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Nursing students' and clinical teachers' perceptions of effective teacher characteristics

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NURSING STUDENTS' AND CLINICAL TEACHERS' PERCEPTIONS OF EFFECTIVE TEACHER CHARACTERISTICS

by

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Abstract

Instructional and organisational strategies can improve students' transfer of knowledge and skill to the workplace. Constraints on transfer include:

1. a shortage of teachers who can build transfer into programmes; and

2. time span (interval) between teaching of the task and transfer of learning.

Fifteen nursing students and five clinical teachers from a university in Western Australia participated in the initial qualitative component of the study. These students and teachers were asked to list effective clinical teachers' behaviours which were then compared with behaviours listed in the Rauen's Clinical Instructor Characteristics Rating Scale (1974). Using a modified Rauen's Scale, 200 students from second and third year of their training participated in the quantitative component, whereby questionnaires were completed to evaluate perceived effective clinical behaviours, as well as the teachers' demonstration of the established effective teacher behaviours from Rauen's Scale. The influences of student and teacher variables (such as age, gender, level of training, previous work experience, perception, teacher qualification, employment status and involvement in teaching theory), as well as students' perception of effectiveness of clinical facilitation, was obtained by data analysis of the completed questionnaires. Correlational data obtained yielded insignificant relationships between student and teacher variables and the perception of effective clinical facilitation of learning. Overall, nursing students' perceptions of effective clinical facilitation was

significantly positive. With the changing trend of employment of more sessional staff, Universities could benefit from the following suggestions to maintain the effectiveness of facilitation of learning in the clinical workplace:

1. Teachers could have an educational background other than content knowledge expertise in their specialist field;

2. Strategies could be established to assist clinical teachers/lecturers to develop clinical behaviours perceived 'effective' to facilitate students at each stage of their nursing training; and

3. Strategic planning of sequencing of the time lapse between instruction of task and transfer of learning in the clinical workplace could be better managed.

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Chapter 1

INTRODUCTION

Background

Historically, in Western Australia, nurses have been educated under an apprentice-type system in the hospital settings. The theoretical and practical contents of nurse-education courses have been oriented to hospital-based needs. As a result of a decision made by the Federal and State governments in the early 1980's, nurse education in Western Australia was transferred to the tertiary settings and in particular, to Edith Cowan University and Curtin University. The transfer of nurse education has resulted in reduced time that student nurses spend in clinical settings (at hospitals). In this context, it is important for nurse educators at universities to understand how the learning of nurse-education content delivered in a university setting can be most easily transferred to a clinical setting in a hospital. That is, how can university nurse educators develop learning for nurses at university so that the nurses will automatically use the learning when it is needed in the clinical and hospital settings.

The role of the nurse is one of continuous ongoing personal care based on individual client needs through therapeutic communication and intervention. In order to educate a nurse in an age of technology and specialisation, an integrated programme is necessary. Subjects areas which are included comprise biological, behavioural and nursing sciences. The programme also provides a range of clinical experiences to enable students to acquire the competencies necessary for a nurse to practise nursing. To enable

achievement as an independent member of the health care team, most schools of nursing foster a problem-solving approach based on scientific principles.

According to de Tornyay and Thompson (1982), the teacher of nursing may well enter a teaching career with neither the pre-requisite trial of competence nor the experience with the tools for teaching. Karuhije's study (1986) reconfirmed that many nursing programs have prepared clinical specialists but many faculty positions was filled by individuals with subject expertise but not teacher preparation expertise. Effective instructional and organisational strategies at university can improve students' transfer of knowledge and skills to the workplace in principle, but in practice, there are at least four constraints that are perceived to hinder transfer.

