practice faculty. Practising faculty also believed that clinical experience increased their clinical competence and their teaching effectiveness, and that it enhanced their scholarly productivity. Findings of the study regarding faculty perceptions of role strain by Steele (1988) and Rogers (1986) show that practising faculty reported less role strain and felt more confident in clinical and classroom teaching.

A surprising finding of this study was that educators with the greatest involvement in classroom instruction time and conference presentations were less likely to prefer evaluation by peers. This relationship is perhaps explainable by the fact that the more educators participate in different activities in addition to classroom instruction, the less time they have to prepare for effective teaching. Thus, they may be uncomfortable with peer evaluation. Also, there was a negative relationship between perceptions of educators about the actual evaluation by students and articles published, but a positive relationship between actual evaluation by students and clinical instruction time. This may reflect the fact that when educators are involved in clinical instruction, they generally spend more time with students and thus may be more secure about having students involved in evaluating their teaching effectiveness. On the other hand, perhaps it is the case that the

more involved they are in publishing articles, the less likely are they to be aware of day-to-day issues facing practising nurses and the less likely are they to want student involvement in evaluating teaching effectiveness.

The fact that the majority of Iranian respondents have not supervised research or participated in research themselves is likely to have had an effect upon their responses in terms of selection of evaluators, data gathering practices, beliefs, criteria and elements considered appropriate for this setting. Studies involving educators more heavily involved in research might produce findings significantly different from the ones that have emerged in this study.

As a result of the literature review, explanations for a positive or negative relationship between research and teaching can be found. One explanation for a positive relationship between teaching and research is "spill-over" effect (Centra, 1983; Friedrich & Michalak, 1983), which implies that the sense of excitement that the researcher derives from research may spill over into the classroom in the form of an excited, enthusiastic teacher. A second explanation is that personal characteristics that lead to success in research (organization, intelligence, self-discipline) often lead to success as a teacher (Association of American Colleges, 1985; Centra, 1983; Feldman, 1987).

One argument for a negative relationship between research productivity and teaching effectiveness is that, as faculty become more involved in research, they are frequently assigned lower teaching loads. This results in the increased use of graduate teaching assistants and part-time educators, both of whom are often even less prepared to teach than the doctorally prepared faculty (Sykes, 1988). As faculty become more engrossed in research, they become more specialized, resulting in decreased interest and effectiveness when teaching the more general introductory undergraduate courses (Kimball, 1988).

The findings of Melland's study (1996), consistent with several studies reviewed in the literature, showed little or no relationship between teaching effectiveness and research productivity. The study did not find that those who do more research make poorer

teachers, nor did it indicate that researchers make better teachers. Even at institutions where research is most highly valued and required, there was no significant difference in teaching effectiveness as perceived by students. It may be that these are essentially independent or unrelated variables and should be treated as such.

In the current research, it was found that most of the educators had not published any books. When considering the evaluation of faculty, if publications and research are used as independent variables, evaluators must be cautious not to allow an educators's productivity in terms of one function (e.g., research productivity) to impact on how that educator is evaluated in terms of the second function (e.g., teaching). In such a situation the quality of the educators' publications would be used as a basis for estimating the educator's skills as a teacher. This may be easier to do, because we often have limited information about how an educator teaches once the classroom door is closed. Conversely, the researcher believes that at other times we may assume a teacher is not very effective because of the demands of being highly published. The educators must have their teaching, as well as their research efforts, evaluated in a comprehensive and systematic manner.

Regarding satisfaction with their present position and satisfaction with the evaluation system that was used, most of the educators were *quite satisfied* with their position and *quite* or *highly satisfied* with the present evaluation system. This high satisfaction with the evaluation system was a surprise to the researcher. As a faculty member with about 12 years' experience, I do not think that evaluation systems in different faculties of nursing in Iran are highly satisfactory. There is neither peer nor self evaluation utilized at the present time. Faculty evaluation is sometimes inconsistent and incomplete, and who the participants are and how they evaluate teaching effectiveness are other issues to be carefully considered.

Students

Frequency and percentage distributions for personal and professional variables of students revealed that most of the students were between the ages of 20 and 29 years, female, single, and in the baccalaureate program. Also, most of the students were *somewhat satisfied* with the nursing program. In comparison with the satisfaction of educators, it is interesting that students reported less satisfaction with the present educator evaluation system than did educators, perhaps because the students are the direct recipients of the teaching and may be evaluating it on the basis of their own perceived learning needs.

Four personal and professional student variables were used in the analysis of findings. Findings indicated that students' year of study and degree of satisfaction with the nursing program were related to their perceptions about evaluation methods. For instance, students' year of study was negatively related to their perceptions of degree of actual involvement by the administrator in the evaluation process, and to importance they assigned to the psychological environment as an element of educator evaluation. In other words, students earlier in their program perceived the administrator to be more involved in evaluating teaching effectiveness than did students later in the program. Psychological environment was also seen as more important in earlier than in later years of the program. Moreover, there was a positive relationship between students' year of study and their perceptions about actual use of performance observation as a method of evaluation, that is, students in their later years of study perceived performance observation to be used more often for evaluating teaching effectiveness.

Findings of this study indicated a positive relationship between students' preferences for using student achievement as an evaluation criterion and their satisfaction with the nursing program. It is possible that the more satisfied students are with the nursing program, the higher marks they receive, and therefore, they prefer to have student achievement as a method for assessing teaching effectiveness. Also, there was a negative correlation between students' satisfaction with the nursing program and their learning-

centred values, meaning that the greater the level of satisfaction, the less emphasis they gave to learning-centred values, and the more they held student-centred or other values.

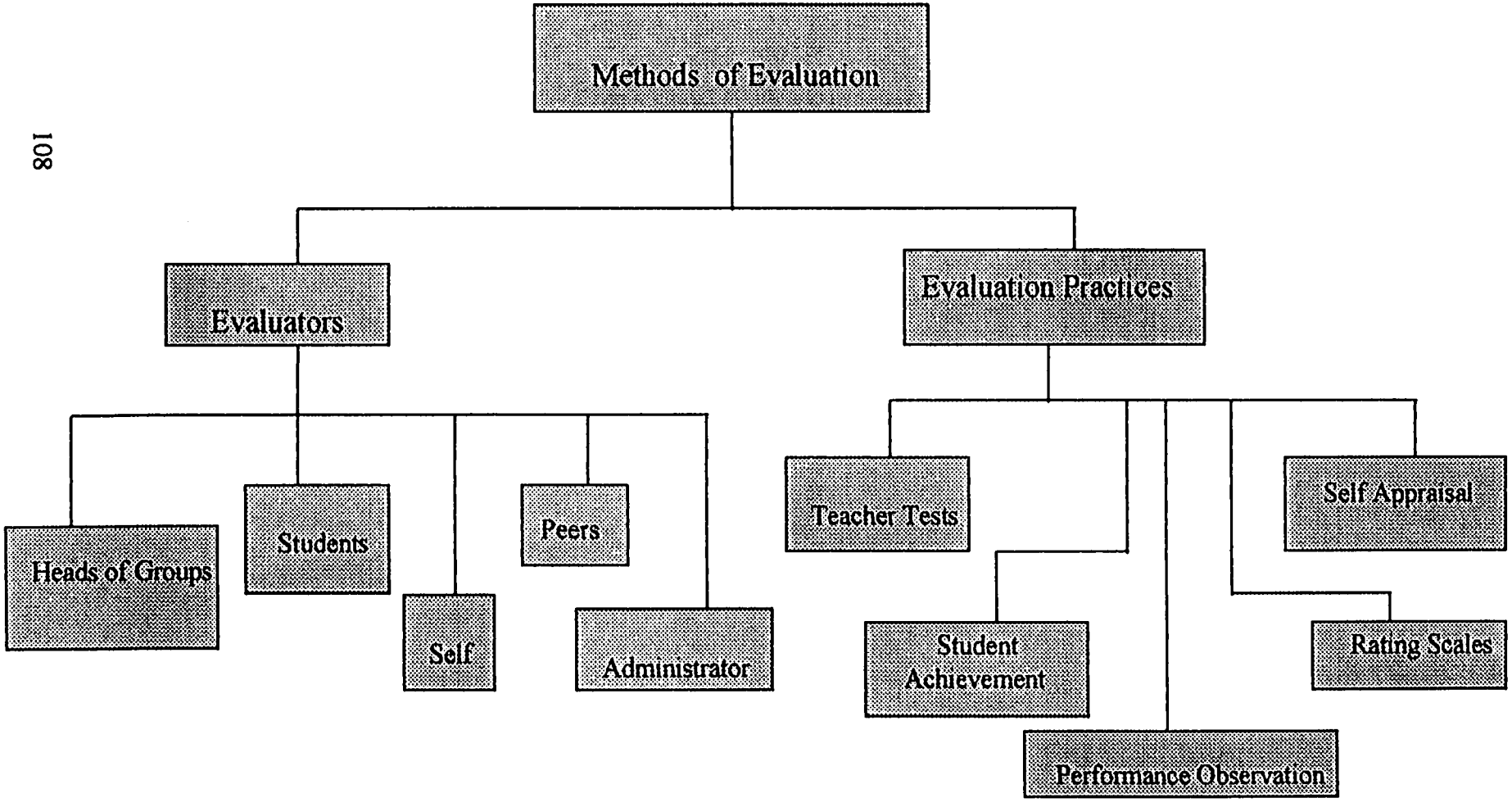
Results of the study indicated that student perceptions regarding the psychological environment, as an element effecting teaching effectiveness, was related to the student's length of time in the nursing program. It would appear that psychological environment plays a more important role for newer students than for those with more experience in the program. This may be related to the fact that other elements of teaching effectiveness take on more importance for more senior students. The other findings related to years in program are interesting but difficult for the researcher to interpret. Obviously, this is an area suggestive of a need for further research.

Methods of Evaluation

Evaluators of Nurse Educator

From the literature, the prevailing view is that the evaluation of each faculty member should be based on the analysis of several sources of data. Each of these sources will be briefly highlighted (Figure 3). Regarding the question of who was and who should be involved in evaluating teaching effectiveness, educators' perceptions show that students were ranked as having the greatest involvement in actual evaluation. However, educators prefer self evaluation as a first choice, with head of group and peers being their second and third choices, respectively. These findings support earlier research (Cadman, 1977) which revealed that administrators were ranked as being the most important source of evaluative input, while the study respondents preferred that input from the educators themselves, from supervisors, and from peers be more important sources than that provided by the administrators. Thus, the findings of this study are consistent with the notion that self evaluation by educators is perceived by all study participants as the preferred method of evaluation.

Figure 3. Methods of Evaluation



Self evaluation is considered by some writers to be of little value (Centra, 1980; Elling, 1984; Seldin, 1984; Van Ort, 1983) and it must be acknowledged that it requires both time and soul searching. The natural tendency to overlook personal weakness can lead to over-rating of one's performance. Finally, an educator who identifies areas that need improvement may not always be aware of sources of help, or may not have administrative support for taking time to use available resources. Self-evaluations are particularly useful when they are combined with information obtained from other sources. Through self-evaluation, educators can identify teaching deficiencies, set goals for themselves, and assess their progress. Improvement through self-evaluation requires that educators perceive themselves as capable of improving and know that resources needed to facilitate improvement are available (Elling, 1984; Iwanicki & McEachern, 1984; Menges, 1984).

Today, the role of the administrator in teacher evaluation remains unclear. It is unlikely that administrators, as a data source, are in the best position to provide objective evidence about teaching performance. There is limited evidence in the literature that administrators are a valid source of information about teacher performance (Applegate, 1981; Sullivan, 1985; Van Ort, 1983; Ward- Griffin & Brown, 1992). As integrators, administrators play a central role in putting together evaluation data. Where evaluative input is obtained from several sources, it is the administrator's responsibility to integrate it and prepare the summary report for the committee considering salary or merit increments, tenure, and promotion matters. The literature seems to be in agreement that administrators have key responsibilities in developing and sustaining an effective system for evaluating teaching effectiveness (Cooper, Field, & Small, 1990).

Responses from the students in this study gave the highest ratings to self evaluation by educators for both actual and preferred involvement in nurse educator evaluation. However, in terms of their current involvement in evaluating teaching effectiveness, students perceived themselves to have the lowest level of involvement, whereas they felt that they should rank second to self evaluation by educators. The degree of actual and

preferred involvement for administrators received the same ranking by educators and students; both groups ranked them third among the five evaluator categories for actual involvement and fifth for preferred involvement.

There is a vast body of literature on the value of student ratings of teaching effectiveness, and it provides evidence of considerable hostility and suspicion on the part of some faculty. It appears that teaching effectiveness is multifaceted and that any instrument which focuses on a single overall score is likely to be inadequate. For instance, an educator who is well organised may not be the best oral communicator. Failure to separate these different components of effective teaching has led to conflicting research findings as well as inadequate information for diagnostic or decision-making purposes (Watkins & Thomas, 1991). Although student evaluation is the most common and frequently the only source of evidence of teacher effectiveness (Applegate, 1981; Dennis, 1990; Menges, 1984; Morton, 1987), the majority of authors support student ratings as one source of data, provided it is not the only source of evaluative information used (Applegate, 1981; Genova et al, 1976; Seldin, 1984).

The study data revealed that educators were the least likely, and students the most likely to rank evaluation by students as the preferred method of evaluation. Students perceive low involvement by students in the faculty evaluation process and desire greater involvement; educators on the other hand, perceive high involvement by students and prefer to have less student involvement. These differences, particularly those concerning "actual participation" are worthy of note and difficult to understand, since both groups are in the same teaching environment reporting on the same process. Differences in the preferences for student involvement are more understandable; student desire for substantial (and increased) involvement is likely to be a reflection of their being directly affected by the process.

A variety of surveys conducted in universities in the United States demonstrate that the importance and use of student ratings have increased dramatically since the late 1950s. Each survey found that classroom teaching was considered to be the most important

criterion in evaluating total faculty performance, though research effectiveness may be more important at prestigious research universities (Dunkin, 1987). The earlier studies found that systematically collected student ratings were among the least commonly used methods of evaluating classroom teaching. In more recent surveys, they are among the most commonly used, and respondents indicate that they should be even more important (Dunkin, 1987; Griffin & Brown, 1992; Marsh, 1984). Today, in more than 1300 published studies addressing the evaluation of faculty, there are a variety of views and opinions about student evaluation of their instructors. These differing beliefs may create a potential source of conflict among administrators, students, and faculty. In addition, interpretation of data by faculty members and administrators who are using (and who are considering) student ratings is often coloured by misconceptions.

There are different misconceptions about student ratings of university faculty that influence how educators view evaluation, and this leads to their preference not to be evaluated by students. Fiction about class size; teacher and student characteristics such as gender, age and personality; high research productivity; heavier assignments; and so on, are examples of these misconceptions. However, different research studies show that these factors have little or no effect on the students' ratings of teaching effectiveness (VanArsdale & Hamnons, 1995). It is surprising that despite ample research evidence on the importance of student evaluation, educators in the faculties participating in this research appeared disinterested in having evaluation by students.

Standard deviations were used as a means of assessing variability in the perceptions of educators and students concerning the degree of actual and preferred involvement by various types of evaluators. The findings indicate that there is consensus among educators and students that peer evaluation is not currently a popular method for evaluating teaching effectiveness. Many authors have recommended that peer evaluation should be a key component in evaluating faculty teaching effectiveness. Despite the proposed advantages of peer evaluation, it remains a controversial method for faculty evaluation (Brannigan & Burson, 1983; Brown & Ward-Griffin, 1994; Harwood & Olson, 1988). It appears that

the success of peer evaluation depends on faculty involvement, short but objective methods of assessment, trained observers, constructive feedback for faculty development, as well as a climate that promotes open communication and trust (Brown & Ward-Griffin, 1994).

Peer evaluation is understood as evaluation of educators by colleagues who are presumed to have competence to evaluate the educators' teaching. Peer evaluation has two aspects, classroom observation and document assessment. Direct classroom observation is an important complement to information gathered indirectly through student rating surveys, alumni surveys, and administrator comments. Document assessment includes the peer's review of course materials and syllabi. This could be helpful to the educator in drafting course outlines, determining relevant content, developing guidelines for assignments, and evaluating examinations (Cooper, Field. & Small, 1990). Evaluation of teaching is integral to assessment by peers but as the literature reveals, the process needs to be collegial, with the educator and peer evaluator taking part in the decision on what should be assessed, and how the assessment should take place (Fink, 1982; McKeachie, 1983; Withall & Wood, 1979). This study has revealed that among educators, there was the least agreement concerning the role which administrators actually play in evaluating teaching effectiveness, and among students, evaluation by educators themselves and by head of group were the areas of greatest dispersion in relation to actual perceptions. This reveals that in relation to some of these types of evaluators there was less knowledge about their current involvement in the evaluation process and perhaps less understanding about the roles they could effectively play in the educator evaluation process.

