

CHAPTER TWO: LITERATURE REVIEW

This study was designed to determine if there are differences in the perceived teaching effectiveness of part-time and full-time clinical nursing faculty. To achieve this purpose, the researcher examined student perceptions of the effectiveness of instruction they received from both part-time and full-time clinical nursing faculty. The clinical nursing faculty members' perceptions of their own effectiveness were also examined and compared with student perceptions.

The purpose of this literature review is threefold. First, the concept of effective teaching and the components that make up effective teaching are explored. Second, the use of student evaluation to determine faculty effectiveness is discussed. Finally, tools that have been designed to measure faculty effectiveness in the clinical setting are described.

Effective Teaching

The ability to teach effectively is of prime concern to educators. It is difficult to identify specific teaching skills that are considered effective (de Tornyay, 1984; Morton, 1987). The teaching methods used by effective faculty consist of varying and complex sets of skills and activities. Students in different class sizes and in different courses may identify different sets of skills and activities as effective. The age and experience of the evaluator also affects which teaching skills and activities are judged as effective (Koon & Murray, 1995; Smith & Cranton, 1992).

One scheme for defining the characteristics of effective teaching is to categorize behaviors identified as effective into five broad categories: Teaching Ability, Professional Competence, Evaluation of Students, Interpersonal Relationships, and Personality Traits (Knox & Mogan, 1985; Mogan & Knox, 1983, 1987). These categories are used as the organizing framework for the following discussion of effective teaching.

Teaching Ability

The effective teacher must have mastered the ability to teach (Darling-Hammond et al., 1983). This ability includes the skills required to transmit knowledge, skills, and attitudes from the teacher to the student (Darling-Hammond et al., 1983; Mogan & Knox, 1983). Included within this category is the ability to develop an atmosphere that encourages student learning.

Smith and Cranton (1992) collected student ratings of teacher behavior from a sample of 42,407 students. A set of 20 teaching skills was divided into four factors: Interest and Atmosphere, Organization and Clarity, Evaluation, and Discussion. The first two of these factors is directly related to teaching ability. Items such as “inspires interest in course material” and “creates an atmosphere conducive to learning” (Smith & Cranton, 1992, p. 753) were included in the factor of Interest and Ability. The factor Organization and Clarity included items such as “clarifies relationships among major and minor topics”

and “wraps things up at the end of the class” (Smith & Cranton, 1992, p. 753). Together, the factors of Interest and Atmosphere and Organization and Clarity accounted for 72 percent of the variance in teaching effectiveness.

A study conducted with undergraduate and graduate social work students demonstrated a strong correlation between teaching ability and student evaluation of teaching effectiveness (Jirovec, Ramanathan, & Alvarez, 1998). Jirovec et al. (1998) defined three dimensions of teaching ability: rapport, organization, and evaluation and grading. They then collected data about the faculty, the course and the student. Information about the faculty included student ratings on an instrument designed to measure the dimensions of teaching ability. Faculty were also asked to provide information about their employment status with the university and their gender. Information about the course included class size, type of course, and whether it was an undergraduate or a graduate course. The only information collected about students was their attendance record. Data analysis revealed a strong correlation between each of the dimensions of teaching ability and the overall student evaluations, with almost 78% of the variance in teacher evaluation explained by organization skills.

Researchers curious about what students identified as competent teaching prepared a questionnaire that was designed to evaluate the effectiveness of the instructor (Armington, Reinkka, & Creighton, 1972). Students from 20 Bachelor of Science in Nursing (BSN) programs completed the questionnaire. Instructors who received above average ratings scored highest on items that addressed organizational skills, excitement and enthusiasm, encouragement of student thinking, and imaginative approach to teaching. These data support the finding that teaching ability is important for effective teaching.

In a study designed to identify effective teaching behaviors, Humphrey (1987) asked Associate Degree Nursing (ADN) students, faculty, and program directors to identify effective and ineffective teaching behaviors. One of the effective behaviors identified is the judicious use of breaks during lecture. Other effective behaviors include showing respect to students, maintaining control of the classroom, and speaking in a clear and audible voice.

The techniques used to teach effectively and the teacher’s decisions about how and when to use various techniques make up the category of teaching ability. The ability to teach is an integral part of effective teaching (Darling-Hammond et al., 1983; Humphrey, 1987; Smith & Cranton, 1992). Some researchers have combined this category with the category of professional competence (Brown, 1981; Bergman & Gaitskill, 1990).