The first constraint is the trend of universities employing part-time or sessional staff to supervise students of nursing in the clinical settings. Reports on tenure of academics (de Tornyay & Thompson, 1982) testify that a person without tenure appointment is less likely to engage in the development of long term commitments and long term research. Furthermore, de Tornyay and Thompson's report (1982) indicates that persons without tenure appointment tended to work with one eye always on the next job application or the renewal of a contract. Findings from Wareham's study (1995) also highlighted that part-time nurse teachers had fears of not being fully informed, feelings of vulnerability if not included in communication network, and the pressure to work well beyond their paid

hours of work. Part-time employment tends to encourage activities with immediate or short term results such as non-attendance at meetings and non-involvement in research activities. A tally of staff employment status in a School of Nursing (Edith Cowan University), July 1994, indicated 48 out of 94 academic staff, (51 percent) were employed on a sessional basis in comparison to July 2000, in the same School of Nursing, 46 out of 65 academic staff, (71 percent) were employed on a sessional basis.

The second constraint appears to be the teachers' inadequate knowledge of educational aims, goals and objectives. This problem is created with increasing employment of teaching staff without formal educational qualifications in the Schools of Nursing. Wilson, Shulman and Richert (1987) viewed subject matter and pedagogy as equally essential to effective teaching. Teachers' inadequate knowledge of educational aims, goals and objectives can hinder their clear vision of the expected learning outcomes and pedagogical decisions. These teachers may be unable to adequately facilitate transfer of theory to practise in students' learning.

The third constraint is that, with the implementation of a career structure in the nursing profession, there has been an increase in professional remuneration. Many highly qualified nursing professionals from academic institutions have moved over to clinical agencies for better paid appointments and higher career status. McHale's study (1991) identified reasons for attrition and mobility among nurse teachers. Some of the reasons for dissatisfaction were excessive meetings and lack of communication. This

shift of nurse teachers to the clinical agency has also compounded the problem of shortage of qualified staff in the Schools of Nursing.

The fourth constraint relates to clinical teachers unfamiliarity with the university's curriculum. Clinical teachers play a dominant role in assisting students to develop critical thinking skills as well as decision making ability (Malek, 1986; Tanner, 1993). In order to assist the students, it would be better if clinical teachers adopted teaching strategies that facilitated integration of knowledge from varied sources and hence related theory to practice. Karuhije (1986) and Myrick (1991) found that many of the sessional clinical teachers employed by the Schools of Nursing in Australia are unfamiliar with the School's curriculum. These teachers vary in their educational and professional experiences. Despite these differences, all are expected to facilitate students' transfer and application of classroom theory to diverse patient situations.

Importance of the Transfer of Learning

Due to the limited time for clinical practice in the University nursing programmes, as well as the scarcity of clinical resources, there is an increasing demand for clinical teachers' accountability. Clinical teachers need to ensure that the learning environment encourages learning. This can be achieved by clinical teachers motivating their students to be actively involved in the learning process. When teachers can identify and use their students' existing knowledge and skills, they are more likely to increase students' motivation, application of knowledge and understanding. Clinical

teachers should be able to monitor the quality of students' learning and provide feedback on how well they are applying theory to practice as well as transference of learning.

At the present time, graduates of nursing programmes are expected to think critically and make impromptu clinical decisions about patient care. The clinical decision made must be congruent to the change in patient status. In order for a nursing student to make that decision and then implement the care, a very complex learning process has to take place. Synder and Pressley (1990) view learning as the cognitive processes of encoding, storage and retrieval. Teachers can facilitate these processes by using three strategies. Firstly, they can direct learning at students' encoding of information so they can remember and associate it with other information. Secondly, this has to be followed by strategies directed at ways in which students work with the information to promote understanding. Thirdly, the focus of the strategies will be on how the students demonstrate their learning. The current demand in nursing is that clinical teachers learn more about effective clinical facilitation.