In terms of preferred involvement, the area of highest consensus among educators was the role which peers should play in evaluating teaching effectiveness, while students consider as highly important the role of students in evaluating teaching effectiveness. It is interesting to note that the standard deviations for most of the preferred evaluators were smaller than those for the actual evaluators, indicating that educators and students were

generally more similar in their perceptions of who should evaluate than in their understanding of the existing involvement of evaluators.

Findings of the study also indicated that statistically significant differences existed for actual perceptions between educators and students for evaluation by students, educators themselves, heads of groups, and administrators. For preferred evaluators, statistically significant differences existed for evaluation by students, peers, and administrators. These findings indicate that the views of educators and students differed with respect to their perspectives about who does and who should conduct evaluation, the knowledge base needed to conduct evaluation, and their expectations about assessment of teaching effectiveness. Also, it is clear that educators and students are quite similar in relation to their preferences about evaluation of teaching effectiveness. Moreover, educators and students tended to agree in their preferences for evaluation by heads of groups and by educators themselves.

Differences were found for both educators and students between actual and preferred extent of involvement in educator evaluation. Except for educators preferences concerning student involvement in educator evaluation, both educators and students preferred more involvement than they perceived by the five types of evaluators.

Types of Evaluators Related to Input, Process, and Output of Teaching

Data were collected about who was and who should be involved in evaluating three different aspects of teaching effectiveness (input, process, output). Findings indicate that educators perceived that heads of groups were most involved in actual input and process evaluation methods, and that educators themselves were most involved in actual output evaluation. In contrast, students rated evaluation by educators themselves as the most common method of input, process, and output evaluation. Educators preferred to evaluate themselves on the input, the process and the output of teaching. Students, however, rated evaluation by heads of groups and student evaluation as preferred methods in relation to input, student evaluation as their preference for process, and student evaluation and

educator self-evaluation as their preference for output evaluation. It is noteworthy that educators assign high ratings to preference for self-evaluation of input, process, and output, whereas students assign high ratings for their own involvement in each of these three aspects of evaluation.

It is interesting that educators emphasized self evaluation, while students saw a greater role for themselves in evaluation of educators. The researcher believes that self evaluation should form a significant component of any appraisal of teaching effectiveness. Such evaluation can enable the development of self reflection by the teacher and thereby improve the quality of the education delivered. The value of other evaluation methods such as student evaluation and peer evaluation should not, however, be forgotten. Hardwood and Olson (1988) propose that peer evaluation needs to be considered as one of the methods within the paradigm of multiple resources to promote faculty teaching effectiveness. Andrusyszyn (1990) suggests that peer evaluation has been "inching its way" to acceptability as an evaluation source.

Although in recent years many faculties of nursing have begun to recognize the viability of peer evaluation as one source of data for evaluating teaching effectiveness, there is still some confusion about the true role of peers in evaluating teaching effectiveness in faculties of nursing in Tehran. Much of the literature on peer evaluation is concerned primarily with evaluation of classroom teaching. Peer evaluation, however, may be equally effective for evaluating different aspects of teaching effectiveness, clinical teaching, and scholarly activities. It can enhance an educator's responsibility for collegial and professional growth through systematic evaluation by an individual of the same rank and profession (Andrusyszyn, 1990). The researcher believes that faculty members are often torn between wanting to be evaluated and the fear of what they will hear in the process. Also, in the faculties of nursing in Tehran it seems that educators and students were unaware of opportunities for peer evaluation in which they could have participated. The important point is that nurse educator evaluation suffers from a lack of good evaluation tools, particularly in the clinical area.

Evaluation Practices

Both current and preferred evaluation practices were examined in the study. The results indicate that performance observation was seen by educators as the most common evaluation method, although they would prefer self appraisal. Students perceived that student achievement was not only the most common method used, but was also their preferred method for evaluating teaching effectiveness. Findings here too suggested that educators prefer self appraisal, while students see a greater role for student involvement.

Studies of teaching effectiveness over the past two decades have yielded descriptive data about the linkages between specific evaluation criteria and student achievement. Results point to a number of specific teacher behaviours that correlate with student achievement. For example, use of learning objectives, effective questioning and answering of questions, giving feedback, and role modelling have been empirically associated with positive student learning outcomes (Brophy & Good, 1986; Rosenshine & Stevens, 1986). A study by Krichbaum (1994) indicated that effectiveness in clinical teaching is quite similar to effectiveness in other settings. Correlations of effective teacher behaviours with two different measures of student learning provided empirical evidence of the kinds of behaviours that nursing educators should develop in order to teach their students effectively. In Krichbaum's study (1994), correlates of cognitive learning measures indicated that specific teacher behaviours enhanced the acquisition of knowledge underlying nursing practice in critical care. Empirical evidence from the study points to the need for further investigation of teacher behaviours that relate to different types of student learning achievements.

Standard deviations were used in the current study to examine the degree of consensus in educators' and students' perceptions about the importance of various actual and preferred evaluation practices. The results provide evidence of consensus among educators that teacher tests and self appraisal are the least often used methods of evaluation. However, students perceive that self appraisal by educators and secondly, rating scales are the most common methods in actual use. In terms of preferred evaluation

practices, educators were more likely to identify self appraisal and student achievement, while students were more likely to mention teacher tests and student achievement. Using self appraisal as a preferred method is consistent with the results of Cadman's (1997) research. Self appraisal typically involves the formal evaluation of one's performance, which is used to supplement performance appraisals by supervisors or others. Self appraisals help nursing educators to gain insight into their own performance. Self appraisals are most effective when used for formative purposes (Korsgaard, 1996; Wood & Mathewman, 1988).

The data from this study indicated that teacher tests and self appraisals have rarely been part of teacher evaluation in Iran. James (1991) asserts that the subjectivity of this type of evaluation leads to reluctance to accept it by many of those involved. There are nonetheless many arguments to support the use of self-appraisal. Protheroe (1990) maintains that educators are constantly evaluating their own performance and thus have the most experience and expertise in this field. They are able to evaluate themselves over a period of time, with different groups of students, and the students' behaviour is not modified by the presence of an observer in the classroom. There is the additional advantage that the process of practising self appraisal may enable the educators to develop reflection skills and thereby become more self-aware and objective in judging their performance (Burke, 1994; Downey, 1991; Duckett, 1991).

Different perspectives (such as symbolic interaction) are inconsistent with a positivist view of education, which suggests that student behaviours and achievement in the educational system should be objectively measured and quantified with the same methods as those used in the physical sciences. Keddie (1973) argues that ability cannot be measured in the same way as indicators such as weight and size, since individuals are able to interpret and change situations in a variety of ways. Therefore interaction processes in the classroom must be analysed in order to understand the ways in which educators and students interpret and give meaning to educational situations (Burke, 1994). The use of only one method would produce a distorted and one-sided picture of the process of

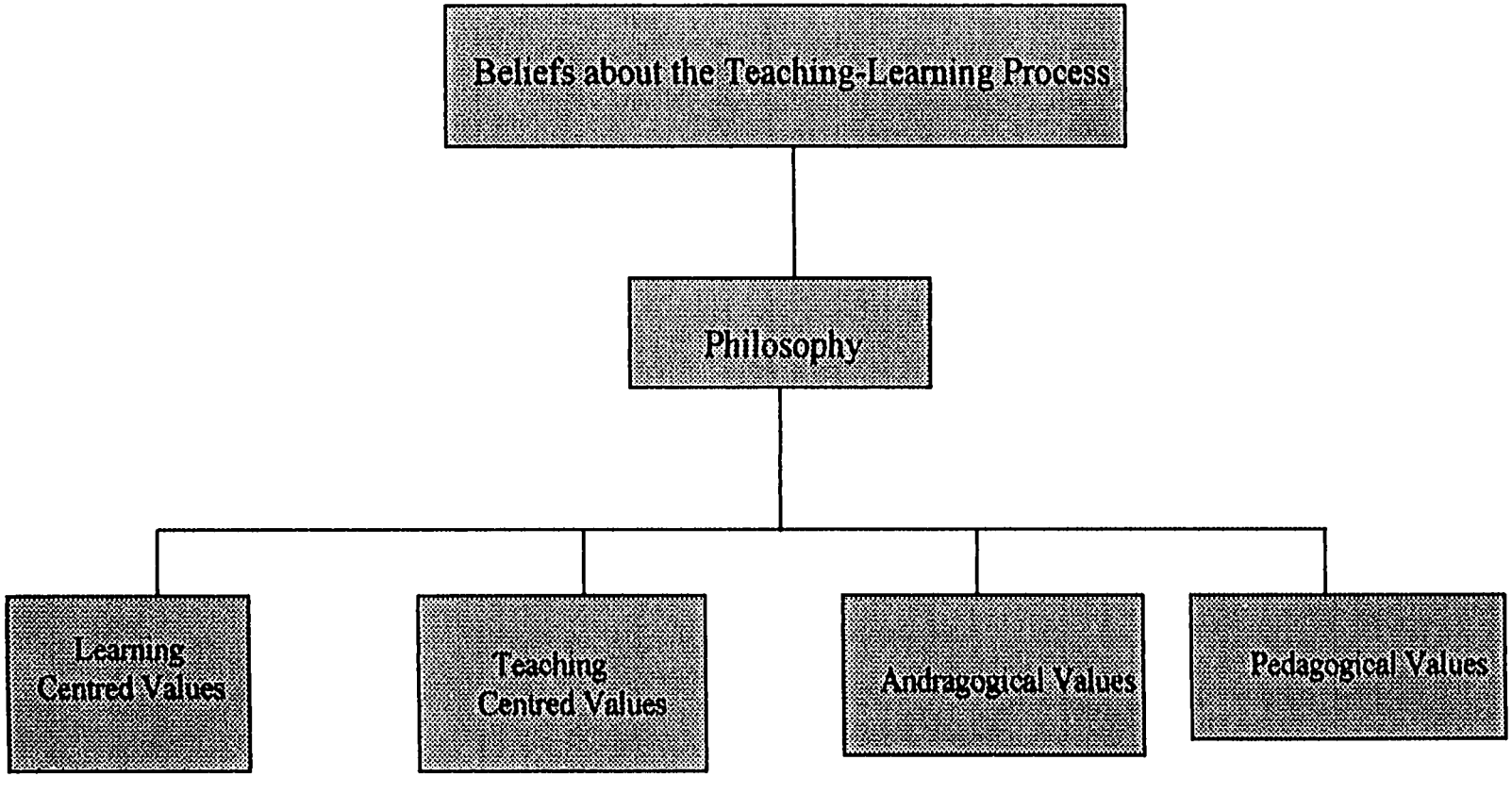
evaluation. The researcher believes that educators themselves are often in the best position to judge the value of the teaching and learning that takes place within the classroom, and must therefore argue for greater input into the evaluation process. As well, other evaluation practices such as student achievement, performance observation, teacher test, and rating scales could be helpful.

In this study, statistically significant but small differences were found between educators and students in perceptions of the actual use of one of the five evaluation practices, the use of rating scales. Similar differences were found for three other evaluation practices: the use of teacher test, student achievement, and rating scales. Since all four differences in means were less than 0.5 on the five point scale and there were no significant differences on the other six comparisons, this suggests similar perceptions between educators and students with respect to actual evaluation practices and preferred evaluation practices. The findings indicate that there were statistically significant differences for all five evaluation practices between the actual and preferred situations both for educators and for students. In all ten cases differences exceeded 1.0 on the five-point scales. It is noteworthy that educators and students preferred great use of all five evaluation practices, particularly self-appraisal and student achievement but also teacher test, rating scales, and performance observation. In all cases the perception of actual use was "some use" or "moderate use" but the preference was for "great use." These results are similar to Cadman's (1977) findings, where a significant difference was found between the actual and preferred situation for each of five data collection practices. Even though the studies were done in different cultures, the results are similar.

Beliefs about Teaching and Learning

The phenomena such as values, norms, and beliefs about the teaching and learning process have some influence on teaching effectiveness that are highlighted in Figure 4.

Figure 4. Beliefs about the Teaching and Learning Process



Beliefs about teaching and learning were examined by ranking the mean scores for each of 14 variables. Results indicated that educators assigned the highest value to "the instructor's role is to facilitate student learning," and the second highest ranking to "respect for students' abilities and experiences." This latter variable was rated by students as the most important, with "the role of instructor in organizing the content and sequence of learning based on students' need" ranking second. Third ranking variables were "the instructor should measure teaching effectiveness by assessing changes in students' attitudes and behaviours" and " instructor should help students choose and develop their own directions for learning," rated by students and educators, respectively. Allen (1985) and Pitts (1985) advise that educators should not treat students as lay persons without valid experiences and abilities, but instead as active, self-aware participants, and creators of new understandings of the human condition. Moccia (1990) emphasizes that nursing education should reflect an understanding of students as whole beings, which implies a necessity to respect their humanity and dignity, and to promote interconnectedness between student and teacher. Effective educators display knowledge and organization of the subject matter, instructional skills, positive attitudes toward working with students, and good interpersonal skills (Eble, 1988; Naeth, 1993). An educator as facilitator guides the student through a discovery or learning process, removes obstacles, and makes the subject matter relevant and easy to assimilate. To facilitate this, educators should create a supportive atmosphere, make the learning practical where possible, encourage active participation in the learning process, and provide plenty of evaluative feedback to students (Naeth, 1993; Tough, 1979). Empirical evidence from this study points to the need for further investigation of educator strategies and behaviours that relate to different types of student learning outcomes. Perhaps what is needed is to have respect for students' abilities, better organization of content in the classroom, and facilitation of students' learning as much as is possible.

In this study, factor analysis was carried out to determine whether two or more variables might cluster in terms of some underlying "factor." Factor analysis is a technique which enables us to determine whether the variables we have measured can be explained

by a smaller number of factors (Norman & Streiner, 1997). Beliefs about teaching and learning in this study basically included three groups of questions: those associated with Philosophy; Andragogy, and Pedagogy, which were all entered into the factor analysis. The results suggested a four factor solution as the most meaningful. The constructs that emerged included 1) *learning-centred values,* where the educator role is to facilitate student learning, 2) *teaching-centred values,* where the educator role is to promote student involvement in learning, 3) *pedagogical values,* where the educator role is to determine learning activities, *and* 4) *andragogical values,* where the educator role is to meet student needs.

Ranking of means and standard deviations were then carried out for each factor (using SPSS), and the results indicated that *learning-centred values* (factor 1) and *teaching-centred values* (factor 2) were important factors in explaining educator's beliefs about the teaching and learning process while factor 2 (*teaching-centred values*) was the most important in the student group. Moreover, significant differences in beliefs between the educator and student groups were found for factors 1 *(learning-centred values*) and 3 (*pedagogical values*).

As implied above, educators were higher on *learning-centred values* and *teaching-centred values*, and students were higher on *teaching-centred values.* The concept of learner-centred education (andragogy) is enabling students to assume full responsibility, with the aid of an acceptant and empathic therapist or mentor, for decisions, actions, and their consequences. The ultimate aim is to help human beings to tap their latent and frequently unused urge for growth en route to becoming self-directed, self-responsible, and autonomous persons. Educators must be aware of, and take into account, the affective needs of the learner as well as the cognitive. The educator-facilitator needs to communicate by words and actions acceptance, trust, and caring for the learners (Dunkin, 1987).

In terms of pedagogy approach, Freire (1987) indicates that pedagogy can be used as a method of establishing control over individuals for essentially political purposes. In such

a pedagogical approach, the teacher "deposits" the information in the student without dialogue, but as Freire notes "knowing is not eating facts." This pedagogical form of education represents adaptation to the world rather than transformation of the world (Cohen, 1993). In the latter, knowledge is no longer static but becomes more personal and valuable, and therefore more consistent with the aims of modern nurse education (French & Cross, 1992). Furthermore, the concept of transformation is also seen as central to the andragogical process (Milligan, 1995).

Results of this study also indicate that educators and students in Iran place more emphasis on teaching-centred values, while they place less stress on pedagogical values. The findings also reveal that there were no statistically significant differences between educators' and students' beliefs concerning teaching-centred values and andragogical values. It is clear that students would like to have nursing education and teaching based on teaching-centred values, and also their experiences appreciated by faculty members. Moreover, educators and particularly students emphasized andragogical values (student-centred education more than teacher-centred education) in the survey.

Burnard (1991) argues that andragogy, in terms of the relationship developed between the student and the facilitator, should in the classroom be similar to what is required in practice. Sweeney (1986) warns that if the traditional asymmetrical power relationship in favour of tutors is not questioned, "clinical practice will further suffer through a mirroring of the asymmetrical power relationship between educator and student in nurse/patient interaction." The importance of focussing on the client in the nurse-patient relationship, and the advantages of mirroring that in the teacher-student dyad, add weight to the usage of andragogy in nursing education. Such consistency, between educational and practice methods, is expounded by Cohen (1993) who suggests that education within nursing must be congruent with the values of caring and reflect the human care paradigm.