Professional Competence

Professional competence is defined as the professor’s knowledge base in the subject matter being taught (Brown, 1981; Collinson, 1999; Parker & Magnensen, 1986). In disciplines that require a laboratory or clinical component, professional competence

includes the ability to perform the skills and engage in the behaviors appropriate for the professional practitioner of that discipline (Bergman & Gaitskill, 1990, Brown, 1981; Mogan & Knox, 1983). Teachers and students agree that professional competence is essential for effective teaching (Collinson, 1999; Parker & Magnensen, 1986).

Investigators have examined the perceptions of effective teaching held by novice and experienced teachers (Collinson, 1999; Parker & Magnensen, 1986). Parker and Magnesen (1986) asked new faculty members to rate outstanding qualities of teachers they remembered from their education. The five qualities new teachers believed to be most important for effective teaching are knowledge of subject, organization, concern for students, enthusiasm for the subject being taught, and a friendly and personable nature.

The importance of professional competence in effective teaching was demonstrated again in a study designed to determine how experienced teachers define excellent teaching. Collinson (1999) interviewed 81 secondary school teachers who had an established reputation for excellence. These teachers identified professional knowledge as essential for excellence. However, they emphasized that this competence represented only one facet of excellence.

The belief that professional competence is one element of effective teaching is borne out in a series of studies. The results of each study indicate that professional competence is a component of teaching effectiveness, but that different populations rank it differently with respect to its importance (Brown, 1981; Bergman & Gaitskill, 1990).

In one study, senior BSN students and faculty were asked to determine traits of effective faculty using a 20-item instrument (Brown, 1981). Brown (1981) divided the characteristics identified as components of effective teaching into three categories: professional competence, relationships with students, and personal attributes. Some of the characteristics that were included in the category of professional competence were showing genuine interest in patients and their care, being well informed, and being able to communicate knowledge to students.

Respondents indicated that all of the items on the instrument described effective teaching traits, but ranked the items in different orders (Brown, 1981). Faculty found the items related to the category of professional competence to be the most important. Students, on the other hand, found the faculty member's relationship with students to be the most important and ranked professional competence as second in importance. Both groups found personal attributes to be least important.

Bergman and Gaitskill (1990) found slightly different results when they replicated Brown's (1981) study in a BSN program located at another university. While respondents in the Bergman and Gaitskill (1990) study agreed that all items were descriptive of effective teaching, both faculty and students rated the faculty member's relationship with students first, professional competence second, and personal attributes third.

Both of these studies classified the idea of providing useful feedback on student progress under the category of professional competence (Brown, 1981; Bergman & Gaitskill, 1990). Other studies refined the definition of professional competence by considering teaching ability and evaluation as separate categories (Darling-Hammond, Wise, & Pease, 1983; Mogan & Knox, 1983). The effective evaluation of students is another integral component of teaching effectiveness.

Evaluation of Students

The practices faculty use to evaluate students is another component of teaching effectiveness (O'Shea & Parsons, 1979; Sieh & Bell, 1994). Evaluation practices include the amount and type of feedback students receive (Mogan & Knox, 1983) and the faculty member's skill in grading. The effective teacher has the ability to correct students without belittling them (Sieh & Bell, 1994). This includes the provision of honest, constructive, and positive feedback (Bergman & Gaitskill, 1990; O'Shea & Parsons, 1979). Ineffective evaluation practices include setting expectations poorly, providing insufficient feedback, providing only negative feedback, and returning papers late (O'Shea & Parsons, 1979).

In the Smith & Cranton (1992) study described earlier, Evaluation was identified as one of the factors that accounted for variance in teaching effectiveness. Items were included that asked if students were informed of their progress in class, if faculty provided explanations of evaluation procedures, and if evaluation was consistent. Smith and Cranton (1992) reported a correlation between evaluation and teaching effectiveness, but evaluation only accounted for 17 percent of the variance in teaching effectiveness.

In Jirovec et al.'s (1998) study of social work students, the instructor's skill in grading was identified as one of the dimensions of teaching effectiveness. Students participating in this study were asked to complete an instrument designed to measure teaching ability. Items related to evaluation asked if grading procedures had been explained, if feedback was prompt, and if exams were fair. In keeping with Smith and Cranton's (1992) findings, evaluation accounted for only a small amount of the variance in teaching effectiveness, in this case four percent.