Educators have been researching how to measure effective teaching but this is still unclear. Stafford and Graves (1978, p.45) stated that "both quality of classroom teaching and ability in demonstrating clinical competence greatly influence the success of graduates of a nursing programme." Kiker (1973) also reinforced that "For nursing, the good teacher is one who helps the student relate past knowledge to new experience, is a learner with the

student and eager to share newly gained knowledge, and serves as a role model " (p.721). Griffith and Bakanauskas (1983) stated that the instructors' expectation of the students' success creates a positive learning environment where students will be more likely to succeed. Marriot (1991) and Nehring (1990) reconfirmed the importance of sound interpersonal skills and a positive attitude of clinical teachers as the most distinguishing characteristics. Teaching efficacy is the belief that teachers can overcome outside influences to bring about learning (Guskey & Passaro, 1994; Soodak & Podell, 1996). It is derived from the confidence that teachers have in the teaching learning process as a means to affect change. Nursing teachers have the opportunity to bridge the theory-to-practise gap by creating a learning environment that will successfully prepare students to practise in a new health care environment.

As students are direct recipients of clinical facilitation, they are in a good position to observe the behaviours of their clinical teachers. This view is supported by Zimmerman and Waltman, (1986) Pratt and Magill (1983) and Sieh and Bell (1994). Mogan and Knox (1987) have been concerned that students have a tendency to rate teachers on personal qualities and the process may result in a popularity contest instead of evaluation of instructional effectiveness. From a pilot study carried out by this researcher (Chow, 1991), findings indicated students of nursing were concerned with clinical facilitation and transfer of learning from university to clinical settings. For this current study, the researcher has assumed that students are a

worthwhile source of data in the evaluation of effectiveness of clinical facilitation and transfer of learning.

For most Schools of Nursing in Australia, there are three groups of teachers involved in clinical facilitation. First, there are the classroom teachers who have little or no contact with the clinical areas. The second group comprise teachers who teach in classrooms as well as facilitate in the clinical settings. The third group is made up mainly of clinical teachers who only facilitate students in clinical settings. The teachers from the first two groups are mainly employed on tenured or contractual appointments whereas almost all of the third group of teachers are employed on a sessional appointment basis. Karuhije (1986) stated that "contrary to current trends and practices, the clinical teacher and the classroom teacher in the undergraduate nursing education should always be the same person " (p.143). Students of nursing may not benefit to the same extent from clinical teachers who may lack knowledge of theoretical content taught in the classroom. Teachers who lack current clinical practice may lack credibility in instruction of theory and the students' integration of theory to practice.

Increased communication between teachers and students, as to what each of their own objectives are, and how they view each other's roles, is important. Awareness of each others' expectations can facilitate increased understanding and working together to reach common goals (Stuebbe, 1980). Stuebbe also found significant differences in how characteristics were ranked by students and teachers. Sellick and Kanitsaki (1991) rationalised

that little consensus on the effective clinical teaching behaviours in many studies may be due to the differences in faculty and student samples, as well as the teachers' behaviours that have been investigated. From Stuebbe's (1980) study, there was evidence to suggest that students at different levels of their training ranked characteristics differently. Freshmen ranked nurse characteristics the most important, while seniors ranked personal characteristics the most important. From this study, findings could be compared with that of other nursing programmes. Results from Stuebbe's study may improve awareness on the part of the teachers as to what the needs and expectations of their students are.

Significance of the Study

The study is of importance for three reasons. The first reason is that clinical teachers need to know which teaching behaviours are most effective. Clarification of effective teaching behaviours can assist experienced teachers in developing further skills and teach new clinical teachers. In Australia, nurse-education has undergone a time of great change. Education at hospital-based schools of nursing have merged to form Colleges and Faculties in tertiary institutions. These changes in the pattern of managing nurse-education compounded by the professional service provision to a wider health care sector, resulted in a challenge to the traditional role of the clinical teacher, which was to link theory to practice. In the current era of financial limitations, accountability and increased student enrolment in the School of Nursing, the nursing clinical experience is vulnerable to budget constraint. The second reason for this study is that Nursing Schools need to

find out how to maximise effective use of clinical teachers and clinical experiences. The third reason is to understand the theoretical importance of clinical teaching. Reasons for entering nurse-education and preparation for that career will impact the effectiveness of the teachers in their clinical role.