It is argued that the theory of andragogy, and its supporting philosophy, methods, and research, are consistent with both the means, and ends of contemporary nurse education. Features of andragogy which Milligan (1995) emphasizes include non-prescription, issue

centredness, problem-solving and knowledge creation, continuous negotiation, shared individual and group responsibility for learning, valuing process as part of learning, equality, trust, openness, care and commitment, mutual respect, and integrated thinking and learning.

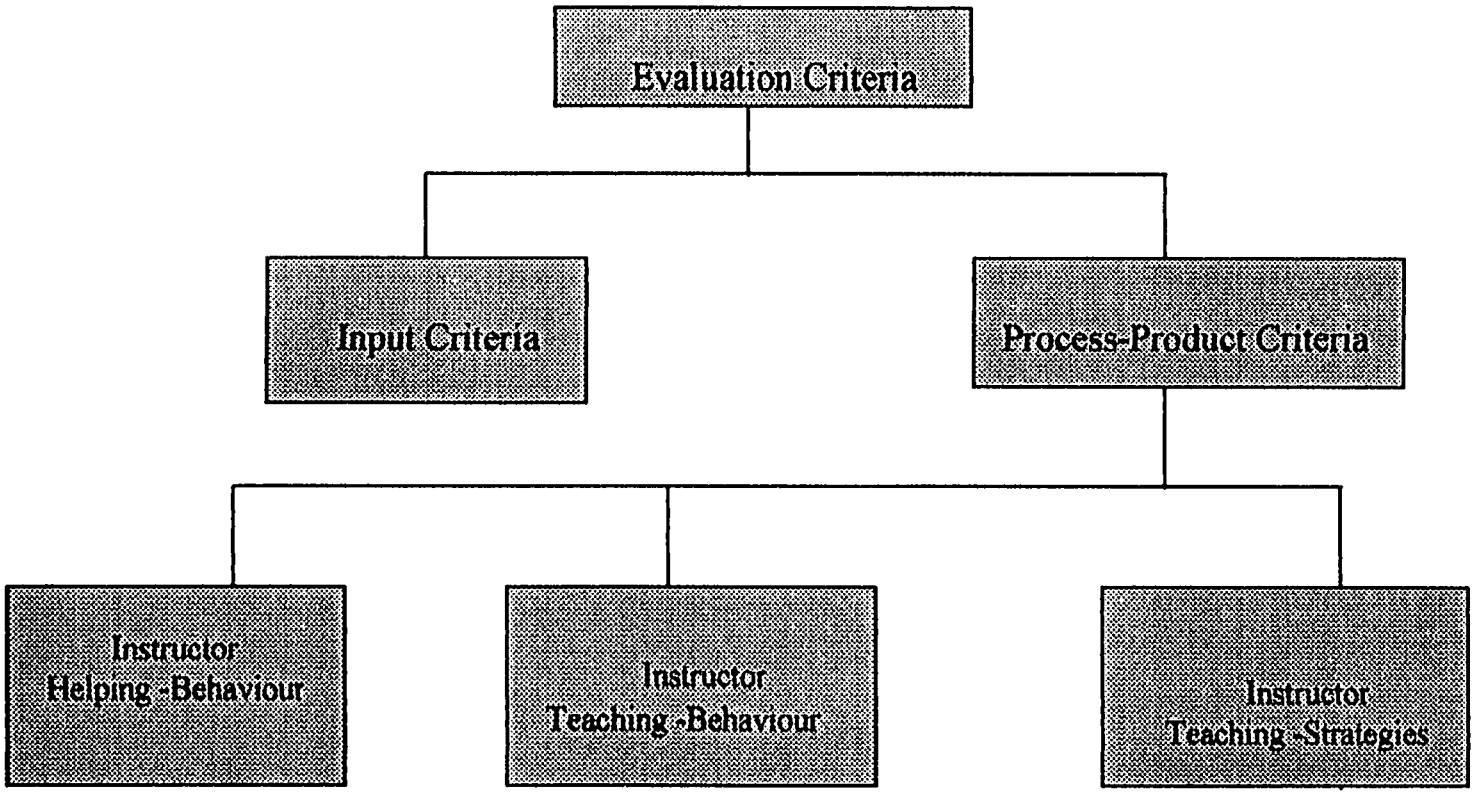
Under the banner of andragogy, a great deal of positive change has been achieved in adult education since the 1960's, and in nursing education in the past decade. The more central role of students in their own educational process is perhaps the best example of this. It is a practical educational theory that, I feel, has meaning for many nurse educators in today's learning environment. We need to reflect critically on our own motivation, and the teaching methods we use, and assess whether it is students' needs we are meeting when we suggest change, or our own. If we wish to be consistent, as educators, with the views and warnings put forward by Freire (1978, 1985, 1987), Jarvis (1985), and Mayo (1993), then we must be politically aware and active in our defence of educational methods that we find useful and appropriate.

Criteria for Evaluating Teaching Effectiveness

It is essential that nursing educators clearly define their criteria for assessing the quality of teaching, and more significantly, how effective teaching might be achieved, recognized, and rewarded. By being clear and explicit about these issues nurse educators can work with their colleagues to shape the "quality ethos" to one that values excellence in teaching. Some criteria that affect the evaluation of teaching effectiveness have been identified and are discussed in this section (Figure 5). In this study, statistical measures were applied to determine how nurse educators and students compared in their perceptions of selected criteria for evaluating teaching effectiveness.

Over 50% of the educators marked the following items as being the most important criteria for evaluating teaching effectiveness. These items are presented in order of importance to educators: (1) *instructor general level of motivation;* (2) *instructor ability to provide clear explanations;* (3) *instructor knowledge of the subject matter;* (4)

Figure 5. Evaluation Criteria



instructor commitment to teaching; (5) *instructor establishes clear goal for courses;* (6) *students' level of motivation;* (7) *instructor management and control of class;* (8) *instructor use of organized materials;* (9) *instructor ability to provide an atmosphere conductive to learning;* (10.5) *instructor use of multiple teaching strategies in the classroom/clinical settings and* (10.5) *instructor ability to improve her/his students' ability to recognize their responsibilities as future members of the nursing profession* were ranked equally; (12) *instructor classroom communication skills;* and finally (13) *time on task.*

According to Seldin (1984) and Van Ort (1983), characteristics of good teaching are reasonably consistent and could be used as evaluative criteria. In Seldin's (1980) study of academic deans' views of effective teaching, five criteria of teaching effectiveness were identified. These included being well prepared for class, motivating students, effective communication, demonstrating comprehensive knowledge, and treating students with respect. In addition to these classroom skills, clinical teachers must possess additional qualities. It is of interest to note that many of the criteria which educators considered important in the current study support Seldin's findings.

At least half of the students in this study ranked the following items as being important indicators of teaching effectiveness, again presented in descending order of significance. These items were as follows: (1) *instructor commitment to teaching;*(2) *instructor knowledge of the subject matter;* (3) *instructor ability to provide clear explanations;* (4) *instructor classroom communication skills;* (5.5) *instructor general level of motivation and* (5.5) *instructor use of organized materials* (ranked equally); (7) *students' level of motivation* (8) *instructor management and control of class;* (9) *instructor ability to provide an atmosphere conductive to learning;*(10) *instructor ability to improve her/his students' ability to recognize their responsibilities as future members of the nursing profession;* and finally (11) *instructor establishes clear goal for courses.*

Educator and student responses were quite similar with respect to the different criteria used for evaluating teaching effectiveness, but varied in the order of importance assigned

to them. It is noteworthy that in this study both educators and students emphasized instructor knowledge of subject matter (ranked 2 by both groups), and clear explanations (ranked 3 and 2) as important criteria for teaching effectiveness, while only knowledge of subject matter was considered significant by students in another study (Money, 1992). Money also found that while educators ranked effective communication as the most important variable, students did not assign the same priority to this variable. In the present study communication skills were ranked 12th by educators and 4th by students. "Ability to motivate" was considered more important by educators than by nursing students in Money's study, (students' level of motivation was ranked 6th by educators and 7th by students in this study), "well-organized materials" was given a higher ranking by students than by the educators (organized materials in the current study was ranked 8th by educators and 5.5 by students), and "classroom control" was not of particular importance to any of her respondents (control of class was ranked 7th by educators and 8th by students).

The literature on student motivation reveals that this variable is significantly and positively related to teaching effectiveness (Melland, 1992). The relationship between teacher behaviour and student achievement has been described. Important aspects of teacher behaviour effectiveness include the ability to organize learning activities according to student needs, provide specific and timely feedback to students based on evidence, and convey a positive and enthusiastic attitude about teaching and learning. Since findings from this investigation corroborate those related to the effectiveness of various teacher behaviours in other contexts, they serve as a guide to clinical teachers in selecting and using behaviours that have been shown to correlate with student learning in nursing (Krichbaum, 1991). Knowledge and expertise, facilitative teaching methods, communication style, use of own experiences, and feedback have also been demonstrated to be important criteria in teaching effectiveness (Krischling, 1995).

Dowson (1986) studied hours of contact and their relationship to students' evaluations of teaching effectiveness. This study was designed to determine if hours of contact with a

teacher influenced students' perceptions of teaching effectiveness. Three hundred forty-one (341) nursing students rated five nursing educators on classroom teaching effectiveness, and one of the five educators on clinical teaching effectiveness. Results indicated a positive relationship between students' ratings of their clinical educator's teaching effectiveness in the classroom and clinical area. The hypothesis that increased contact hours and time on task with an educator would have a positive influence on students' evaluations of educators was supported.

Armington et al (1972) identified the following four characteristics of effective teachers: (1) exhibits enthusiasm about their work, (2) impresses students as being expert in their field, (3) encourages students to think, and (4) are easily accessible to them. In another study by Jacobson (1971) using five university schools of nursing, the data revealed six major characteristics required of effective nursing educators. These include: (1) keeps self available to students; (2) demonstrates own ability as a nurse and teacher; (3) shows skill in interpersonal relationships; (4) demonstrates knowledgeable teaching practices; (5) possesses personal characteristics including honesty, warmth, patience, and calmness; and (6) uses fair evaluation practices. The inconsistencies in findings from the current study and those reported in the literature perhaps reflect the fact that perceptions of educators and students are somewhat different between Iran and other geographic locations, explainable by differences in perspectives, culture, education, etc. At the same time, there are also many similarities between the findings of the current study and those of other studies. This suggests that regardless of context, nurse educators and students in nursing programs in different geographical locations do share many similarities in the criteria that they believe should be used for assessing teaching effectiveness.

This study also sought to determine the degree to which educators and students held common perceptions concerning input, process, and output categories of teaching effectiveness. To determine whether different variables can be grouped together in some meaningful way, factor analysis was used. The factor analysis produced four clusters, three of which (1, 2, and 4) were related to process-product constructs, while the fourth

(3) was an input construct.

The results show identical rankings of evaluation criteria between educators and students (e.g. both groups ranked factor 3 - input in the teaching-learning process - as their first choice). The other factors were ranked in the following order of importance by both groups: factor 2 (instructor teaching behaviour), followed by factor 4 (instructor teaching strategies) and finally factor 1 (instructor helping behaviour).

Valentine (1992) discusses teaching behaviours that are positively related to desired student performance. Five key teaching behaviours have been consistently supported in research conducted over the past two decades. These are: (1) lesson clarity (refers to how clear and interpretable a presentation is to the class and includes both cognitive and oral clarity with a logical, step-by-step order and clear); (2) instructional variety (refers to the variability or flexibility of delivery during a presentation and includes variability in instructional materials, questioning, types of feedback and teaching strategies); (3) task orientation (refers to time devoted to teaching of a topic and means having goals and objectives for each class); (4) engagement in the learning process (refers to maintaining on-task behaviour and limiting opportunities for distraction); and (5) success rate (refers to the rate at which students understand and correctly complete exercises) (Naeth, 1993).

Naeth (1993) indicates that the five teaching behaviours described above can be used in combination with five helping behaviours. These helping behaviours are: (1) use of student ideas and contributions (includes acknowledging, modifying, applying, comparing, and summarizing student responses to promote the goals of a lesson and to encourage student participation); (2) structuring (includes comments made by the instructor to put the present task or topic in context with what is to follow or what has occurred in an earlier part of the course or class period); (3) questioning (includes both content and process questions); (4) probing (refers to instructor statements that encourage students to elaborate upon an answer and can include eliciting, soliciting and redirecting expressions); and (5) teacher affect (includes enthusiasm maintained with vocal inflection, gestures, eye contact, and movement).

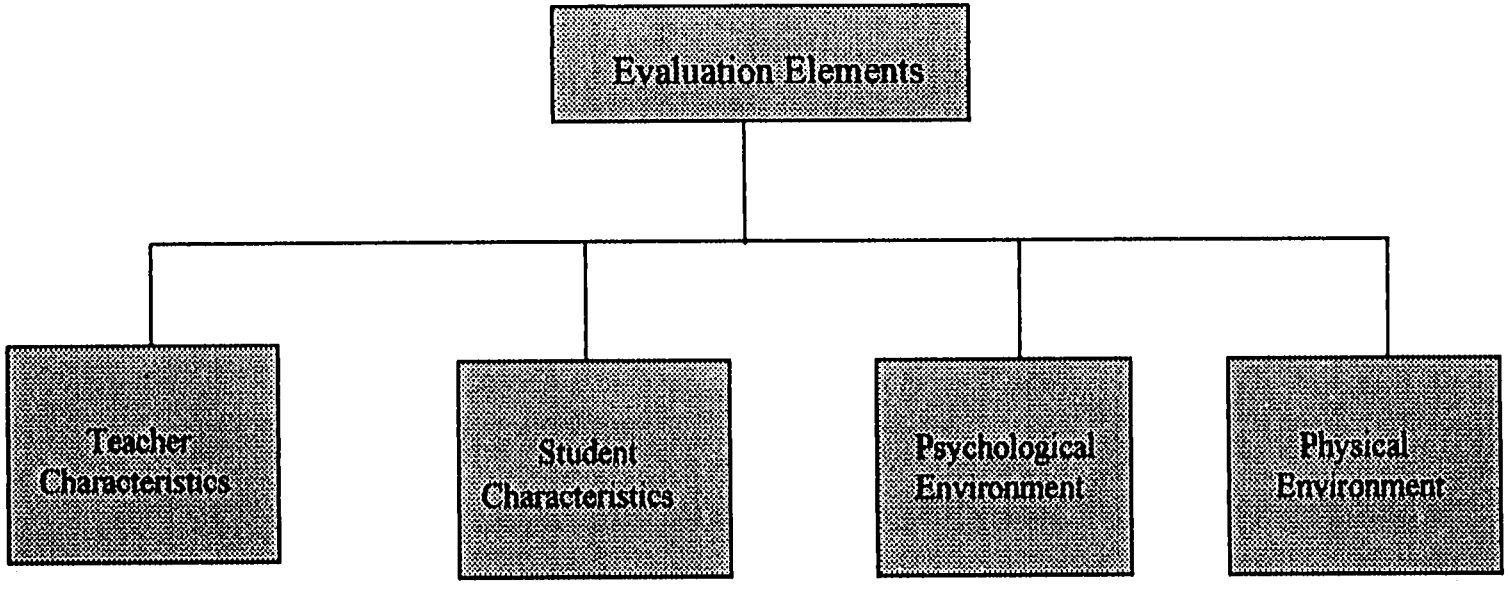
Evaluation Elements

Some elements that may influence the outcomes of educator evaluation are identified in Figure 6. Respondents were asked a series of questions to assess their perceptions regarding the importance of these elements in evaluating teaching effectiveness. Using ranked means, it became obvious that over 50% of the educators marked item 4 (*teacher personality*), item 12 (*psychological environment*), and item 2 (*teacher experience*) as being of very great importance in evaluating teaching effectiveness. Items 2 (*teacher experience*), 12 (*psychological environment*), 5 (*teacher academic rank*), and 4 (*teacher personality*) were chosen by 50% or more of the students as being elements of very great importance in evaluating teaching effectiveness. It is interesting that educators and students had similar views about the elements that were of greatest importance, although they did not necessarily assign them the same ranking. Among educators, teacher personality, psychological environment, teacher experience, and personalities of the students were ranked the four most important elements, in that order. Students considered teacher experience, psychological environment, teacher academic rank, and teacher personality the four most important elements.

The findings of this study are consistent with several studies reviewed in the literature which showed teacher personality (expressiveness/enthusiasm), faculty rank, and psychological environment (Andrews, 1982; Brophy & Good, 1986; Westbury, 1988) as important variables in teaching effectiveness (VanArsdale & Hammons, 1995).