Other researchers have found evaluation skills to be more important. In a study designed to examine perceptions of effective clinical teachers, 199 ADN students and 22 faculty were asked to rank effective teaching behaviors (Sieh & Bell, 1994). Both students and faculty rated the subset of evaluation as the most important characteristic of the effective teacher.

The ability to fairly and adequately evaluate students impacts faculty member's capacity for effective teaching. The relationship between the faculty member and the student also has an impact of teaching effectiveness.

Interpersonal Relationships

The relationship between the student and the professor is an important component of teaching effectiveness. This relationship can impact education in three ways (Walsh & Maffei, 1994). First, a strong student-professor relationship enhances enjoyment of the educational experience for both parties. Second, a strong relationship improves student evaluations of faculty. Finally, a strong relationship enhances student learning.

Interpersonal relationships can include interactions between/among groups and individuals. To develop good interpersonal relationships requires empathy, honesty and trust, tolerance, awareness, and the setting aside of self (Collinson, 1999). A group of teachers identified as excellent indicated that the effective teacher is able to maintain good interpersonal relationships with the students, other faculty, and the community at large (Collinson, 1999).

Walsh and Maffei (1994) developed a scale of 46 items designed to assess student and faculty perceptions of behaviors that affected the student-professor relationship. The top five behaviors that students identified as enhancing the student-professor relationship include treating students equally regardless of race and sex, learning the students' names quickly, showing patience in explaining points to students, treating students as equals, and smiling and displaying a friendly demeanor (Walsh & Maffei, 1994). Interestingly, for each behavior that was identified as enhancing the student-professor relationship, female students ranked the behavior as more important than male students did.

The behaviors identified by faculty as affecting the student-professor relationship are similar to the behaviors identified by students (Walsh & Maffei, 1994). Faculty believe that encouraging students to ask questions, treating students equally, preparing thoroughly for class, showing patience, and learning students names quickly enhances the relationship.

The behaviors that students identify as detracting from the student-professor relationship include failing to keep scheduled office hours and appointments and offering little explanation of grading decisions (Walsh & Maffei, 1994). Faculty believe that behaviors like offering little explanation of grading decisions and being vague about expectations of students detract from the relationship.

In a series of studies conducted with nursing students and their clinical faculty, Brown (1981) found that nursing students believed that the faculty member's relationship with students is the most important component of faculty effectiveness. In Bergman and Gaitskill's (1990) study, both faculty and students believed the faculty - student relationship is the most important component of faculty effectiveness.

One behavior that influences the student - teacher relationship is caring. Caring may be defined as "good will" or "intent toward the receiver" (Teven & McCroskey, 1997, p. 4). In a study designed to correlate student perception of teacher caring with teacher evaluations, course content evaluations, and learning, Teven and McCroskey

(1997) asked a sample of 235 university students to complete a series of questionnaires. Results indicated that students who perceive their professors as caring award higher evaluation scores to those teachers, the course content, and the amount of learning achieved than students who do not perceive that their professors are caring.

Another researcher (Craig, 1991) used surveys and open-ended follow up interviews to see how junior and senior nursing students perceive clinical instructors. Results indicate that students perceive clinical instructors as more respectful and genuine than empathetic.

Personality Traits

The final category of teaching effectiveness is the teacher's personality traits. These traits include the attitudes, emotional tendencies, and character traits that form the personality of the teacher (Mogan & Knox, 1983).

One difficulty in conducting research that relates effective teaching to personality traits relates to determining how to measure personality traits. Researchers have approached this issue by asking faculty to describe their own personality traits, by asking faculty to describe the personality traits of other faculty, and by asking students to describe the traits of faculty (Feldman, 1986).

A meta-analysis of data gathered from 16 studies led Feldman (1986) to conclude that student perceptions of teacher effectiveness is not related to the teachers' personality traits as measured by the teachers themselves. However, there is a relationship when the teachers' personality traits are measured by their professional peers or by their students.