Statement of the Problem

The current study addresses the effectiveness of clinical facilitation and transfer of learning from university to clinical setting. As students are direct recipients of clinical facilitation, they are in the best position to observe their teachers' behaviours. What teacher behaviours are considered essential by undergraduate students in facilitation of learning ? To ascertain whether students at different levels of training perceive teachers' behaviours to be of equal importance, the sample will be drawn from semester 4, 5 and 6 for the study because these students. Mutual awareness of teachers' and students' expectations can also facilitate achievement of common goals. For this reason, the study will also explore any significant differences between students' and teachers' expectations.

The following six questions will be addressed in the present study:

1. What are effective clinical teaching behaviours as perceived by students of nursing?

2. What is the relationship between students' and teachers' perceptions of the importance of teaching behaviours to the facilitation of students' transfer of learning to the clinical situation?

3. How do students rate their clinical teachers' demonstration of established effective clinical behaviours?

4. How do teachers and students rate clinical teachers' demonstration of effective clinical behaviours differently?

5. How does the seniority of the students affect their perceptions of clinical teachers' effectiveness in facilitating students' transfer of learning?

6. What effects do teacher and student characteristics have on students' perception of facilitation and transfer of learning from the university to clinical settings?

Definitions

The definitions of the major variables are stated below.

Characteristics of clinical teacher

Attributes and behaviours demonstrated by clinical teachers of nursing from a university.

Clinical competence

The ability to transfer and apply theoretical knowledge to the provision of holistic care. Clinical competence is the culmination of many sub - competencies, all of which are acquired by study, observation and reflective practice.

Clinical experience

Planned and unplanned activities that students engage in when providing nursing care to patients in the hospitals, community or clinics.

Clinical teacher

A nurse employed by the university to teach, facilitate and evaluate

students during clinical experience at a hospital, community or clinic.

Contractual appointment

A contractual agreement whereby a faculty member is hired by the university either on a sessional or part-time basis to teach nursing students.

Semester

In a university teaching year, there are two semesters. Each semester has a duration of 16 weeks. As an example, semesters 5 and 6 equate to 2 periods of 16 weeks in the 3rd year of nurse training at Edith Cowan University.

Overview of Study

Chapter one provides the background, the significance of the study and the research questions to be answered. Chapter two provides a review of the literature pertaining to the effectiveness of clinical facilitation and transfer of learning from university to clinical settings. Chapter three discusses the conceptual model that has been used. Chapter four describes the methodology which includes the research design used, selection of the subjects, data collection and ethical considerations. The findings of the study are provided in chapter five. Discussions related to significant findings, implications for improvement of clinical teaching, recommendations, limitations and recommendations for further research is presented in chapter six.

Chapter 2

LITERATURE REVIEW

Introduction

This chapter begins with an overview of studies in clinical practice followed by a review of teacher effectiveness in nursing and general education. The focus of discussion is then directed towards preparation of clinical teachers and how clinical teachers can help facilitate students' transfer of learning to the clinical situation. The chapter concludes with a discussion of the importance of students' and teachers' expectations followed by research aspects relating to the transfer of learning in Perth, Western Australia.

Clinical Practice

The quality of nursing education depends upon the quality of the clinical experience (National Nurse Education Review, 1994). As nursing is a practice based profession (Craddock, 1993; Infante, 1985; Rafferty, 1992; Townsend, 1990), the inclusion of clinical experience completes the education begun in the classrooms and laboratories (Napthine, 1996). Clinical practice provides students with opportunities to apply theoretical knowledge to patient care. Students who participated in Wilson's (1994) study stated that they understood some classroom and reading materials only after they have observed and practised the clinical applications. As the clinical teacher is the person with direct, immediate responsibility for ensuring that a student's field experience leads to clinical competency (Napthine, 1996), how effective then is clinical teaching?