Naeth (1993) mentions that a supportive classroom environment is one in which students and educators feel comfortable and accepted. In this situation they are able to share their ideas and knowledge. To create a positive emotional climate then, students should feel respected, accepted, and valued. It is worth mentioning that although professional rank is emphasized by some authors, others conclude that it has minimal effects on student ratings of teaching effectiveness. In this study, however, this element was rated as "of great importance" (ranked 3) by students. Numerous studies have shown little or no relationship between a student's personality, age, gender, grade point average,

Figure 6. Evaluation Elements (Influencing Evaluation)



or academic level and ratings of teaching effectiveness. Elements that do influence student ratings are expected grades and student motivation (Marsh, 1984; VanArsdale & Hammons, 1995).

A significant difference was found between educators' and students' perceptions for item 5 (teacher academic rank), and item 8 (students' age). Students' age was not considered an important element of evaluation by either group, although educators tended to assign this element a slightly higher ranking (9) than did students (10). Moreover, students assigned greater importance to teacher academic rank than did educators. The differences between educators' and students' perceptions are likely explainable in *terms* of their different perspectives and experiences.

Findings and Discussion Associated with the Deans' Interviews

The purpose of the interviews with the three nursing faculty Deans in Tehran was to have them describe the evaluation process that is used to assess teaching effectiveness in their faculties. The Deans of the University of Tehran and Shahid Beheshte University, and the Associate Dean of Iran University were the three interview participants. In particular, the interviews focused on information provided about the approach to evaluating teaching effectiveness. Seven questions in the interview schedule were used to probe concerns related to the degree of their involvement in evaluating the teaching effectiveness for educators. These questions addressed the processes for evaluating the teaching effectiveness, the strengths and weaknesses of the current approach to evaluating teaching effectiveness, and what the Deans thought should be done to improve teaching in nursing faculties. The researcher also asked the Deans for additional comments.

Interview in Tehran University

In describing the evaluation system in this faculty, the Dean explained that 90% of the evaluation was done by heads of groups and 10% by the Dean herself. However, in 1994 the University of Tehran established an office named "Evaluation Office." The evaluation forms, which are filled out by students, heads of groups, and the Dean are sent to this

office. At the end of year, the results of the different evaluations are sent to the faculty members. This process is systematically carried out. In describing the strengths of the current approach to evaluating teaching effectiveness of nurse educators, the Dean indicated that this systematic approach is very good since each faculty receives teaching effectiveness scores and these scores are the results of evaluations done by different people.

With regard to the main weaknesses of the current approach, she mentioned that most of the educators were not satisfied with student evaluation. They believed that students rate those educators who assign more work or issue low marks, lower than other educators. Also, personal bias may have an impact on the ratings. Other weaknesses of the student ratings involves the time of evaluation. Sometimes, students give higher ratings to faculty prior to than following examinations and marking. Students may not trust educators and perceive that if they rate their educators low, this could affect their grades. That is why these evaluations may not necessarily reflect their actual perceptions.

Regarding how to improve teaching in the nursing faculty, the Dean of the University of Tehran faculty indicated that evaluation should be reflective of each individual faculty member's perception of her/his own positive and negative points. Also, evaluation should be based on fairness and should differentiate between educators who are competent and those who are not. She also stipulated that they have an evaluation committee which is not very active. Peer evaluation is regarded as significant; however, they do not use peer evaluation currently, but may do so in the future. The Dean was given the opportunity in this interview to speculate about what she could envision her faculty doing in the future and what she would recommend for improving the evaluation system. She emphasised systematic evaluation, the importance of evaluation results, support for implementation of an evaluation system that is based on the results of the evaluation, and finally using positive and negative reinforcement in their approach.

Interview in Shahid Beheshte University

The Dean of the faculty at Shahid Beheshte University, revealed that for evaluating teaching effectiveness, educators are appraised by heads of groups, students, colleagues, and the Dean. She emphasised that if educators have a score of less than 80%, they would not retain their teaching position but would be assigned to a clinical position working with nursing students. She also mentioned that they conduct teaching methods sessions periodically and hold workshops on improving the knowledge and teaching skills of educators.

The processes that are used for evaluating the teaching effectiveness of educators, include the "Academic Improvement Committee" that is comprised of the Associate Dean (as the head of committee), and heads of groups or one educator from each group (Medical-Surgical Group, Pediatric Group, Psychiatric Group, Health Group, and Administration Group). This committee is supervised by the Dean. Each member of this committee has different responsibilities. Since the faculty is evaluated by the head of group, students, and peers, each member of the committee prepares different forms and distributes them to different students randomly selected at mid-term and end of term. It is worth mentioning that evaluation by colleagues and head of group are done every six months. After completing the form and analysing the results, one copy is sent to the educator, another copy is forwarded to the head office, and a third is placed in the educator's file. As well, it should be noted that the results of the evaluation are used in determining the educator's rank and so have a direct impact on the educator.

In so far as the strength and weaknesses of this approach are concerned, it was indicated that having an evaluation completed by different individuals is an advantage; however, sometimes misunderstandings occur. It was recognized also that relationships and friendships have some bearing on the rating of educators. In her comments, the Dean emphasised the necessity of choosing educators carefully. Such selection should be based on faculty needs.

Interview in Iran University

The Associate Dean of the faculty at the University of Iran, participated in this interview. The Dean's rationale for not participating was due to the Associate Dean's involvement in the evaluation system of the faculty. The evaluation system entails faculty evaluation by teachers, students, and administrator. These various evaluations are monitored by the Dean or Associate Dean. The purpose of these evaluations are for staff development and ensuring teaching effectiveness.

The evaluation of teaching effectiveness of educators is done primarily by the heads of groups and students. The Associate Dean anticipated that self evaluations would also be done in the next term. Faculty members are evaluated each term by students and heads of groups. The results of the analysis based on different items are submitted to the committee and discussed by committee members. The faculty members include the Dean or Associate Dean, and one representative from each group of nurse educators. This bears some similarity to the evaluation committee at Shahid Beheshte University. The final results of the evaluation are sent to the faculty members as well as to the head office.

In discussing the strengths and weaknesses of the current evaluation system, the Dean emphasised (a) the significance of having different approaches to evaluation by different groups and individuals; and (b) the resistance of faculty members to evaluation by students. For a start, she emphasised the systematic and continuous evaluation as well as staff development as the ultimate goal for the evaluation process. She indicated that all of the individuals should work together, be together, and help each other to improve their awareness and knowledge of the assessment of teaching effectiveness and ultimately to improve their effectiveness as nurse educators.

Summary

The ultimate goal in education should be to provide the best quality educational experiences for all students. Each process implemented in a faculty should contribute toward accomplishing that goal. Implementing an evaluation system that improves student performance and removes incompetent teachers without creating a climate of mistrust and malcontent is one of the most elusive tasks for educational leaders.

Being an effective teacher means being able to get the best out of your students, measured in terms of educational, psychological, and social outcomes (Stephens & Crawley, 1994). To put this in simple terms, if your teaching and your interactive style contribute to improvement on those three important fronts, you are doing your job well. The nursing profession seems to be increasingly concerned with evaluation as part of the accountability issue; however, the literature examined by the researcher indicated that little attention has been paid to the topic of nursing educator evaluation in Iran and elsewhere.

The findings of this study indicate that although educators prefer to have self evaluation and students prefer to have student evaluation, both reported limited use of multiple evaluators and of multiple approaches to the evaluation of teaching effectiveness. However, they preferred the use of multiple approaches. This result was congruent with the literature. Teaching-centred values were viewed as the most common beliefs perceived by educators and by students. Pedagogical values were also seen as the least common beliefs by both groups.

Educators and students reported that all criteria for input, process, and output are of great and very great importance. As well, they shared the same perceptions regarding the use of different criteria for evaluating teaching effectiveness (such as: *instructor knowledge of the subject matter, instructor commitment to teaching, instructor ability to provide clear explanations, instructor general level of motivation*) but varied in the order of importance assigned to them. This result was congruent with some of the literature in North America. Regarding important elements for evaluating teaching effectiveness, the findings of this study were consistent with several studies reviewed in the literature which

indicated that instructor experience, instructor personality, and the psychological environment were important variables in teaching effectiveness perceived by educators and by students. In contrast with the literature, students' perceptions in this study showed that teacher academic rank is an important variable.

The findings revealed statistically significance relationships among perceptions of educators about: the preferred evaluation by heads of groups and level of education (negatively related), amount of clinical experience (positively related), and classroom instructor time (positively related); preferred evaluation by peers and hours worked per week (positively related), classroom instruction time(negatively related), conference presentation (negatively related); actual evaluation by students and age (positively related), articles published (negatively related), and clinical instruction time (positively related).

The findings revealed statistically significance relationships among students about: actual evaluation by administrator and year of the study (negatively related); the preferred evaluation practices through student achievement and satisfaction with the nursing program (positively related); the actual evaluation practices through performance observation and year of the study (positively related); the beliefs about learning-centred values and satisfaction of students with nursing program (negatively related); the psychological environment as an element of evaluating teaching effectiveness and the year of the study (negatively related). Some of these results were congruent with the literature, however, the incongruence where it occurred is not easily understood and requires further exploration.

The results of Deans' interviews indicated that they emphasised the importance of systematic evaluation process and the significance of having different approaches for evaluating teaching effectiveness. Overall results reveal their beliefs regarding the shortcoming of the evaluation system and their desire to improve teaching effectiveness.

CHAPTER 6

Summary, Conclusions, and Implications

In this chapter, the rationale for the study is discussed, the results of the study are summarized, and conclusions and recommendations are provided.

Rationale for the study

Nursing education in Iran has undergone much change since the first training schools for nurses were opened in the 1940s. This variation has been associated with corresponding changes in health care, societal values, and the political environment, both inside and outside the profession. Unfortunately, these factors have not always propelled nurse education in the same direction at the same time, a situation which has made the overall direction of the profession uncertain, and has caused many policies to seem contradictory.

While response to social change is appropriate for a profession which seeks to meet the needs of society, it does reduce the ability of nursing to set its own agenda. Iranian nurses feel now that nursing is in a position to determine its own priorities; the professional status of nursing is established, their expertise respected, and autonomy guaranteed. This complacency, however, could be shaken at any moment. So, in these circumstances, as Reed and Procter (1993) indicated, professional leaders and nurse educators have sought to consolidate and increase the social standing of nursing in the eyes of public. Having become accepted as a respectable occupation, nursing has now turned its attention to professional respectability.

This professional respectability has become almost synonymous with academic respectability and the positioning of nursing education as a highly academic undertaking. What does it mean to become competent as a nurse? Professional competence as Simmons (1993, p. 43) reflects is usually defined "as ability adequate for a specific purpose or

achievement of specific behaviour and outcomes." Nurses and nurse educators are expected to measure performance whether this performance occurs in an examination situation or on the job.

The researcher believes that the nature of competence in nursing is considerably more complex than can be captured in observable, measurable behaviours. However, there are a variety of reasons why we need to evaluate teaching effectiveness and the way we teach nursing students in all types of nursing programs: a) the health care system is not fully meeting the societal needs; b) the student population in these programs is changing; c) the need for caring health professionals has never been more apparent; and d) proponents of the current curriculum revolution are calling for education models that educate rather than train, that are interactive rather than passive, and that emphasize understanding of principles rather than the lockstep execution of procedures. Thus, the ultimate goal in nurse education should be to provide the best quality educational experiences for all students. Each aspect of a nursing education program should contribute toward accomplishing that goal.

For an evaluation system to contribute to that goal, it must promote the professional improvement of each faculty member and, at the same time, provide data sufficient to identify teaching deficiencies. Educators generally resent the need to be reviewed through a process they view as punitive and administrators become frustrated with evaluative procedures that have a negative impact on individual faculty members and on faculty climate. Valentine (1992) contends that implementing an evaluation system that improves personnel performance and removes incompetent educators without creating a climate of mistrust and malcontent is one of the most elusive tasks in education. It must also reward competent performance.

The nursing profession seems to be increasingly concerned with evaluation as part of its accountability. However, the literature indicates that little attention has been paid to the topic of nursing educator evaluation and evaluating teaching effectiveness in Iran as well as in Canada and elsewhere.

Overview of the Study

This study was the first research endeavour regarding teaching effectiveness evaluation in the faculties of nursing in Tehran, the capital of Iran. The purpose of this study was to examine the perceptions of Iranian nurse educators and students concerning actual and preferred evaluation methods, including identification of the beliefs, criteria, and elements for evaluating teaching effectiveness. Interviews with three Deans of nursing faculties provided insight into the evaluation systems in these faculties and the strengths and weaknesses of the different evaluation approaches used.

An exploratory descriptive design was employed. The researcher designed a questionnaire to determine the perceptions of the two categories of participants. Personal interviews were conducted to elicit information from the Deans regarding evaluation policies and procedures. The entire population of nurse educators employed as full time faculty members in nursing faculties of the three universities in Tehran comprised of the study population (approximately 200 educators). A systematic stratified random sampling procedure was used to select a 10% sample of 80 undergraduate students from Tehran University. The entire population of approximately 36 graduate students at that university was asked to participate in this study.

Before distributing the questionnaire (which was translated into Persian), the researcher conducted a pilot study as well. The returns for the main study were 143 questionnaires from educators, 40 from under-graduate nursing students, and 30 from graduate nursing students providing a response rate of 71.5% for educators, 50% for undergraduate students, and 83.33% for graduate students. Data were analysed using parametric and nonparametric statistics to identify perceptions and differences that exist within the Iranian nurse educator group and the student group, and between these two groups of respondents. Frequency and percentage distributions were used to present a preliminary analysis of the personal and professional data collected from the two respondent groups. Ranking of means for both the actual and preferred situations were utilized to determine the extent to which respondents shared common perceptions

concerning the importance of actual and preferred evaluators, evaluation practices, beliefs about the teaching and learning process, evaluation criteria, and elements for evaluating teaching effectiveness.

Standard deviations for different sections of the questionnaire were calculated in order to demonstrate the extent to which study respondents shared common perceptions about different aspects of educators' teaching effectiveness. *t* tests and chi-square tests were used to determine if any of the differences between educators and students in the actual and preferred situations were of statistical significance. Kappa tests were utilized to determine the degree of agreement between the actual and preferred perceptions of educators and students regarding evaluating teaching effectiveness.

A factor analysis was performed in order to determine if the study beliefs and criteria could be classified according to the pedagogical, andragogical, and philosophical approach for beliefs about the teaching/learning process; and input, process, and output criteria for evaluating teaching effectiveness. Multi-linear regressions were utilized to determine the effect of independent variables (demographic data) on the perceptions of the respondents concerning actual and preferred evaluators; evaluation practices; and beliefs, criteria, and elements in evaluating teaching effectiveness. It is anticipated that the results of the study will contribute to the development of improved approaches to the evaluation of nurse educators in Iran. The study also provided a foundation for the investigator's ongoing research in the area of program evaluation in nursing education.

Summary of the Findings

The various analyses revealed the following:

1) The majority of educators in this study were female, between the ages of 40-49, married, prepared at the master's degree level, and were teaching in the baccalaureate program. Also, most of the educators were involved in classroom and clinical education, had 20 years or more of teaching experience and eight years or more of clinical experience. The findings of the study also show that most of the educators were not

involved in the supervision of research nor did they provide evidence of scholarly productivity. The majority of students were female, between the ages of 20-29 years, single, with slightly more than half in the baccalaureate program and the remainer at master's level.

2) Regarding the question of who was and who should be involved in evaluating teaching effectiveness, educators' perceptions show that students were ranked as being the most frequent source of actual evaluation data. However, educators would prefer self evaluation as a first choice, with head of group and peers being their second and third choices, respectively. Responses from the students in this study gave the highest ratings to self evaluation by educators for both actual and preferred involvement in nurse educator evaluation. However, in terms of their current involvement in evaluating teaching effectiveness, students perceived themselves to have the least level of involvement, whereas they felt that their degree of involvement should be second. The degree of actual and preferred involvement for administrators received the same ranking by educators and students. Both groups saw the administrators as the middle group for actual involvement and preferred that their involvement be lowest of the five groups (administrator, educator, student, peer, head of group).

The findings also indicated that the most consensus existed for educators and also for students concerning the actual use of peers to provide evaluative input. The least consensus for educators existed concerning the role that administrators played in evaluating teaching effectiveness and for students it was for educators themselves and for head of group.

For preferred involvement, the most consensus existed among educators for the role which peers should play in providing evaluative input and among students for the role students should play in providing evaluative input. The least consensus existed for both respondent groups concerning the extent of involvement administrators should have. It is important to mention that the standard deviations for each of the preferred evaluators were smaller than those of the actual evaluators with one exception (student ratings for

peer evaluation), indicating that nurse educators and students were more similar in their perceptions of who should evaluate than in their perceptions of the existing involvement of evaluators.