The relationship between faculty effectiveness and teacher personality as perceived by students or by other faculty can be explained in three ways (Feldman, 1986). First, it is possible that there is a true relationship between personality and effectiveness. If this is so, then there is a question about why this relationship does not appear when faculty describe their own personality traits. Feldman (1986) suggests that teachers may act outside of their personality in the classroom and at work. For instance, a normally shy professor may appear to be gregarious in the classroom.

Another explanation for the relationship between faculty personality traits and effectiveness is the use of the same sample to measure personality and effectiveness. This might have affected the results (Feldman, 1986). Students and colleagues who found a professor to have the trait of energy and enthusiasm might then picture that person as effective whether or not energy and enthusiasm really contribute to effectiveness.

The third explanation for the relationship between faculty personality traits and effectiveness is that there is an actual relationship between the perception of teacher personality and perception of teacher effectiveness, but the perception of teacher personality is not an accurate reflection of the teacher's true personality (Feldman, 1986).

Fisher and Kent (1998) looked at the relationship between student and teacher perceptions of classroom environment and teacher personality in colleges in Australia. They used the Myers-Briggs Type Indicator to measure teacher personality and found significant associations between teacher personality type and perceptions of classroom environment, with about 10% of the variance in classroom environment due to effects of teacher personality. Fisher and Kent (1998) suggest that this small variance is important because so many of the variables believed to contribute to the classroom environment are difficult to control (e.g., socio-economic status of the student).

Age also affects the personality of faculty members, and thus their teaching effectiveness (Renaud & Murray, 1996). In one study, a strong correlation was found between student perceptions of teaching effectiveness and specific personality traits. An inverse relationship was found between the identified personality traits and age (Renaud & Murray, 1996). The sample consisted of 25 male and eight female faculty members from a Canadian university. Personality traits were measured by faculty peer ratings on a scale of 29 personality traits. Student evaluations were collected from archived student ratings of faculty over a three-year time span.

Five of the personality traits that predominate among younger faculty are a sociable nature, approval-seeking, seeking help and advice, liberal attitude toward change and progression, and extroversion. These personality traits are closely associated with perceived teaching effectiveness (Renaud & Murray, 1996). The personality trait strongly associated with older faculty members is independence. This trait was negatively associated with perceived teaching effectiveness (Renaud & Murray, 1996).

Effective teaching has been described as encompassing the traits of teaching ability, professional competence, evaluations of students, interpersonal relationships, and personality traits (Knox & Mogan, 1985; Mogan & Knox, 1983; 1987). Measurement of effective teaching has been accomplished through student and faculty evaluation (Brown, 1981; Collinson, 1999; Smith & Cranton, 1992; Walsh & Maffei, 1994). The use of student evaluation to determine faculty effectiveness is discussed in the next portion of this literature review.

Student Evaluation of Faculty

Researchers agree that teaching effectiveness can be measured through evaluation (deTornyay, 1984; Fong & McCauley, 1993; Morton, 1987). The best procedures for evaluating the teaching effectiveness of faculty use a variety of methods (Fong & McCauley, 1993). These methods include administrative review, peer evaluation, self-appraisal, and student evaluation. Of these methods, student evaluation is the most pervasive (Ory, 1991).

Even though student evaluation of faculty is the most common method of measuring effective teaching, there are arguments against it. First, opponents of this type of evaluation argue that students are not reliable evaluators (Morton, 1987). Students may be unreliable evaluators because they do not have the knowledge required to adequately

evaluate teaching effectiveness and they may not fully understand the purpose of the evaluation process. Without this knowledge base, students may rely upon the teacher's ability to entertain them rather than the teacher's competence. Students also may hold certain philosophical beliefs that may taint their evaluation of faculty (Morton, 1987). In small classes, even a few evaluations by unreliable students can affect the overall measurement of the teacher's effectiveness (Wood & Matthewman, 1988).

Opponents of faculty evaluation by students also claim that the tools used for student evaluation are poorly constructed (Morton, 1987). Koon and Murray noted that there are concerns about "unexplained, between-teacher variation that remains in mean student ratings of overall instructor effectiveness after discounting the variance shared with objective measures of student learning gains (1995, p. 61)." If the evaluation tools are not valid, then the meaningfulness of the results of the evaluation process is diminished.