Teacher Effectiveness in Nursing Education

In the 1960's and 1970's, studies conducted in the United States examined classroom and clinical teaching jointly. There are few published studies addressing clinical teaching effectiveness including descriptions of effective and ineffective clinical teaching behaviours in nursing (Stafford & Graves, 1978) and the situation has only marginally improved since 1978. Some authors developed a wide variety of behaviours that should result in effective clinical teaching. However, it has been difficult to gain a consensual validation of the behavioural categories that do actually contribute to clinical facilitation of learning. To judge the usefulness of a clinical evaluation tool there must be clear definitions for the behaviours to be measured (Brown & Hayes, 1979; Bronstein, 1979) and acceptable evidence that they 'work'.

Some classic studies including Ryan (1961), identified three distinct patterns of teaching behaviours associated with effective instruction. These behaviours included warmth, understanding and friendliness in the first pattern followed by responsible, businesslike and systematic behaviours in the second pattern. The third pattern involved stimulating, imaginative and surging behaviours. Students valued the availability and accessibility of the instructor (Armington, Reinkka & Crighton, 1972; Kams & Schwab, 1982; Kiker, 1973). Jacobson (1966) described the relationship of teacher and student as important to learning in the clinical setting. Jacobson calls this relationship the human component which is not present in the same way in the classroom. Critical requirements in the human component include availability to students, interpersonal skills relationships and possession of

personal characteristics including honesty, warmth, patience and calmness. A teacher's interpersonal skill has been identified as critical to his or her effectiveness (Griffiths & Bakanareskas, 1983; Kiker, 1973; Mogan & Knox, 1987).

Pohlman (1975) found that effective instructors must attend to affective aspects of their content areas. This includes motivation and attitude enhancing facets of teaching. According to Armington, Reinka and Crighton (1972), Jacobson (1966) and Kiker (1973), other frequently mentioned attributes include general knowledge, professional competence, evaluation skills and personality traits such as enthusiasm, ability to role-model and a non-judgemental attitude. Schimpfhauser, F., Wittleman, J.K., and Sachs, L., (1981) assert that clinical teachers must possess those skills which are effective for communication (questioning) and learner assessment in small group, one-to-one conferences with students and clinical supervision.

Some studies of clinical teaching have concentrated on effective and ineffective teacher behaviour (Reeve 1994; Bergman & Gaitskill 1990; Knox & Mogan 1985; Brown 1981; O'Shea & Parson 1979; Jacobson 1966). Due to the differences in methodology for data collection, the results they reported are not comparable. Effective and ineffective teacher behaviours identified in the various study were significantly dissimilar.

An important study to deal with the characteristics of the 'best' and 'worst' clinical teachers was conducted by Mogan and Knox (1987). Nehring (1990)

replicated the study using the instrument developed by Mogan and Knox, known as the Nursing Clinical Teacher Effectiveness Inventory (NCTEI). Both studies revealed that the 'best' clinical teacher characteristics are good role models, enjoy nursing, enjoy teaching and demonstrate clinical skill and judgement. Students indicated that the 'worst' clinical teacher characteristics are not good role models. In both studies, the most distinguishing differences between the 'best' and 'worst' clinical teachers were those of being a good role model and encouraging mutual respect.

Sieh and Bell (1994) measured the perception of effective clinical teachers using the NCTEI. Reports were comparable with those of other studies, except for the item of good role modelling. Sieh and Bell used students from associate degree programmes compared to other studies that use baccalaureate students. Good role modelling was rated higher in associate degree programmes than in the baccalaureate programmes.

In Australia, Kanitsaki and Sellick (1989) conducted a study on the characteristics of effective clinical teachers from the students' perspective. The extent to which students' perceptions were influenced by year of study, educational institution, students' status and demographic characteristics were surveyed. Results revealed no significant differences for year of study, institution, student status, age and gender. Sellick and Kanitsaki (1991) extended the study to the faculty's perspective. Results indicated that teachers rated all behavioural categories as more important than the students rated them. However, both students and faculty regarded 'teacher

behaviour' to be the most important and 'evaluation behaviour' to be the least important clinical teaching behaviour.