Statistically significant differences existed for actual perceptions between educators and students for evaluation by students (educators $\bar{x}$, 3.65; students $\bar{x}$, 1.66; p, 0.000), self evaluation by educators (educators $\bar{x}$,1.75; students $\bar{x}$, 3.36; p, 0.000), evaluation by head of group (educators $\bar{x}$, 3.48; students $\bar{x}$, 2.93; p, .014), and evaluation by administrators (educators $\bar{x}$, 2.42; students $\bar{x}$, 1.91; p, .032) (Scale used was: 1 = very limited involvement, 2 = some involvement, 3 = moderate involvement, 4 = great involvement, 5 = very great involvement). For preferred evaluators statistically significant differences existed for evaluation by students (educators $\bar{x}$, 2.82; students $\bar{x}$, 4.03; p, 0.000), evaluation by peers (educators $\bar{x}$, 2.88; students $\bar{x}$, 3.58; p, 0.000), and evaluation by administrators (educators $\bar{x}$, 2.81; students $\bar{x}$, 3.23; p, .029). The findings also, indicated that there was no agreement between actual and preferred perceptions of educators and students concerning the five categories of evaluators and statistically significant differences existed when applying the *t* test.

3) With regard to the types of evaluators related to inputs, process, and outputs of teaching, findings revealed that the greatest consensus among educators for perceptions concerning actual evaluators of input criteria was for head of group, while preference was for self evaluation. Students perceived that inputs were evaluated primarily by educators themselves while their preference was for head of group and students to do this type of evaluation. For evaluating the process of teaching, the greatest degree of consensus among educators for actual evaluators existed for head of group while they preferred to have self evaluation. Among students, two-thirds perceived that educators themselves were the actual evaluators while they preferred to have students as the primary evaluators in evaluating the process of teaching. For evaluating the outputs of teaching, the greatest consensus among educators, with respect to actual evaluation, existed for educators themselves. This was also their preference. Students perceived that educators themselves

were the actual evaluators of output, while they preferred to have student evaluation and evaluation by educators themselves.

Findings of this study also indicated that for the actual evaluation of inputs there were statistically significant differences between educators and students on the perceived degree of involvement of students (educators, 25.9%; students, 2.9%; χ^2, 0.00005) and for the preferred evaluators, for evaluation by educators themselves (educators, 64.3%; students, 40.0%; χ^2, 0.0005) and for student involvement (educators, 29.4%; students, 44.3%; χ^2, 0.033). For evaluating the process of teaching within the actual situation, there were statistically significant differences for student evaluation (educators, 39.9%; students, 11.4%; χ^2, 0.00002), evaluation by head of group (educators 44.1%; students, 20.0%; χ^2, 0.0005), and evaluation by educators themselves (educators, 42.7%, students, 65.7%, χ^2, 0.0001). In the preferred situation there were statistically significant differences for evaluation by peers (educators, 28.7%; students, 11.4%; χ^2, 0.004), and by head of group (educators, 42.7%; students, 27.1%; χ^2, 0.02).

For perceptions concerning preferred evaluators of the outputs of teaching, educators and students were in agreement, that is, there were no statistically significant differences between the two respondent groups. For educators the preferences in order of mention were self evaluation by educators (71%), evaluation by students (47%), evaluation by head of group (41%), evaluation by peers (20%), and evaluation by administrator (12%). For students the preferences in order were evaluation by students (60.0%), evaluation by educators themselves (59%), evaluation by head of group (33%), and evaluation by administrator (13%). However, for four of the five evaluator categories there were significant differences between the two respondent groups in their perceptions of actual evaluators of outputs: student evaluation (educators, 41.3%; students, 11.4%; χ^2, 0.00001), educators themselves (educators 49.0%, students, 72.9%, χ^2, 0.0009), head of group (educators, 33.6%; students, 20.0%; χ^2, 0.037), and administrators (educators, 5.6%; students, 0.0%; χ^2, 0.042). Regarding the degree of agreement between actual and preferred situations, the Kappa test indicated that there was just one area of "fair

agreement" and that was for students with respect to the evaluation of inputs by peers.

4) The results regarding evaluation practices indicated that performance observation was seen as the most common evaluation practice as perceived by educators and they were interested in having self appraisal. Students' perceptions indicated that student achievement was seen as the most important method used and were preferred as the method of choice for evaluating teaching effectiveness. It is noteworthy that the means for each of the practices increased from the actual to the preferred situation, indicating that the study participants were in favour of more emphasis being placed on each practice, particularly teacher tests, and self-appraisal for both respondent groups, and student achievement and rating scales for the student respondents.

The findings also indicated that the greatest consensus among educators occurred concerning the actual use of teacher tests and self appraisal both of which were rated the lowest in use. However, students' perceptions with the greatest consensus for actual use were self appraisal by educators and secondly the use of rating scales. The results also indicated that among educators, performance observation had the greatest degree of variance and among students, student achievement and performance observation had the greatest degree of variance. The most commonly shared perceptions among educators concerning the preferred use of evaluation practices were self appraisal and student achievement, and for students it was the preferred use of student achievement, teacher tests, and rating scales. The greatest variance in the educators' perceptions occurred concerning the use of teacher tests and performance observation. However, the greatest variance in the students' perceptions occurred concerning the use of self appraisal by educators and performance observation.

For perceptions of actual evaluation a significant difference was found between the educators and students for evaluation of teaching effectiveness by rating scales. Educators perceived more evaluation using this practice than did students. For preferred evaluation practices differences occurred for use of teacher tests, student achievement, and rating scales. In all three cases students preferred more use of these practices than did educators.

It is important to note that the mean for each of these practices increased from the actual to the preferred situation, indicating that the study participants were in favour of more emphasis being placed on each practice. Regarding the degree of agreement the Kappa test indicated that there was no agreement between actual and preferred perceptions of educators and students for these evaluation practices, and statistically significant differences existed when applying the *t* test.

5) Regarding the importance which various beliefs were given by the respondents, the results show that "*instructor's role is to facilitate students learning*," " *respect for students' abilities and experiences*," and "*instructor should help students choose and develop their own directions for learning,* " were ranked (in order) significantly higher by educators. *The "respect for students' abilities and experiences," "the role of instructor in organizing the content and sequence of learning based on students' need,* " and "*the instructor should measure teaching effectiveness by assessing changes in students' attitudes and behaviours,* " were ranked (in order) significantly higher by students. After completing a factor analysis, four different factors were identified and named: learning-centred values, Teaching-centred values, pedagogical values, and andragogical values. The results of the comparison of means and standard deviations for each factor showed that the learning-centred values and teaching-centre values (factors 1 & 2) were seen as the most common beliefs perceived by educators, and teaching-centred values and andragogical values (factors 2 & 4) were seen as the most common beliefs perceived by students. Also, the most commonly shared perceptions were concerning the learning-centred values and teaching-centred values (factors 1 & 2) perceived by educators and andra-gogical values (factor 4) perceived by students. Statistically significant differences were found between educators' and students' beliefs on factor 1 (learning-centred values) and factor 3 (pedagogical values). In both cases the nurse educators agreed more strongly with these beliefs. That is they held higher learning-centred values and higher pedagogical values. The two groups did not differ on teaching-centred values or on andragogical values. Although they differed significantly on them, both educators and students agreed more strongly with the learning-centred values than with pedagogical values.

6) The results regarding evaluation criteria indicated that educators' and students' responses were quite similar for various criteria, although there were differences in order. Items such as instructor motivation, clear explanation by instructor, instructor knowledge of the subject matter, instructor commitment to teaching, management and control of class, and student motivation were important for both groups of respondents. To determine whether different evaluation criteria could be grouped together, a factor analysis was used. Four factor solutions seemed most suitable. Factor 3 (input in the teaching-learning process) contained some of the items which seemed to represent teaching inputs and factors 1 (instructor helping behaviour), 2 (instructor teaching behaviour: student engagement), and 4 (instructor teaching strategies) contained items which seemed to represent process-product criteria in evaluating teaching effectiveness. Factor 3 was the first choice, factor 2 the second choice, factor 4 the third choice, and finally factor 1 the fourth choice as perceived by educators and students. There were no statistically significant differences between educators' and students' perceptions for these evaluation criteria.

7) Educators and students shared similar perceptions concerning the importance of different elements in evaluating teaching effectiveness although the rank orders were different. Their perceptions indicated that instructor personality, instructor experience, and the psychological environment of teaching were very important in evaluating teaching effectiveness. Significant differences were found between educators' and students' perceptions for instructor academic rank and student age. Students assigned greater importance to instructor rank than did educators, and educators assigned greater importance than did students to student age.

8) Regarding the relationship between demographic data and perceptions of respondents, multiple linear regression was utilized. The findings revealed statistically significance relationships among perceptions of educators about: the preferred evaluation by head of group and level of education (negatively related), amount of clinical experience (positively related), and classroom instruction time (positively related); preferred

evaluation by peers and hours worked per week (positively related), classroom instruction time (negatively related), conference presentation (negatively related); actual evaluation by students and age (positively related), articles published (negatively related), and clinical instruction time (positively related). The results of this study also show that there was a relationship between perceptions of students about actual evaluation by administrator and year of the study (negatively related).

Regarding the effect of independent variables on perceptions concerning evaluation practices the results showed that a statistically significant relationship existed among perceptions of students about the preferred evaluation practices through student achievement and satisfaction with the nursing program (positively related). Also, there was a statistically significant relationship among students' perceptions about the actual evaluation practices through performance observation and year of the study (positively related).

Regarding the effect of independent variables on perceptions concerning beliefs about the teaching-learning process, the results showed that a statistically significant relationship existed among students' perceptions about the learning-centred values and satisfaction of students with nursing program (negatively related).

Regarding the effect of independent variables on perceptions concerning evaluation elements the results indicated that students' perceptions regarding the psychological environment as an element of evaluating teaching effectiveness was related to the year of the study (negatively related).

9) The results of Deans' faculties of nursing in Tehran indicated that there were some advantages and disadvantages in each evaluation system and they were planning to improve it as much as possible. They also emphasised the importance of systematic evaluation process and the significance of having different approaches for evaluating teaching effectiveness.

Regarding the evaluation system in Tehran faculty, the faculty Dean mentioned that

90% of the evaluation is done by head of group and 10% of the evaluation by Dean of the faculty. However, over the past two years, the university of Tehran has established an office named "Evaluation Office."The evaluation forms which are filled out by head of groups, students, and Dean of the faculty are sent to this office. At the end of year, the results of the different evaluations are sent to the faculty members and this process is systematic. She also revealed that most educators are not satisfied with student evaluation.

The Dean of Shahid Beheshte faculty mentioned that the process that are used for evaluating teaching effectiveness of educators include the "Improving Academic Committee" that is comprised of the Associate Dean, heads of groups or one educator from each group. Evaluation by colleagues and head of group are done each six months and educators are appraised by students as well. Associate Dean of Iran faculty revealed that the evaluation system entails faculty evaluation by educators, students, and head of group. These various evaluations are monitored by Dean or Associate Dean. The purpose of evaluation committee is for staff development and ensuring teaching effectiveness. She also indicated that all individuals should work together and help each other to improve their awareness, knowledge, and ultimately teaching effectiveness.

Conclusions

This section presents conclusions based on the findings and suggests implications for nursing education, for practice, and for research. Although different approaches to evaluating teaching effectiveness have been discussed in light of the study findings, these elements warrant special attention for their significance in relation to teaching effectiveness as perceived by educators and students in faculties of nursing in Iran.

The evaluation of teaching effectiveness is a complex process and will never be an easy task nor a totally fair endeavour for any nursing department. The advantages and limitations inherent in any evaluation system are intensified by the variety of roles and responsibilities assumed by nurse educators. As a result, it is most important to obtain a comprehensive and representative picture of the educators' performance from relevant sources. Data collected must be based on criteria, if the evaluation is to have meaning

(Andrusyszyn, 1990; Bell, Miller, & Bell, 1984). The development of a comprehensive faculty evaluation system that strives to distinguish good from superior performance can challenge and stimulate all faculty to strive for meaningful accomplishments that are both rewarding to the individuals being evaluated, and recognized as important in the administrative decision making process.

The findings of this study indicate that:

1) although educators prefer to have self evaluation and students prefer to have student evaluation, both reported limited use of multiple evaluators and of multiple approaches to the evaluation of teaching effectiveness.

2) teaching-centred values were viewed as the most common beliefs perceived by educators and by students. As well, pedagogical values were seen as the least common beliefs by both groups.

3) educators and students reported that all criteria for evaluating inputs, process, and outputs were of great or very great importance. Also, they shared the same perceptions regarding the use of different criteria for evaluating teaching effectiveness but the order differed.

4) important elements for evaluating teaching effectiveness were consistent with several studies reviewed in the literature which showed that instructor personality, instructor experience, and the psychological environment were important variables in teaching effectiveness as perceived by educators and by students. In contrast with the literature, students' perceptions in this study showed that teacher academic rank is an important variable (ranked 3).

5) statistically significance relationships were identified among perceptions of educators about: the preferred evaluation by head of group and level of education (negatively related), amount of clinical experience (positively related), classroom instructor time (positively related); preferred evaluation by peers and hours worked per

week (positively related), classroom instruction time(negatively related), conference presentation (negatively related); actual evaluation by students and age (positively related), articles published (negatively related), and clinical instruction time (positively related).

6) statistically significance relationships were identified among students about: actual evaluation by administrator and year of the study (negatively related); preferred evaluation practices through student achievement and satisfaction with the nursing program (positively related); actual evaluation practices through performance observation and year of the study (positively related); learning-centred values and satisfaction of students with nursing program (negatively related); and the psychological environment as an element of evaluating teaching effectiveness and the year of the study (negatively related). Some of these results were congruent with the literature, however, the incongruence is not easily understood and requires further exploration.

7) the Deans of Faculties of Nursing in Tehran were aware of the shortcoming of the evaluating system and they desire to improve teaching effectiveness. The Deans also emphasised the importance of evaluation, the importance of evaluation results, and having these evaluations done by different individuals. They stressed that systematic and continuous evaluation as well as staff development should be an ultimate goal for the faculty evaluation process.

In conclusion, faculty evaluation has always been a major part of nursing programs. Faculty evaluation must be approached more analytically, objectively, and comprehensively to ensure that all nursing educators receive the fairest evaluation possible. Nurse educators must become more involved and committed to the development and implementation of a better evaluation system. In addition, as Thompson and Crutchlow (1993) mention, educators should keep in mind that nursing is a dynamic profession. Thus, students must be taught to be flexible in the way that they acquire knowledge and in the way that they apply it. A variety of teaching strategies should be used to broaden the students' learning skills and promote flexibility. Furthermore, nursing

faculty should design activities that promote learning in all three domains: cognitive, psychomotor, and affective. Educators must assess factors such as cultural background and value orientation that influence learning in these domains as well.

The changing population of nursing students should also be considered when planning program strategies. This population includes adults choosing nursing as a second career as well as those entering universities for the first time. The rich, diverse experiences of these learners play a significant role in their learning and must be considered when selecting learning methods (Knowles, 1980). Ultimately, the goal of nursing education should be to provide students with the skills for life-long learning. Such skills, as Thompson and Crutchlow (1993) indicated, include the ability to view problems in a variety of ways; gather appropriate information to solve them; and generate alternative solutions. Thus, educators must strive to challenge students beyond their present capabilities by exposing them to new ways of learning. Finally, faculty, students, the educational institution, the health care consumer, and the profession alike will benefit from the educator who demonstrates professional and accountable behaviour.

Implications

The findings of this study have a number of theoretical and practical implications for further research. This study has been conducted to determine the characteristics of effective teaching by nurse educators as described by educators themselves and by students in the three faculties of nursing in Tehran. The researcher is hopeful that the results of this study will contribute to:

1) an increase in nurse educators familiarity with key theories of learning, how learning takes place, and principles and concepts of teaching and learning.

2) an understanding of the degree to which Iranian administrators, educators, and students perceive evaluation of teaching as a concern.

3) an understanding of the degree of agreement and differences in perceptions of nurse

educators and students concerning actual and preferred evaluation strategies.

4) the development of appropriate criteria and methods for the ongoing evaluation of nurse educators in Tehran and elsewhere.

5) an examination of the existing evaluation systems in other situations and other countries.

6) an understanding of the value of evaluation system and development of better nurse educator performance appraisal systems.

7) the determination of the characteristics of effective teaching.

8) nurse educators becoming aware of the preparation required for teaching and the important roles they play in teaching-learning process. Nursing educators must also attempt to bridge the gap between what educators and what students perceive as effective teacher characteristics.

9) nurse educators, in collaboration with nursing administrators, reviewing current evaluation systems to determine the most helpful evaluation system for teaching effectiveness.

10) the overall improvement of teaching and learning in faculties of nursing.

Recommendations for Further Research

On the basis of findings from this investigation, a number of recommendations are offered. Since this study was the first of its kind known to have been conducted in Iran, more empirical research might be carried out in an attempt to either support or refute the conclusions of this study. This study could be replicated in other faculties of nursing and other regions of Iran and elsewhere, to test the perceptions of educators and students in regards to clinical and classroom teacher characteristics (teaching effectiveness).