Even though there are arguments against the use of student evaluations of faculty, many researchers support their use (Centra, 1994; Fong & McCauley, 1993; Gien, 1991). In one study, evaluations of teaching by two groups of peers and by deans were compared to student evaluations (Centra, 1994). In this study, faculty at a community college prepared portfolios that reflected their teaching. Three groups reviewed the portfolios: peers selected by the faculty, peers selected by the deans, and the deans. Students were also asked to evaluate faculty. The student evaluations were found to correlate "reasonably well" with the evaluations by the peer groups and the deans (Centra 1994, p. 568). This study supports the reliability of students' evaluations of faculty.

Other researchers have supported the reliability and validity of student evaluation of faculty as long as the instrument is well-constructed, administered correctly, and interpreted carefully (Fong & McCauley, 1993; Gien, 1991). Effective instruments are multidimensional, reliable, stable, and valid. They should be designed to evaluate the instructor and not the course and they should be unaffected by bias (Gien, 1991).

Before the effectiveness of student evaluations of faculty can be established, the purpose of the evaluation must be determined (Abrami, d'Apollonia, & Cohen, 1990). Student evaluations may have two purposes: to determine the student's opinion of the quality of instruction and to determine what the student has learned. The purpose of the evaluation should dictate the tool to be used.

Since perceptions of effective teaching vary according to the situation (Koon & Murray, 1995; Smith & Cranton, 1992), it is important to use an evaluation tool that is appropriate for the situation. Knox and Mogan (1985) have pointed out that evaluation methods that are used in general education courses are not appropriate for clinical settings because clinical settings require unique sets of skills and activities. Various tools that have been used to evaluate effective clinical instruction in nursing are discussed in the final section of the literature review.

Evaluation Tools

Characteristics identified as being components of effective teaching have been used to develop instruments to rate clinical nursing teaching effectiveness (Barham, 1965; Jacobson, 1966; O'Shea & Parsons, 1979). These instruments include the Clinical Teacher Characteristic Instrument (CTCI) (Brown, 1981), the Effective Teaching Clinical Behaviors (ETCB) (Zimmerman & Westfall, 1988), the Clinical Teaching Evaluation (CTE) (Fong & McCauley, 1993), and the Nursing Clinical Teacher Effectiveness Inventory (NCTEI) (Knox & Mogan, 1985). Through the use of these instruments, the characteristics of effective clinical nursing faculty can be identified and measured.

Clinical Teacher Characteristic Instrument

One instrument used to identify the characteristics of effective clinical nursing faculty is the CTCI (Brown, 1981). The CTCI was developed to compare the perceptions of nursing faculty and students. The instrument is based on effective clinical teacher behaviors identified through a review of the literature.

The CTCI consists of two sections. The first section contains 20 characteristics that can be rated using a 5-point Likert scale from "of most importance" to "of no importance." In the second section, the subjects are instructed to choose the five most important characteristics of a clinical instructor and rank them in order (Brown, 1981).

The CTCI was administered to 82 senior nursing students and 42 faculty members. Responses were classified into three categories: professional competence, relationships with students, and personal attributes (Brown, 1981).

The category of professional competence includes nine items. These items rate the ability of the instructor to facilitate an awareness of professional responsibility among students and to show genuine interest in patient care (Brown, 1981).

The items that related to the instructors' ability to convey confidence in and respect for the student were classified into the category of relationship with students (Brown, 1981). This category included six items.

The third category, personal attributes, includes items that addressed the instructor's sense of humor, enthusiasm, and flexibility (Brown, 1981). The smallest of the three categories, this category consists of five items.

The results of Brown's (1981) study indicate that nursing faculty rank the category of professional competence first, the category of relationships with students second, and the category of personal attributes third. Students in the study had a slightly different response, ranking items from the category of relationships with students first and the category of professional competence second.

The CTCI was used in a later study that was designed to determine if baccalaureate students and their faculty agree in identifying effective characteristics of clinical instructors and if student's perceptions differed across grade levels (Bergman & Gaitskill, 1990). The findings of this study also fell into three categories after a factor analysis, but results differed in that both faculty and students ranked the category of relationship with students as the most important characteristic of clinical instructors, followed by professional competence, and personal attributes identified as least important.

Administration of the CTCI has provided researchers with useful information about how different groups perceive effective clinical instruction. Results show that students and faculty from various levels of education regard the same behaviors as effective but rank them in different orders of importance (Bergman & Gaitskill, 1990; Brown, 1981). This tool is not useful in determining if individual faculty members demonstrate the characteristics of effective instructors.