There is a positive correlation between effective clinical instruction and nurse-learning outcomes (Krichbaum, 1994). Student learning demonstrated by the Basic Knowledge Assessment Tool (BKAT) is significantly related to teacher behaviours such as use of objectives, providing opportunities, asking effective questions, providing effective specific timely feedback, displaying enthusiasm and concern for the learner's programme. Empirical evidence from Krichbaum's findings point to the need to further investigate teacher behaviours that relate to different types of student learning outcomes. There is a lack of a universal classification system and categories of behaviours are poorly defined. Furthermore, the problem is compounded by researchers' inconsistencies with the grouping of their findings within behavioural categories. Despite variations of classification systems of the researchers, some studies have revealed common categories. Comparing Kiker (1973) and Mogan and Knox (1987), three categories (professional competence, interpersonal skills and personal attributes) have emerged. The level of educational preparation of clinical teachers and student-teacher ratios have also been researched in relation to clinical teacher effectiveness. Jacobson (1966) identified student-teacher ratio in the clinical area as a significant factor in determining teacher effectiveness. Educational level of clinical teachers has a small positive relationship with clinical teacher effectiveness.

Teacher Effectiveness in General Education

Some more recent studies on teacher effectiveness in general education have focused on the teacher's thought processes and knowledge base. Researchers Wittrock, (1986) and Calderhead, (1987) examined factors that influence the teachers' interactive decision-making processes. Further attempts made, identified the process of effective decision-making by a teacher as well as factors that determine approaches teachers employ in teaching similar content to diverse groups.

Other researchers like Medley (1979) thought that the key to success in teaching must lie in the characteristics of teachers but the assumption proved mostly correct. However, Medley's research identified three characteristics - knowledge, clarity and warmth - which are mildly, positively related to success in teaching. Attempts were made by researchers (Wilson, Shulman & Richert, 1987) to investigate the professional knowledge base of teachers. One conclusion from their research has indicated that subject matter and pedagogy are two separate domains of equal importance to effective teaching. These researchers claimed that effective teachers employed seven types of knowledge: a) knowledge of education contexts; b) content knowledge; c) knowledge of other content; d) general pedagogical knowledge; e) knowledge of learners; f) knowledge of education aims, goals and objectives and g) knowledge of curriculum (p.113). Anderson (1993) suggests that effective teachers must also know the structure, function and development of the material they teach. To ensure that the content is suitable to a diverse group of learners, an effective teacher has the capacity

to transform his or her content knowledge. According to Shulman (1987), good teachers must know how to transform their knowledge into effective examples, explanations, illustrations and activities. The teacher's capacity to transform his or her content knowledge to suit a diverse group of learners, will facilitate the process of information transformation from teacher to student.

Some studies focused on how expert teachers think about their students, the subjects they teach and the process of teaching. Expert teachers focus more than beginning teachers on analysing a problem and mentally applying different principles to develop a solution (Swanson, O'Connor & Cooney, 1990). Researchers (Borko & Livingston, 1989; Sabers, Cushing & Berliner, 1991; Russell & Munby, 1992) concluded that experts and novices think about classroom problems in different ways. For example, an expert works through a series of problem-solving stages that allow the expert to apply extensive knowledge about students and teaching. Novices, on the contrary, often jump to the first solution that comes to mind. Peterson (1992) argued that what makes teachers 'experts' is the quality of their professional knowledge and their ability to be aware of their own thinking.

Pratt (1988) focused on three perspectives of teacher effectiveness in adult education. The first perspective (used since the 1950s) is based on the belief that there exists a universal set of teaching principles and skills applicable to most learners in most situations. Adoption of this perspective results in misrepresentation of teaching as mechanical procedures and routines

(p.247). The second perspective (used since 1970s) compares teaching to problem solving. According to Pratt (1988), the teacher is seen as a clinical practitioner whose effectiveness is due to the ability to solve complex, ambiguous and unpredictable problems within the learning environment. The third perspective focuses on the relationship between implicit and explicit values and the teachers' thinking about what and how to teach. An effective teacher can critically examine his or her own values and acknowledge the link between teaching, personal and cultural values (p.249). Pratt asserts that teachers conceivably move through each of the three perspectives as they gain experience. Movement through the perspectives, according to Pratt, is cyclical and regressive. An understanding and acknowledgement of the interdependence of all three perspectives can enhance teacher effectiveness.