Further research should be undertaken concerning the role which administrators,

educators, and students could play in evaluating teaching effectiveness in other countries as well as Iran. Also, further investigation into the use of different methods, criteria, and factors in evaluating teaching effectiveness should be undertaken.

A follow-up study could be done to explore further reasons for differences in the characteristics regarded as important for clinical and classroom teachers to possess. Also with the increase of males entering the nursing profession, further studies are needed to explore gender differences in the perceptions of effective educators. The number of male respondents in the current study was too small to allow exploration of gender differences.

Research on the effectiveness of teaching by nurse educators seems to be based on overly simplistic theoretical models. This study confirms that teaching and its assessment are highly complex processes. Research into nurse educator effectiveness would benefit from more sophisticated models than those currently found in the literature.

Since the ultimate goal of any system for assessing the effectiveness of teaching in nurse preparation programs is the improvement of teaching in these programs, this study should be examined by educators and administrators in nursing education for the potential relevance of its findings to their specific context.

Based on the findings of this and other similar studies, educators and students may better appreciate each others' perceptions of what constitutes an effective teacher.

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* * *

APPENDIX A

Evaluating Teaching Effectiveness
A Survey of Faculties of Nursing in Iran
Nurse Educator Questionnaire

Section I. Personal and Professional Data

Please circle the number of the appropriate response.

1. Age
   - Under 30 years ---------- 1
   - 30 - 39 years ----------2
   - 40 - 49 years ----------3
   - 50 or older ----------4

2. Gender
   - Female----------1
   - Male ----------2

3. Marital status
   - Single----------1
   - Married----------2
   - Divorced----------3
   - Widowed----------4

4. Highest level of education
   - Bachelor's Degree---------- 1
   - Master's Degree---------- 2
   - Doctoral Degree ---------- 3

5. Total amount of teaching experience
   - Less than 5 years ---------- 1
   - 5 - 9 years---------- 2
   - 10 - 14 years---------- 3
   - 15 -19 years ---------- 4
   - 20 or more years ---------- 5

6. Total amount of clinical experience
   - 2 years or less ----------1
   - 3 or 4 years ---------- 2
   - 5 or 6 years-------- 3
   - 7 or 8 years -------- 4
   - More than 8 years ----------5

7. Areas of major teaching responsibility
   - Classroom instruction--------- 1
   - Clinical instruction----------2
   - Approximately equal classroom and clinical responsibilities---------3
   - Other-please specify----------4

     ----

8. Type of program in which you presently teach

Undergraduate (BS) ---------1
Graduate (MS) ---------2
Both undergraduate and graduate-------3

9. How many hours per week usually do you work in the faculty?

Less than 30 hours per week ----1
30-36 hours per week ----2
37-42 hours per week-----3
More than 42 hours per week----4

10. What is your position in the faculty?

Instructor ----------1
Head of group ----------2
Director of education ----------3
Director of research ----------4
Other -please specified----------5

11. How satisfied are you with your present position as a member of a nursing faculty?

Not satisfied---------1
Somewhat satisfied----------2
Moderately satisfied ----------3
Quite satisfied ---------4
Highly satisfied----------5

12. How satisfied are you with the present system used to evaluate your teaching effectiveness?

Not satisfied--------1
Somewhat satisfied--------2
Moderately satisfied--------3
Quite satisfied--------4
Highly satisfied-------5

13. How many hours per week on average do you spend in following activities?

Classroom instruction ----------
Clinical instruction ----------
Supervision of research ----------
Preparation for instruction ----------
Other-please specify----------

14. In what types of scholarly activities have you been involved? Please circle all that apply.

Published book (s) ----------
Published article (s) ----------
Conference presentation (s) ---------
Research study (ies) ----------

Evaluating Teaching Effectiveness
A Survey of Faculties of Nursing in Iran

Student Questionnaire

Section I. Personal and Professional Data

Please circle the number of the appropriate response.

1. Age

Under 20 years ----------1
20 - 29 years ----------2
30 - 39 years ----------3
40 - 49 years----------4
50 or older----------5

2. Gender

Female ----------1
Male----------2

3. Marital status

Single ----------1
Married ----------2
Divorced ----------3
Widowed ----------4

4. What degree program are you in ?

Bachelor's----------1
Master's ----------2

5. What is your year of study in the above program?

First year ---------1
Second year---------2
Third year ---------3
Fourth year---------4

6. How satisfied are you with your current nursing program?

Not satisfied--------1
Somewhat satisfied---------2
Moderately satisfied --------3
Quite satisfied ---------4
Highly satisfied ---------5

Section II. Nurse Educator Evaluators

Part A. A variety of individuals may be involved in evaluating the teaching effectiveness of nurse educators in your faculty. Following the example below, please check the response which best indicates your perception of the degree of involvement with which each potential evaluator is actually involved in your faculty (**Actual**) and your perception of the degree of involvement with which each potential evaluator should be involved (**Preferred**) in your faculty.

Example:

Evaluators	A= Actual P=Preferred	Very limited involve-ment	Some involve-ment	Moderate involve-ment	Great involve-ment	Very great involve-ment	Don't know
Students	A P						

The first check mark provided (Actual) indicates that the respondent thinks that there is very limited involvement of students in evaluating the teaching effectiveness of nurse educators in your faculty. The second check mark (Preferred) indicates the respondent's preference for moderate involvement by students in evaluating the teaching effectiveness of nurse educators in your faculty.

Evaluators (Who do and who should evaluate teaching effectiveness)	A=Actual P=Preferred	1. Very limited involve-ment	2. Some Involve-ment	3. Moderate involve-ment	4.Great involve-ment	5.Very great involve-ment	6. Don't know
1. Administrator of nursing program (Dean or associate dean)	A						
	P						
2. Head of group or department	A						
	P						
3. Peers (colleagues)	A						
	P						
4. Nurse educators themselves (Self-evaluation)	A						
	P						
5. Students	A						
	P						

Section II:

Part B. The following list identifies five categories of individuals who may provide feedback on the three aspects of teaching effectiveness evaluation for nurse educators. In the top half of each row please check the response which best indicates your perception of who is actually involved (**Actual**) in evaluating three different aspects of teaching effectiveness. These aspects include: what planning is necessary for effective teacher performance i.e. input; what variables contribute to the act of facilitating learning/teaching i.e. process; and what outcomes indicate whether the desired/hoped for learning has occurred i.e. output. In the bottom half of each row check your preference (**Preferred**) for the type of nurse educator who, in your opinion , should be involved in that type of evaluation.

Aspects of teaching effectiveness evaluation	A=Actual P=Preferred	Administrator	Heads of groups	Peers	Self	Students
Input: Preparation for class, characteristics of educators, experience in teaching, and learning environment (e.g.,instructor's formal preparation for teaching; knowledge of subject matter; organization of teaching materials; etc)	A P					
Process: Those factors which promote or inhibit teaching-learning interaction (e.g., teacher enthusiasm; teacher clarity; active learning time; etc)	A P					
Output: Those factors which indicate the results of the teaching-learning interaction (e.g., giving students criticism in an appropriate manner; evaluating students based on course objectives; etc)	A P					

Section III. Evaluation Practices

The following presents a range of practices which may be utilized in gathering information for evaluating nurse educators. For each practice, please check the response which indicates your perception of the current degree of use (Actual) in evaluating the teaching effectiveness of nurse educators in your faculty, and also check the degree of use that, in your opinion, should be made (Preferred) of that practice in evaluating the teaching effectiveness of nurse educators.

Description of evaluation practices	A= Actual P=Preferred	1. Very limited use	2. Some use	3.Moderate use	4 Great use	5. Very great use	6. Don't-know
1. Performance observation: observers watching educators in the work setting and recording what they do, and evaluating now	A						
	P						
2. Rating scales: comparing specific traits, skills, or behaviours of the teacher being evaluated(with norms, or with other criteria)	A						
	P						
3. Student achievement: appraising an educator by assessing the amount of progress made by her/his students	A						
	P						
4. Teacher tests: using standardized tests to gather information about specific teacher abilities	A						
	P						
5. Self-appraisal: using methods, techniques, materials, and tools (used by educators) to gain evaluative data about their own growth and development as educators	A						
	P						

Section IV: Beliefs about Teaching and Learning

In the following two pages a number of beliefs about teaching and learning are listed. Please check the response that best represents the degree of your personal agreement with each of these belief statements.

Belief Statement	1.Strongly disagree	2.Disagree	3. Undecided (neutral)	4. Agree	5. Strongly agree
1. The instructor should focus on what is sure, reliable, and lasting (i.e. facts)					
2. The instructor's role is to facilitate student learning					
3. The instructor should focus on intellectual development: the understanding of ideas (concepts)					
4. The instructor should promote active student participation in deciding what is to be learned and how					
5. The instructor should organize the content and sequence of learning activities based on students' needs					
6. The instructor should measure teaching effectiveness by assessing changes in students' attitudes and behaviours					

Belief Statement	1. Strongly disagree	2. Disagree	3. Undecided (neutral)	4. Agree	5. Strongly agree
7. The instructor's role is to evaluate students' achievements and assign grades					
8. Students are good sources of ideas for improving teaching and learning					
9. The instructor should show each student that her/his abilities and experiences are respected and valued					
10. The instructor should help students choose and develop their own directions for learning					
11. The instructor should be mainly a transmitter of knowledge in the classroom					
12. The instructor should make the decisions about what is to be taught, when, and how					
13. The instructor should inspire students to create their own learning activities and materials rather than always provide them					
14. The instructor should develop a systematic plan for the course and stick to it					

Section V. Evaluation Criteria

In the following five pages, criteria are listed that may be used in evaluating teaching effectiveness. For each criterion, please check the response which indicates your perception of the degree of importance of each in evaluating the teaching effectiveness of nurse educators.

Criteria	1. Very limited importance	2. Some importance	3.Moderate importance	4. Great importance	5. Very great importance	6. Don't know
1. Instructor knowledge of the subject matter						
2. Instructor involvement in research						
3. Instructor commitment to teaching						
4. Instructor establishes clear goal for courses						
5. Instructor general level of motivation						
6. Students' level of motivation						
7. Students' general ability in class						

Criteria	1. Very limited importance	2. Some importance	3.Moderate importance	4. Great importance	5. Very great importance	6.Don't know
8. Instructor ability to provide clear explanations						
9.Time-on-task (active learning time in class)						
10. Instructor flexibility						
11. Instructor sensitivity to student difficulties						
12. Instructor ability to provide an atmosphere conducive to learning						
13. Instructor sharing of personal experience with students						
14. Students' level of success in meeting course requirements						
15. Instructor evaluation of students based on course objectives						
16. Instructor classroom communicatio n skills						

Criteria	1. Very limited importance	2. Some importance	3.Moderate importance	4. Great importance	5. Very great importance	6. Don't know
17. Instructor use of organized materials						
18. Instructor ability to inspire student participation						
19. Instructor management and control of class						
20. Instructor use of multiple teaching strategies in the classroom /clinical setting						
21. Instructor enthusiasm						
22. Instructor availability outside of class						
23. Instructor ability to improve her/his students ability to become self-directed in learning						
24. Instructor ability to provide clear course expectations						

Criteria	1. Very limited importance	2. Some importance	3.Moderate importance	4. Great importance	5.Very great importance	6. Don't know
25. Instructor ability to inform students of their progress						
26. Instructor ability to give students criticism in an appropriate manner						
27. Instructor ability to enhance her/his students problem-solving skills						
28. Instructor ability to enhance her/his students ability to relate theory to nursing practice						
29. Instructor ability to enhance her/his students ability to provide individualized nursing care						
30. Instructor ability to enhance her/his students ability to recognize their specific strengths and limitations						

Criteria	1. Very limited importance	2. Some importance	3. Moderate importance	4. Great importance	5. Very great importance	6. Don't know
31. Instructor ability to improve her/his students ability to recognize their responsibilities as future members of the nursing profession						

Section VI. Evaluation Elements

Following are a number of elements which may influence the outcome of the evaluation of teaching. Please check the response which best indicates your perception of the degree of importance each of these elements should have in evaluating the teaching effectiveness of nurse educators.

Elements influencing evaluating teaching effectiveness	1. Very limited importance	2. Some importance	3.Moderate importance	4. Great importance	5. Very great importance
1. Teacher age					
2. Teacher experience					
3. Teacher gender					
4. Teacher personality					
5. Teacher academic rank					
6. Previous level of academic achievement of the students					
7. Personalities of the students					
8. Students age					
9. Students gender					
10. Student education level					
11. Physical environment (e.g., class size, time of day)					
12. Psychological environment (e.g., friendliness between teacher and students, teacher caring and support					

Interview Schedule For Dean Of Nursing Faculty

The items in the interview schedule were selected from items on the survey instrument. The following items will be used in interviewing the deans of the nursing faculties:

1) What involvement do you have in evaluating the teaching effectiveness of nurse educators in your faculty?

2) What system or processes are used for evaluating the teaching effectiveness of nurse educators in your faculty? (please describe it).

3) What would you say are the strengths of the current approach to evaluating the teaching effectiveness of nurse educators in your faculty?

4) What are the main weaknesses of the current approach?

5) What do you think should be done to improve teaching in nursing faculties?

6) What do you think should be done to improve the evaluation of the teaching effectiveness of nurse educators in your faculty?

Prompt: Do you use student evaluations or peer evaluations currently?

Do you feel that greater use should be made of student evaluations or peer evaluations? Why? Or why not?

7) Comments

Do you have any additional comments?

Dear Participant,

Evaluation of nurse educators may be a topic of concern to you. The purpose of this study is to examine the perceptions of Iranian nurse educators and students about the actual and preferred evaluation methods, including identification of the criteria for evaluating teaching effectiveness. The purpose of the attached questionnaire is to obtain input concerning your perceptions of the process for evaluating nurse educators as it is now and how you think it should be. The questionnaire is being circulated to Iranian nurse educators who have teaching responsibilities at the graduate and undergraduate level. Also, about fifty students at different levels and grades (BSc and MSc) will participate in this study. The data received will be analysed and a thesis prepared. The thesis will be available in the University of Tehran Nursing Faculty Library once the study is completed.

I would ask your assistance in completing the questionnaire and returning it in the envelope which is enclosed. The questionnaire should take approximately 45 minutes of your time to complete. I hope the results of the study will be of some value to you and I am willing to present the results of the study in seminar and workshop.

I am looking forward to receiving your completed questionnaire within two weeks. If you wish further information, or wish to receive a summary of results when the study is done, please contact the researcher at the following phone number.

Mahvash Salsali
BSc, MSc, and PhD Candidate
T: (021) 7816131

Dear Colleague

This is a brief memo to students seeking their assistance. The research title is Evaluating Teaching Effectiveness: A Survey of Faculties of Nursing in Tehran. This questionnaire will be translated into Persian. I will have a pilot study in Iran as well. Please give me your feedback on the following:

1) Clarity of questionnaire
2) Time to complete (I have estimated 45 minutes for each questionnaire)
3) What is your advice about the turn around time. Should I ask them to return in two weeks or some other specified time or as soon as possible?

I appreciate your cooperation
Mahvash Salsali

APPENDIX B

Table 1. Summary of personal and professional variables for educators (N= 143)

Variables		Categories			
		>30 years	**30 -39**	**40 - 49**	**50 or older**
Age	f	___	59	73	10
	%		41.5	51.5	7.1
		Female	**Male**		
Gender	f	132	11		
	%	92.3	7.7		
		Single	**Married**	**Divorced**	**Widowed**
Marital Status	f	28	108	2	3
	%	19.6	75.5	1.4	2.1
		BSc	**MSc**	**PhD**	
Highest level of education	f	13	127	3	
	%	9.1	88.8	2.1	
		>10 years	**10 -19**	**20 or more**	
Total amount of teaching experience	f	44	58	41	
	%	30.8	40.6	28.6	
		>5 years	**5-8 years**	**more than 8 years**	
Total amount of clinical experience	f	50	29	56	
	%	37.0	21.5	41.5	
*		**Classroom Instruction**	**Clinical Instruction**	**Classroom & Clinical equal**	**Other Responsibility**
Areas of major teaching responsibility	f	4	4	133	55
	%	2.8	2.8	94.3	38.5
		BSc	**Both BSc & MSc**		
Type of program for teaching	f	91	49		
	%	65.0	35.0		
		>30 hr	**30 -36 hr**	**37 -42 hr**	
Hours worked Per week	f	9	54	78	
	%	6.4	38.3	55.3	

Table 1. (Continoused). Personal and professional variables for Educators (N = 143)

Variables		Categories			
		Instructor	**Other positions**		
Position in the faculty	f	124	18		
	%	87.3	12.7		
		Not or Somewhat	**Moderately**	**Quite**	**Highly**
Satisfaction with present position	f	35	36	40	32
	%	24.5	25.2	28.0	22.4
		Somewhat	**Moderately**	**Quite**	**Highly**
Satisfaction with present evaluation system	f	21	38	39	42
	%	15	27.1	27.9	30.0
		None	**Up to 3 hours**	**4 - 6**	**7 or more**
Hours per week in classroom instruction	f	16	39	56	30
	%	11.3	27.7	39.7	21.3
		None	**2 - 18**	**19 - 28**	**30 -50**
Hours per week in clinical instruction	f	25	42	34	37
	%	18.1	30.4	24.6	26.8
		None	**1 - 10**		
Hours per week in supervision of research	f	110	27		
	%	80.3	19.7		
		None	**2 - 8**	**10 - 30**	
Hours per week in preparation for instruction	f	61	45	30	
	%	44.9	33.1	22.1	
Published book		**Yes**	**No**		
	f	36	107		
	%	25.2	74.8		

Table 1. (Continoused). Personal and professional variables for Educators (N = 143)

Variables		Categories	
Published articles		**Yes**	**No**
	f	77	66
	%	53.8	46.2
Conference presentation		**Yes**	**N0**
	f	95	48
	%	66.4	33.6
Reseach studies		**Yes**	**No**
	f	66	77
	%	46.2	53.8
Scholarly activities	0 of the above activities		N= 15 (11%)
	1 of the above activities		N= 45 (32%)
	2 of the above activities		N= 37 (26%)
	3 of the above activities		N= 30 (21%)
	All of the above activities		N= 16 (11%)

Note:
*Total exceeds 100% because some respondents had other responsibilities in addition to classroom or clinical instruction.