Effective Teaching Clinical Behaviors

Zimmerman and Westfall (1988) noted that existing studies focused on the identification of effective characteristics of clinical nursing faculty, but that a scale designed to measure those characteristics had not been developed. They designed the ETCB to fill this void. This instrument consists of a 43-item questionnaire that subjects respond to by ranking each item on a 3-point Likert scale (from "1" Not Important to "3" Very Important).

To validate the ETCB, it was administered to 281 students from three nursing programs. Findings indicated that the instrument measures one major factor that the researchers have identified as effective teaching behaviors (Zimmerman & Westfall, 1988). This study was useful in confirming that the characteristics identified on the tool describe effective teaching behaviors. Nevertheless, the ETCB has not been used in further research studies.

Clinical Teaching Evaluation

Although the ETCB was useful in evaluating the effectiveness of individual clinical nursing faculty, it did not address the clinical nursing faculty member's ability to help students apply theory to practice (Fong & McCauley, 1993). The CTE instrument was intended to provide a more comprehensive picture of clinical nursing faculty effectiveness.

The CTE was developed based on a literature review and was tested to determine validity and reliability (Fong & McCauley, 1993). The tool consists of 30 items and uses a 5-point Likert scale (from "1 = poor, one of the least effective teachers I know" to "5 = excellent, one of the most effective teachers I know"). It was tested on 384 undergraduate nursing students.

A factor analysis of the results revealed that the CTE measures three factors: nursing competence, consideration for students, and teaching competence (Fong & McCauley, 1993). The scale was found to be internally consistent (coefficient alpha = .965) and reliable (test-retest $r = .85$, $p < .001$).

The first factor, nursing competence, consists of 9 items (Fong & McCauley, 1993). These items refer to professional nursing expertise and interest in assigned patients. Consideration for students, the second factor, consists of items that ask about the faculty member's relationships with students. This factor includes items that ask about the respect and confidence the instructor shows in the student (Fong & McCauley, 1993). The final factor, teaching competence, measures the faculty member's ability to transfer knowledge and skills (Fong & McCauley, 1993). This factor contains 7 items.

Nursing Clinical Teacher Effectiveness Inventory

The instrument that was used in the present study is the NCTEI. This instrument, derived from a study conducted by Knox and Mogan in 1983, is also intended to measure the characteristics of effective clinical nursing faculty.

To develop this tool, Knox and Mogan (1983) conducted a qualitative study in which two questions were asked. First, students were asked to identify effective behaviors of nursing clinical faculty. Then, they were asked how clinical faculty could become more effective. Responses were divided into five categories similar to those identified by previous researchers (Brown, 1981; Jacobson, 1966; O'Shea & Parsons, 1979). These categories include: personality traits, interpersonal relationships, nursing competence, teaching ability, and evaluation (Knox & Mogan, 1983).

Results of this study were used to develop the NCTEI in 1985. Since then, it has been used in several subsequent studies (Knox & Mogan, 1985; Mogan & Knox, 1987; Morgan, 1997; Nehring 1990; Sieh & Bell, 1994; White, 1997). The widespread use of the NCTEI makes it valuable when comparing the results of studies of clinical nursing faculty effectiveness (Scanlan, 1996).

On the NCTEI, subjects are asked to rate the behaviors used by clinical nursing faculty from least effective to most effective using a 7-point Likert scale. Researchers have found each of the categories to be internally consistent (alpha ranges from .79 to .92) and reliable (test-retest r ranged from .76 to .93) (Knox & Mogan, 1985; Mogan & Knox, 1987).

In one study, 393 BSN students, 49 faculty, and 45 graduate nurses were asked to recall the characteristics of their best clinical instructor and use the NCTEI to rate that instructor (Knox & Mogan, 1985). The subjects were then asked to repeat the exercise for their worst clinical instructor. The results of this study indicate that all five categories of teacher effectiveness are considered important, but that different groups assign different levels of importance to the categories. Students in this study consider evaluation to be the most important category, followed by interpersonal relationships. Teaching ability and

nursing competence are considered to have equal importance. Finally, students consider personality traits the least important category (Knox & Mogan, 1985). Faculty and graduates ranked the importance of the categories as follows: evaluation, nursing competence, interpersonal relationships, teaching ability, and personality traits (Knox & Mogan, 1985).