In their review of a number of studies, Wilson, Shulman and Richert (1987) concluded that subject matter and pedagogy are two separate domains of equal importance. Perhaps in the previous studies of clinical teacher effectiveness, there is the absence of clearly established categories or domains hereby impeding the analysis of data and the outcome.

In the late 1980's and early 1990's, educational researchers focused on the relationship between teacher behaviour and student achievement. Important findings from these studies have identified two forms of process-outcome emphasis, school effects and teacher effects with student gains (Good & Brophy, 1997). Most school effect studies have focused on basic skills

instruction and have been correlational rather than experimental. Therefore, findings are subject to multiple interpretations. Good and Brophy (1997) identified several characteristics that are observed consistently in schools that elicit good achievement gains. These characteristics include the importance of strong academic leadership that produces consensus on goal priorities and commitment to instructional excellence, an orderly school climate, positive teacher attitudes and expectations, a focus on instructional use of the available time, careful monitoring of progress towards goals through student testing and staff evaluation programmes, strong parent involvement programmes and consistent emphasis on the importance of academic achievement (p. 360).

Good (1996) and Reynolds (1992) focused on process-outcome at the classroom level. The following six aspects are widely replicated findings concerning the characteristics of teacher-effects research that are related to success in teaching. One indicates the value of teacher role definitions that emphasise positive expectations and a sense of efficacy. A second supports time allocation policies that maximise student opportunities to learn. A third supports the use of effective classroom management and organisation approach. A fourth supports curriculum pacing that moves students through the curriculum rapidly, but in small steps that minimise frustration. A fifth supports active instruction by the teacher making sure that the students achieve mastery of basic objectives. A sixth supports maintenance of a supportive learning environment (Good & Brophy, 1997, p.386).

McInerney and McInerney (1998) assert that effective teachers teach for student-centred learning in Australian schools. The basic frameworks identified by McInerney and McInerney which guide teaching and learning are learner-centred principles. Use of a competency framework for beginning teachers will enhance constructivist views of the learning process. The learner-centred principles include cognitive and meta-cognitive factors, motivational and affective factors, developmental and social factors and individual differences. The competencies drawn from the National Competency Framework for Beginning Teaching. (Australian Teaching Council, 1996) include use of professional knowledge and values (McInerney & McInerney, 1998, p.5). The essential element in the constructivist view of learning is that there is an active involvement of the learner, and a shift in focus from what the teacher may do through explicit teaching to influence learning, to what the learner does as an active agent in the learning process. Phillips (1995) asserts that there are many varieties of constructivism. The approaches identified are personal and social constructivism. Personal constructivism focuses on the individual's internal mental state and transformations of understanding that occur within the individual. However, social constructivism focuses on the construction of knowledge in a social context, with the individual making personal meaning from a socially-shared perception (McInerney & McInerney, 1998).

Preparation of Clinical Teachers

According to Mager (1968), teachers can promote successful experiences and increase student confidence. Furthermore, teaching strategies used by

the clinical teachers may have a profound effect on students' learning and professional role development. Clinical teaching is carried out by clinical teachers with varying academic qualifications, clinical experience and familiarity with the school's philosophy and curriculum (Karuhije, 1986). Seventy-five percent of participants in Karuhije's (1986) study agreed that "... most graduate programmes do not provide individuals with basic information on clinical instruction" (p.40). Seventy percent of those participants who agreed with the statement further expressed the desired contents that should be in a graduate education programme on clinical instruction. Ranked in order of frequency, the desired content is: clinical teaching strategies, evaluation of student clinical performance, developing and writing clinical objectives, developing clinical evaluation tools and clinical teaching practicum with experienced teachers (Karuhije, 1986). Karuhije's survey (1986) clearly points to an overwhelming need for change and improvement in the preparation of nurse educators with special emphasis placed on clinical teaching competence.