Because of missing data some row totals are less than 100%.

Table 2- Personal and professional variables for students (N = 70)

Variable		Categories		
		29 years or less	**30 years or more**	
Age	f	52	18	
	%	74.3	25.7	
		Female	**Male**	
Gender	f	56	14	
	%	80.0	20.0	
		Single	**Married**	**Widowed**
Marital	f	43	26	1
Status	%	61.4	37.1	1.4
Degree		**BSc**	**MSc**	
Program	f	43	27	
	%	61.4	38.6	
		1 -3 year	**4 years**	
Year of	f	39	29	
Study	%	57.4	42.6	
		Somewhat Satisfied	**Moderately**	**Highly**
Satisfaction with nursing program	f	27	20	23
	%	38.6	28.6	32.9

Table 3- Frequency, percentage, mean, and standard deviation distributions of nurse educator evaluators (Educators & Students) (Actual & Preferred)

Variable	Participant	1-Very Limited Involvement f(%)		2-Some Involvement f(%)		3- Moderate Involvement f(%)		4-Great Involvement f(%)		5- Very Great Involvement f(%)		6- Do not know & Missing f(%)		Mean		Standard Deviation	
		A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P
Administrator Evaluation	Educators	44	26	17	20	17	41	15	23	14	13	36	20	2.42	2.81	1.46	1.26
		30.8	18.2	11.9	14.0	11.9	28.7	10.5	16.1	9.8	9.1	25.2	14.0				
	Students	27	9	7	4	9	22	1	19	4	9	22	7	1.91	3.23	1.26	1.21
		38.6	12.9	10.0	5.7	12.9	31.4	1.4	27.1	5.7	12.9	31.4	10.0				
Heads of groups Evaluation	Educators	10	7	18	5	32	32	39	38	31	45	13	16	3.48	3.85	1.21	1.11
		7.0	4.9	12.6	3.5	22.4	22.4	27.3	26.6	21.7	31.5	9.1	11.2				
	Students	15	3	11	5	14	17	7	16	15	21	8	8	2.93	3.75	1.50	1.15
		21.4	4.3	15.7	7.1	20	24.3	10.0	22.9	21.4	30	11.4	11.4				
Peers Evaluation	Educators	54	7	37	42	20	58	9	28	2	6	21	2	1.91	2.88	1.02	0.92
		37.8	4.9	25.9	29.4	14.0	40.6	6.3	19.6	1.4	4.2	14.7	1.4				
	Students	24	11	20	18	13	23				13	13		1.80	3.58	0.78	0.99
		34.3	15.7	28.6	25.7	18.6	32.9	------	------	------	18.6	18.6	------				
Self Evaluation	Educators	87	5	9	2	11	23	6	43	11	56	19	14	1.75	4.10	1.31	1.01
		60.8	3.5	6.3	1.4	7.7	16.1	4.2	30.1	7.7	39.2	13.3	9.8				
	Students	11	2	8	1	13	17	9	17	22	28	7	5	3.36	4.04	1.50	1.02
		15.7	2.9	11.4	1.4	18.6	24.3	12.9	24.3	31.4	40	10.0	7.1				
Students Evaluation	Educators	19	26	9	18	18	52	29	18	50	15	18	14	3.65	2.82	1.44	1.23
		13.3	18.2	6.3	12.6	12.6	36.4	20.3	12.6	35.0	10.5	12.6	9.8				
	Students	41	1	13		7	21	3	19	2	26	4	3	1.66	4.03	1.04	0.92
		58.6	1.4	18.6	----	10.0	30.0	4.3	27.1	2.9	37.1	5.7	4.3				

Table 4- Frequency and percentage distributions for aspects of teaching effectiveness evaluation (Educators & Students)

Variable	Participants	Missing Data f(%)	Administrator f(%)		Heads of Groups f(%)		Peers f(%)		Self f(%)		Students f(%)	
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Input	Educators	3	11	129	71	69	16	124	68	72	37	103
		2.1	7.7	90.2	49.7	48.3	11.2	86.7	47.6	50.3	25.9	72
(Actual)	Students	2	6	62	31	37	10	58	42	26	2	66
		2.9	8.6	88.6	44.3	52.9	14.3	82.9	60	37.1	2.9	94.3
Input	Educators	3	18	122	76	64	44	96	92	48	42	98
		2.1	12.6	85.3	53.1	44.8	30.8	67.1	64.3	33.6	29.4	68.5
(Preferred)	Students	1	16	53	32	37	14	55	28	41	31	38
		1.4	22.9	75.7	45.7	52.9	20	78.6	40	58.6	44.3	54.3
Process	Educators	3	9	131	63	77	11	129	61	79	57	83
		2.1	6.3	91.1	44.1	53.8	7.7	90.2	42.7	55.2	39.9	58.0
(Actual)	Students	1	3	66	14	55	5	64	46	23	8	61
		1.4	4.3	94.3	20	78.6	7.1	91.4	65.7	32.9	11.4	87.1
Process	Educators	3	15	125	61	79	41	99	90	50	65	75
		2.1	10.5	87.4	42.7	55.2	28.7	69.2	62.9	35	45.5	52.4
(Preferred)	Students	1	12	57	19	50	8	61	35	34	41	28
		1.4	17.1	81.4	27.1	71.4	11.4	87.1	50	48.6	58.6	40
Out put	Educators	3	8	132	48	92	11	129	70	70	59	81
		2.1	5.6	92.3	33.6	64.3	7.7	90.2	49	49	41.3	56.6
(Actual)	Students	1		69	14	55	5	64	51	18	8	61
		1.4	—	98.6	20	78.6	7.1	91.4	72.9	25.7	11.4	87.1
Out put	Educators	3	17	123	58	82	29	111	101	39	67	73
		2.1	11.9	86.0	40.6	57.3	20.3	77.6	70.6	27.3	46.9	51
(Preferred)	Students	1	9	60	23	46	11	58	41	28	42	27
		1.4	12.9	85.7	32.9	65.7	15.7	82.9	58.9	40	60	38.6

Table 5- Frequency, percentage, mean, and standard deviation distributions for evaluation practices (Actual & Preferred) (Educators & Students)

Variable	Participants	1-Very limited use f (%)		2- some use f(%)		3-Moderate use f(%)		4- Great use f(%)		5-Very Great Use f(%)		6- Do not know & Missing f(%)		Mean		Standard Deviation	
		A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P
1- Performance Observation	Educators	40	7	14	10	25	19	25	51	19	38	20	18	2.74	3.82	1.48	1.12
		28.0	4.9	9.8	7.0	17.5	13.3	17.5	35.7	13.3	26.6	14	12.6				
	Students	21	1	10	1	25	21	9	21	2	20	3	6	2.41	3.90	1.15	0.92
		30.0	1.4	14.3	1.4	35.7	30	12.9	30	2.9	28.6	4.3	8.6				
2- Rating Scales	Educators	40	8	23	2	29	24	13	58	13	34	25	17	2.45	3.85	1.35	1.04
		28.0	5.6	16.1	1.4	20.3	16.8	19.1	40.6	19.1	23.8	17.5	11.9				
	Students	23		15	3	14	9	3	24	2	28	13	6	2.05	4.20	1.09	0.85
		32.9	------	21.4	4.3	20	12.9	4.3	34.3	2.9	40	18.6	8.6				
3- Student Achievement	Educators	34	5	26	5	28	18	23	55	15	60	17	10	2.67	4.05	1.36	1.002
		23.8	3.5	18.2	3.5	19.6	12.6	16.1	38.5	10.5	35.0	11.9	7.0				
	Students	20		11	1	20	5	11	22	2	40	6	2	2.43	4.48	1.19	0.70
		28.6	----	15.7	1.4	28.6	7.1	15.7	31.4	2.9	57.1	8.6	2.9				
4-Teacher Test	Educators	76	10	21	4	11	21	7	51	4	44	24	13	1.67	3.88	1.08	1.14
		53.1	7	14.7	2.8	7.7	14.7	4.9	35.7	2.8	30.8	16.8	9.1				
	Students	38		8	2	4	9	4	20	2	35	14	4	1.64	4.33	1.11	0.82
		54.3	---	11.4	2.9	5.7	12.9	5.7	28.6	2.9	50	20	5.7				
5- Self - Appraisal	Educators	79	2	16	2	15	15	6	48	6	67	21	9	1.72	4.31	1.15	0.84
		55.2	1.4	11.2	1.4	10.5	10.5	4.2	33.6	4.2	46.9	14.7	6.3				
	Students	25	3	17	2	10	7	1	21		34	17	3	1.75	4.20	0.83	1.05
		35.7	4.3	24.3	2.9	14.3	10.0	1.4	30	-----	48.6	24.3	4.3				

Table 6- Frequency, percentage, mean, and standard deviation distributions for beliefs about teaching and learning (Educators & Students)

Beliefs	Participants	Strongly Disagree f (%)	2- Disagree f (%)	3-Undecided f (%)	4- Agree f (%)	5- Strongly Agree f (%)	6- Missing & Do not know f (%)	Mean (Rank)	Standard Deviation (Rank)
1- The instructor should focus on what is sure, reliable, and lasting (i.e., facts)	Educators Students	1 (0.7) ------	3 (2.1) 1 (1.4)	4 (28) 4(5.7)	66 (46.2) 40 (57.1)	67 (46.9) 24 (34.3)	2 (1.4) 1 (1.4)	4.38 4.26 (2)	0.71 0.63
2- The instructor's role is to facilitate student learning	Educators Students	---------- 3 (4.3)	1 (0.7) 3 (4.3)	------ 5 (7.1)	61 (42.7) 26 (37.1)	80 (55.9) 33 (47.1)	1 (0.7) ------	4.54 (1) 4.18	0.54 1.04
3- The instructor should focus on intellectual development: the understanding of ideas (concepts)	Educators Students	---------- ------ ---	7 (4.9) 4(5.7)	10 (7.0) 5 (7.1)	68 (74.6) 29 (41.4)	55 (38.5) 32 (45.7)	3 (2.1) -----	4.22 4.27	0.78 0.83
4- The instructor should promote active student participation in deciding what is to be learned and how	Educators Students	3 (2.1) ---------	7 (4.9) 2 (2.9)	8 (5.6) 10 (14.3)	61 (42.7) 38 (54.3)	64 (44.8) 20 (28.6)	---- -----	4.23 4.08	0.91 0.73
5- The instructor should organize the content and sequence of learning student's needs	Educators Students	3 (2.1) --------	14 (9.8) 1 (1.4)	2 (1.4) 3 (4.3)	57 (39.9) 27 (38.6)	66 (46.2) 39 (55.7)	1 (0.7) ----	4.19 4.48 (2)	1.01 0.65 (3)
6- The instructor should measure teaching effectiveness by assessing changes in students'attitudes and behaviours	Educators Students	2 (1.4) ---------	2 (1.4) 1 (1.4)	11 (7.7) 4 (5.7)	57 (39.9) 30 (42.9)	70 (49) 35 (50)	1 (0.7) ----	4.34 4.41 (3)	0.79 0.67

Table 6- (Continoused) Frequency, percentage, mean, and standard deviation distributions for beliefs about teaching and learning (Educators & Students)

Beliefs	Participants	1- Strongly Disagree f %	2- Disagree f %	3-Undecided f %	4- Agree f %	5- Strongly Agree f %	6- Do not know & Missing f %	Mean (Rank)	Standard Deviation (Rank)
7- The instructor role is to evaluate students'achievements and assign grades	Educators Students	6 (4.2) 9 (12.9)	40 (28) 29 (41.4)	16 (11.2) 8 (11.4)	54 (37.8) 22 (31.4)	27 (18.9) 2 (2.9)	---- ------	3.39 2.70	1.19 1.13
8- Students are good sources of ideas for improving teaching and learning	Educators Students	------ 1 (1.4)	9 (6.3) 4 (5.7)	18 (12.6) 7 (10)	68 (47.6) 37 (52.9)	47 (32.9) 21 (30)	1 (0.7) ----	4.07 4.04	0.84 0.87
9- The instructor should show each student that her/his abilities and experiences are respected and valued	Educators Students	1 (0.7) -----	1 (0.7) 2 (2.9)	----- 2 (2.9)	60 (42.00) 21 (30.00)	81 (56.6) 45 (64.3)	------ ------	4.53 (2) 4.55 (1)	0.61 (2) 0.69
10- The instructor should help students choose and develope their own directions for learning	Educators Students	----- -----	2 (1.4) 1 (1.4)	4 (2.8) 3 (4.3)	68 (47.6) 39 (55.7)	69 (48.3) 27 (38.6)	------ ------	4.42 (3) 4.31	0.62 (3) 0.62 (1)
11- The instructor should be mainly a transmitter of knowledge in the classroom	Educators Students	4 (2.8) 2 (2.9)	39 (27.3) 10 (14.3)	7 (4.9) 11 (15.7)	57 (39.9) 32 (45.7)	35 (24.5) 13 (18.6)	1 (0.7) 2 (2.9)	3.56 3.64	1.21 1.04
12- The instructor should make the decisions about what is to be taught, when, and how	Educators Students	----- 3 (4.3)	11 (7.7) 11(15.7)	9 (6.3) 7 (10.00)	66 (46.2) 30 (42.9)	55 (38.5) 19 (27.1)	2 (1.4) -----	4.17 3.72	0.86 1.15
13- The instructor should inspire students to creat their own learning activities and materials rather than always provide them	Educators Students	3 (2.1) 1(1.4)	26 (18.2) 7(10.00)	14 (9.8) 15 (21.4)	59 (41.3) 32 (45.7)	41(28.7) 32 (45.7)	----- ------	3.76 3.75	1.19 0.95
14- The instructor should develop a systematic plan for the course and stick to it	Educators Students	8 (5.6) 6(8.6)	62 (43.4) 24 (34.3)	11 (7.7) 9 (12.9)	44 (30.8) 28(40.00)	18 (12.6) 3 (4.3)	------ ------	3.01 2.97	1.21 1

Table 7- Frequency, Percentage, Mean, and Standard Deviation distributions for Evaluation Criteria (Educators & Students)

Criteria	Participants	1-Very Limited Importance f %	2- Some Importance f %	3- Moderate Importance f %	4- Great Importance f %	5- Very Great Importance f %	6- Do not know & missing f %	Mean (Rank)	Standard Deviation (Rank)
1- Instructor Knowledge of the subject matter	Educators	3 2.1	3 2.1	5 3.5	31 21.7	101 70.6	---------	4.56 (3)	0.83
	Students	1 1.4	1 1.4	4 5.7	14 20	50 71.4	----------	4.58 (2)	0.78 (3)
2- Instructor involvement in research	Educators	7 4.9	6 4.2	33 23.1	42 29.4	54 37.8	1 0.7	3.91	1.10
	Students	5 7.1	----------	12 17.1	26 37.1	27 38.6	----------	4	1.103
3- Instructor commitment to teaching	Educators	5 3.5	----------	8 5.6	27 18.9	101 70.6	2 0.14	4.55 (4)	0.89
	Students	1 1.4	----------	3 4.3	17 24.3	49 70.0	----------	4.61 (1)	0.70 (1)
4- Instructor establishes clear goal for courses	Educators	3 2.1	2 1.4	8 5.6	36 25.2	94 65.7	----------	4.51(5)	0.83
	Students	1 1.4	3 4.3	5 7.1	25 35.7	36 51.4	----------	4.31(10)	0.84
5- Instructor general level of motivation	Educators	3 2.1	3 2.1	2 1.4	18 12.6	116 81.1	1 0.7	4.69 (1)	0.79
	Students	2 2.9	1 1.4	4 5.7	20 28.6	43 61.4	----------	4.44 (5)	0.89
6- Students'level of motivation	Educators	4 2.8	2 1.4	11 7.7	29 20.3	95 66.4	2 0.14	4.48 (6)	0.91
	Students	2 2.9	2 2.9	4 5.7	17 24.3	44 62.9	1 1.4	4.43 (6)	0.94
7- Students'general ability in class	Educators	2 1.4	4 2.8	25 17.5	46 32.2	65 45.5	1 0.7	4.18	0.92
	Students	1 1.4	1 1.4	12 17.1	23 32.9	32 45.7	1 1.4	4.21	0.88