This study has been replicated on two occasions (Mogan & Knox, 1987; Nehring, 1990). The first study looked at 28 clinical teachers and 173 undergraduate nursing students (Mogan & Knox, 1987). The second study included 63 faculty and 121 undergraduate students (Nehring, 1990).

The results of these studies were reported in terms of the top 10 highest - ranking characteristics of effective faculty rather than by category. Both studies found that students believe effective faculty are good role models, enjoy nursing, demonstrate clinical skills and judgment, enjoy teaching, and are well-prepared for teaching. Good instructors also take responsibility for their own actions, are approachable, and self-confident, demonstrate enthusiasm, promote student independence, and correct students' mistakes without belittling them (Mogan & Knox, 1987; Nehring, 1990).

Faculty in these studies identified and ranked the top five characteristics as follows: enjoys teaching, is a good role model, demonstrates clinical skill and judgment, enjoys nursing, and stimulates student interest in the subject. The next six included: explains clearly, demonstrates a breadth of knowledge in nursing, takes responsibility for own actions, is well-prepared for teaching, is self-confident, and is approachable (Mogan & Knox, 1987; Nehring, 1990).

Another study in which the NCTEI was employed looked at ADN students' and faculty member's perceptions of important characteristics of clinical nursing faculty (Sieh & Bell, 1994). The results of this study also indicate that all of the characteristics on the NCTEI are important. Although the ADN students and faculty who participated in this study substantially agreed on important characteristics of clinical nursing faculty, they did not rate them in the same order (Sieh & Bell, 1994). Faculty and students both perceived evaluation and interpersonal relationships as the most important characteristics of clinical faculty. Faculty rated nursing competence as third in importance with teaching ability and personality traits tying for least important. Students found that teaching ability ranks third, nursing competence fourth, and personality traits fifth in importance.

Morgan (1997) used the NCTEI to determine the characteristics that students in a career ladder program found important. The participants in this study were first year nursing students and Licensed Practical Nurses (LPNs) who had returned to school to earn their ADN. Morgan (1997) found that the categories of nursing competence and evaluation skills are considered the most effective characteristics of clinical nursing faculty and that personality traits and teaching skills ranked lowest. There were no significant differences in rankings between the two groups of subjects.

The series of studies that have been conducted using the NCTEI are significant in that they represent the only examples in which one tool has been used consistently over several studies that employed various groups of nursing students, graduates, and faculty (Knox & Mogan, 1985; Mogan & Knox, 1987; Morgan, 1997; Nehring 1990; Sieh & Bell, 1994). The consistent results demonstrate that effective clinical nursing instructors demonstrate professional competence, strong teaching ability, superior evaluation practices, good relationships with students, and effectual personality traits.

In conclusion, student evaluation of faculty is an effective measurement of faculty effectiveness if the appropriate evaluation tool is used (deTornyay, 1984; Fong & McCauley, 1993; Morton, 1987). This tool should reflect the varying and complex sets of skills and activities specific to the subjects and the teaching situation (de Tornyay, 1984; Koon & Murray, 1995; Morton, 1987; Smith & Cranton, 1992).

Clinical instruction in nursing is a unique teaching environment that requires distinctive characteristics on the part of the clinical nursing faculty (Bergman & Gaitskill, 1990; Brown, 1981; Jacobson, 1996; Massarweh, 1999; Meleca et al., 1981). The characteristics of effective clinical nursing faculty have been identified and measured through a series of studies (Barham, 1965; Jacobson, 1966; Knox & Mogan, 1985; Mogan & Knox, 1987; Morgan, 1997; Nehring 1990; O'Shea & Parsons, 1979; Sieh & Bell, 1994; White, 1997). These characteristics may be grouped into 5 categories: personality traits, interpersonal relationships, nursing competence, teaching ability, and evaluation (Knox & Mogan, 1983).

One tool, the NCTEI, has been used in a variety of settings and with several different groups of subjects including LPNs, ADN students, BSN students, faculty, and nurse graduates (Knox & Mogan, 1985; Mogan & Knox, 1987; Morgan, 1997; Nehring 1990; Sieh & Bell, 1994; White, 1997). This tool has proven to be a reliable and valid measure of effective behaviors of clinical nursing faculty.