Table 7- (Continoused) percentage, Mean, and Standard Deviation distributions for Evaluation Criteria (Educators & Students)

Criteria	Participants	1- Very Limited Importance f %	2- Some Importance f %	3-Moderate Importance f %	4- Great Importance f %	5- Very Great Importance f %	6-Don't know, missing f %	Mean	Standard Deviation
8- Instructor ability to provide clear explanations	Educators	1 0.7	2 1.4	7 4.9	36 25.2	96 67.1	1 0.7	4.57 (2)	0.71 (1)
	Students	1 1.4	1 1.4	1 1.4	22 31.4	45 64.3	----------	4.55 (3)	0.73 (2)
9- Time on task (active learning time in class)	Educators	3 2.1	2 1.4	14 9.8	49 34.3	73 51.0	2 0.14	4.32 (12)	0.87
	Students	1 1.4	1 1.4	13 18.6	23 32.9	31 44.3	1 1.4	4.18	0.89
10- Instructor flexibility	Educators	5 3.5	8 5.6	30 21	42 29.4	57 39.9	1 0.7	3.97	1.07
	Students	1 1.4	2 2.9	16 22.9	24 34.3	26 37.1	1 1.4	4.04	0.93
11- Instructor sensitivity to student difficulties	Educators	4 2.8	9 6.3	32 22.4	48 33.6	50 35	----------	3.91	1.03
	Students	1 1.4	8 11.4	14 20	21 30.0	25 35.7	1 1.4	3.88	1.07
12- Instructor ability to provide an atmospher conductive to learning	Educators	2 1.4	3 2.1	10 7	45 31.5	82 57.3	1 0.7	4.42 (9)	0.82
	Students	2 2.9	1 1.4	4 5.7	25 35.7	38 54.3	----------	4.37 (8)	0.88
13- Instructor sharing of personal experience with students	Educators	3 2.1	5 3.5	25 17.5	37 25.9	71 49.7	2 1.4	4.19	0.99
	Students	1 1.4	4 5.7	12 17.1	19 27.1	34 48.6	----------	4.15	1.002
14- Students' level of success in meeting course requirements	Educators	2 1.4	8 5.6	32 22.4	47 32.9	51 35.7	3 2.1	3.97	0.97
	Students	1 1.4	4 5.7	15 21.4	29 41.4	21 30.0	----------	3.92	0.93
15- Instructor evaluation of students based on course objectives	Educators	4 2.8	6 4.2	29 20.3	47 32.9	55 38.5	2 0.14	4.01	1.01
	Students	3 4.3	2 2.9	20 28.6	27 38.6	14 20.0	4 5.7	3.71	0.98
16- Instructor classroom communication skills	Educators	2 1.4	3 2.1	11 7.7	52 36.4	73 51.0	2 1.4	4.35	0.82
	Students	2 2.9	1 1.4	4 5.7	18 25.7	45 64.3	----------	4.47 (4)	0.89

Table 7- (Continoused) Frequency, Percentage, Mean, and Standard Deviation distributions for Evaluation Criteria (Educators & Students)

Criteria	Participants	1- Very Limited Importance f %	2- Some Importance f %	3- Moderate Importance f %	4- Great Importance f %	5- Very Great Importance f %	6- Do not know & Missing f %	Mean (Rank)	Standard Deviation (Rank)
17- Instructor use of organized materials	Educators	1 0.7	2 1.4	8 5.6	52 36.4	78 54.5	2 0.14	4.44 (8)	0.73 (2)
	Students	2 2.9	----------	6 8.6	19 27.1	43 61.4	----------	4.44 (5)	0.87
18- Instructor ability to inspire student participation	Educators	2 1.4	2 1.4	11 7.7	55 38.5	72 50.3	1 0.7	4.35	0.80
	Students	1 1.4	3 4.3	8 11.4	27 38.6	31 44.3	----------	4.20	0.91
19- Instructor management and control of class	Educators	2 1.4	4 2.8	6 4.2	43 30.1	86 60.1	2 0.14	4.46 (7)	0.82
	Students	2 2.9	----------	5 7.1	22 31.4	39 55.7	2 2.8	4.41 (7)	0.86
20- Instructor use of multiple teaching strategies in the classroom/clinical setting	Educators	3 2.1	2 1.4	11 7.7	46 32.2	77 53.8	4 2.8	4.38 (10)	0.86
	Students	1 1.4	1 1.4	4 5.7	29 41.4	34 48.6	1 1.4	4.36	0.78 (3)
21- Instructor enthusiasm	Educators	----------	7 4.9	19 13.3	50 35.0	65 45.5	2 0.14	4.22	0.86
	Students	3 4.3	1 1.4	17 24.3	23 32.9	26 37.1	----------	3.97	1.03
22- Instructor availability outside of class	Educators	6 4.2	13 9.1	33 23.1	48 33.6	39 27.3	4 2.8	3.72	1.10
	Students	4 5.7	4 5.7	18 25.7	26 37.1	18 25.7	--------	3.71	1.09
23-Instructor ability to improve her/his students ability to become self-directed in learning	Educators	4 2.8	7 4.9	21 14.7	41 28.7	64 44.8	6 4.2	4.12	1.03
	Students	3 4.3	4 5.7	13 18.6	28 40 0	20 28.6	2 2.8	3.85	1.05
24- Instructor ability to provide clear course expectations	Educators	3 2.1	6 4.2	25 17.5	52 36.4	53 37.1	4 2.8	4.05	0.96
	Students	1 1.4	4 5.7	9 12.9	35 50.0	18 25.7	3 4.3	3.97	0.88

Table 7- (Continoused) Frequency, Percentage, Mean, and Standard Deviation distributions for Evaluation Criteria (Educators & Students)

Criteria	Participants	1- Very Limited Importance f	%	2- Some Importance f	%	3- Moderate Importance f	%	4- Great Importance f	%	5- Very Great Importance f	%	6- Do not know & Missing f	%	Mean (Rank)	Standard Deviation (Rank)
25- Instructor ability to inform students of their progress	Educators	3	2.1	3	2.1	24	16.8	60	42.0	51	35.7	2	0.14	4.08	0.89
	Students	2	2.9	8	11.4	12	17.1	29	41.4	18	25.7	1	1.4	3.76	1.05
26- Instructor ability to give students criticism in an appropriate manner	Educators	2	1.4	5	3.5	28	19.6	51	35.7	54	37.8	3	2.1	4.07	0.92
	Students	3	4.3	3	4.3	17	24.3	32	45.7	15	21.4	----------		3.75	0.98
27- Instructor ability to enhance her/his students problem-solving skills	Educators	1	0.7	6	4.2	21	14.7	57	39.9	53	37.1	5	3.5	4.12	0.87
	Students	3	4.3	1	1.4	16	22.9	24	34.3	24	34.3	2	2.8	3.95	1.02
28- Instructor ability to enhance her/his student ability to relate theory to nursing practice	Educators	3	2.1	3	2.1	16	11.2	61	42.7	57	39.9	3	2.1	4.18	0.87
	Students	2	2.9	----------		12	17.1	33	47.1	23	32.9	----------		4.07	0.87
29- Instructor ability to enhance her/his students ability to provide individualized nursing care	Educators	2	1.4	2	1.4	12	8.4	54	37.8	69	48.3	4	2.8	4.33	0.81
	Students	1	1.4	2	2.9	4	5.7	31	44.3	32	45.7	----------		4.30	0.82
30- Instructor ability to enhance her/his students ability to recognize their specific strengths and limitations	Educators	3	2.1	2	1.4	14	9.8	53	37.1	67	46.9	4	2.8	4.28	0.87
	Students	3	4.3	2	2.9	8	11.4	33	47.1	24	34.3	---------		4.04	0.98
31- Instructor ability to improve her/his students ability to recognize their responsibilities as future members of the nursing profession	Educators	3	2.1	4	2.8	9	6.3	43	30.1	80	55.9	4	2.8	4.38 (10)	0.89
	Students	2	2.9	----------		6	8.6	25	35.7	36	51.4	1	1.4	4.34 (9)	0.87

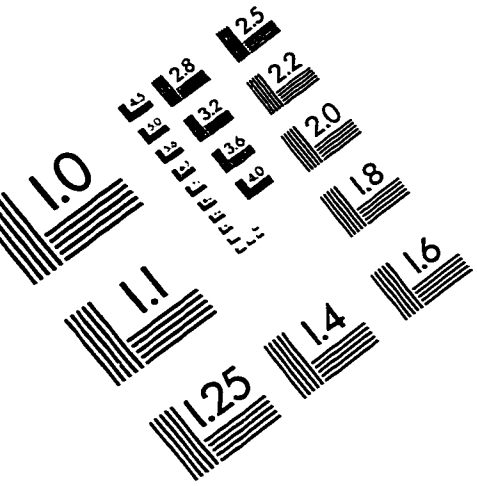
Table 8 - Frequency, percentage,mean, and standard deviation distributions for evaluation elements (Educators & Students)

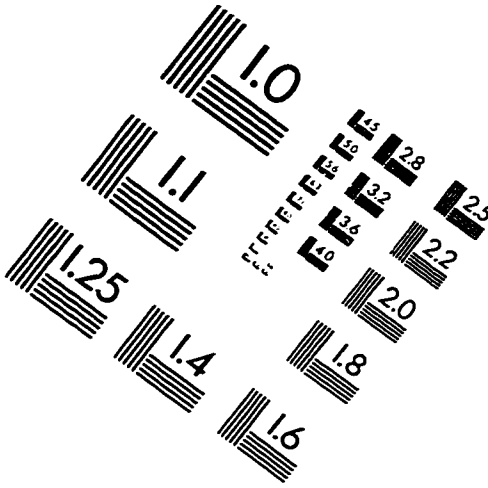
Variable	Participants	1- Very limited importance		2- Some importance		3- Moderate importance		4- Great importance		5- Very great importance		6- Do not know & missing		Mean	Standard deviation
		f	%	f	%	f	%	f	%	f	%	f	%		
1- Teacher age	Educators	18	12.6	15	10.5	52	36.4	26	18.2	24	16.8	6	5.6	3.17	1.23
	Students	6	8.6	10	14.3	30	42.9	11	15.7	13	18.6	----------		3.21	0.28
2-Teacher experience	Educators	3	2.1	4	2.8	15	10.5	40	28	75	52.4	6	4.	4.31	0.93
	Students	1	1.4	1	1.4	5	7.1	18	25.7	45	64.3	---------		4.5	0.81
3- Teacher gender	Educators	47	32.9	16	11.2	30	21	17	11.9	11	7.7	22	15.4	2.41	1.36
	Stdents	25	35.7	12	17.1	15	21.4	9	12.9	8	11.4	1	1.4	2.46	1.39
4- Teacher personality	Educators	1	0.7	3	2.1	13	9.1	35	24.5	85	59.4	6	4.2	4.46	0.81
	Students	2	2.9	1	1.4	8	11.4	20	28.6	37	52.9	2	2.9	4.30	0.95
5- Teacher academic rank	Educators	4	2.8	3	2.1	29	20.3	51	35.7	48	33.6	8	5.6	4.007	0.96
	Students	1	1.4	----------		10	14.3	16	22.9	42	60	1	1.4	4.42	0.84
6- Previous level of academic achievement of the students	Educators	6	4.2	7	4.9	36	25.2	38	26.6	47	32.9	9	6.3	3.84	1.103
	Students	2	2.9	7	10.0	16	22.9	28	40	15	21.4	2	2.8	3.69	1.02

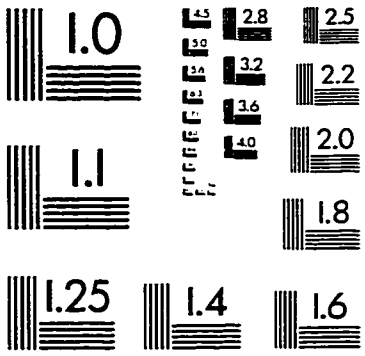
Table 8 - (Continoused) Frequency, percentage,mean, and standard deviation distributions for evaluation elements (Educators & Students)

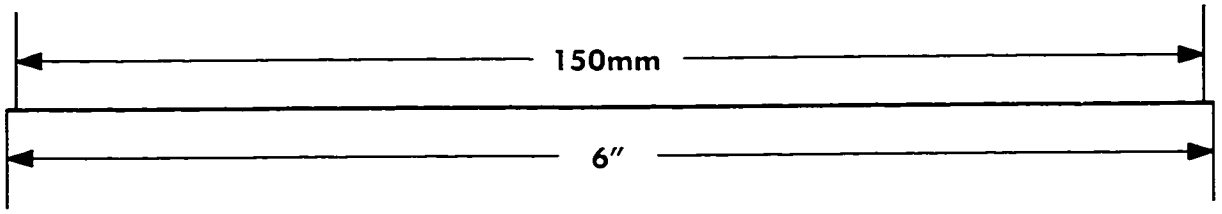
Variable	Participants	1-Very Limited Importance		2- Some Importance		3- Moderate Importance		4- Great Importance		5- Very Great Importance		6- Do not know & Missing		Mean	Standard Deviation
		f	%	f	%	f	%	f	%	f	%	f	%		
7- Personalities of the students	Educators	3	2.1	3	2.1	25	17.5	50	35	54	37.8	8	5.6	4.10	0.93
	Students	3	4.3	9	12.9	13	18.6	18	25.7	26	37.1	1	1.4	3.79	1.20
8- Students age	Educators	25	17.5	16	11.2	29	20.3	35	24.5	26	18.2	12	8.4	3.16	1.39
	Students	20	28.6	12	17.1	20	28.6	13	18.6	4	5.7	1	1.4	2.55	1.25
9- Students gender	Educators	49	34.3	11	7.7	26	18.2	20	14	20	14	17	11.9	2.61	1.51
	Students	30	42.9	12	17.1	13	18.6	7	10.6	6	8.6	2	2.9	2.22	1.34
10- Students educational level	Educators	11	7.7	12	8.4	37	25.9	29	20.3	40	28	14	9.8	3.58	1.25
	Students	8	11.4	8	11.4	11	15.7	24	34.3	15	21.4	4	5.7	3.45	1.30
11- Physical environment	Educators	5	3.5	11	7.7	26	18.2	28	19.6	64	44.8	9	6.3	4.007	1.16
	Students	3	4.3	3	4.3	11	15.7	21	30	31	44.3	1	1.4	4.07	1.08
12- Psychological environment	Educators	3	2.1	3	2.1	15	10.5	32	22.4	79	55.2	11	7.7	4.37	0.93
	Students	1	1.4	1	1.4	7	10	17	24.3	43	61.4	1	1.4	4.44	0.85

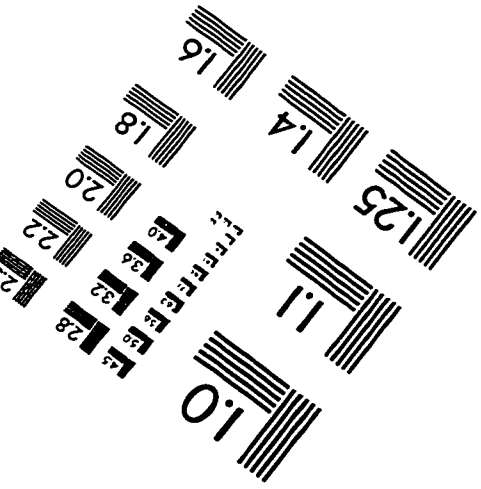
IMAGE EVALUATION
TEST TARGET (QA-3)

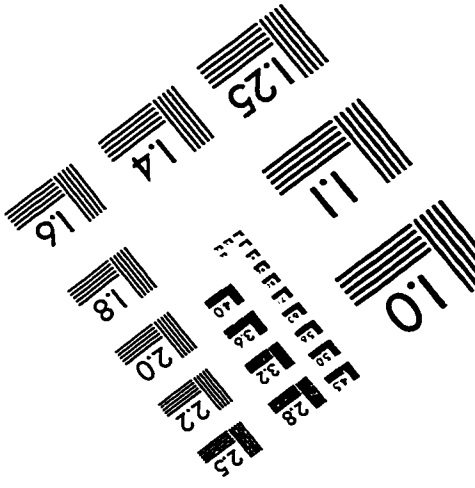












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