Lowman (1984) found evidence to support the view that even though many instructors have developed excellent skills on the job, without formal training or consultation, many others have never developed the competence they might have achieved with appropriate instruction. Therefore, one cannot assume that ability to teach in a classroom is sufficient preparation for clinical teaching. Reilly and Oermann (1985) stated that a clinical teacher with knowledge and expertise in clinical practice is not necessarily a good clinical

teacher. Some attributes of a clinical teacher include knowledge and clinical competence, relationship with students, personal characteristics and teaching skills. Craddock (1993) recommended that a student nurse requires a clinical teacher with adequate teaching preparation. This recommendation is supported by Bergman and Gaitskill (1990) who emphasised that special attention be given to the preparation of clinical teachers to teach because clinical teaching is the ability to relate underlying theory to clinical practice. Therefore, it is evident that clinical teachers have to be prepared for their role in teaching.

How can Clinical Teachers Help Facilitate Students' Transfer of Learning?

Although it is important for the design of instruction to make provision for external activation of the retrieval process, it is even more important for the learner to acquire strategies that will enable the individual to do this alone. In order to encourage such development, the teacher must identify "what is going on" in learning and, thereby, to choose judiciously the appropriate communication. Many considerations must also be taken into account when planning and implementing the curriculum content in education of students of nursing. The careful sequencing of content and instruction can enhance retrieval and transfer of learning entities at a later date, but what other factors must a teacher consider to enhance transfer?

Hunter (1972, p.2) found that teachers can best utilise transfer to increase learning through the use of four factors identified. These factors are:

1. The similarity of the situation in which something is learned, and the situation to which that learning may transfer;

2. The students' association of the old and new learnings for any one of the many reasons;

3. The degree of the effectiveness of the original learning; and

4. The perception of essential or unvarying elements which exist in both the old and new learning.

Considering Hunter's identified factors of transfer, the teacher must identify subordinate skills and suitable sequences to enable, and maximise, smooth transfer. The careful sequencing of contents and instruction can enhance retrieval and transfer of learning entities at a later date. Magill (1989, p.395) supports Hunter's factors of transfer and maintains that the teacher can maximise students' potential for transfer of psychomotor skills, if these principles are applied in their teaching. They are to:

1. Maximise the similarity between teaching and the ultimate resting situation;

2. Provide adequate experience with the original task;

3. Provide a variety of examples when teaching concepts and principles;

4. Label or identify important features of a task; and

5.   Make sure that general principles are understood before expecting such transfer.

Considering Magill's principles, "Provisions of adequate experience with the original task," how much practice does a student need? The assumption is that the more practice a person has, the better the eventual performance. How much practice is beneficial to assume the optimum amount of learning is met? Overlearn or overpractice can enhance student's performance. Magill (1989) (p.421) states, "the intent of extra practice time is to help develop a memory representation of the skill that is as desirable and as accessible as possible" (p.421).

Melwick (cited in Magill, 1989, p.422-424) stressed three important points in implementation of the overlearning practice strategy. These points are:

1.   Effective implementation of this strategy can be achieved only when the teacher knows how much practice the students need to achieve a certain performance level;

2.   The amount of extra practice required should not be based on the notion that "more is better." Research indicates that a "safe bet" can be around 100% additional practice trails beyond the number required to achieve the specified performance criterion; and,

3.   The use of requiring additional practice beyond what is needed to achieve a performance criterion seems to be a particularly useful strategy for skills that will be practised

during a specified period and will then not be performed for some time after.

Salomon and Perkins (1989) described two kinds of transfer, termed low-road and high-road transfer. "Low-road transfer involves the spontaneous, automatic transfer of highly practiced skills, with little need for reflective thinking." (p.118). On the contrary, high-road transfer involves consciously applying abstract knowledge learned in one situation to a different situation. Salomon and Perkins further sub-classified transfer as forward-reaching or backward-reaching. Forward-reaching transfer is when a learner is looking forward to applying the knowledge gained, whereas backward-reaching transfer occurs when a learner is faced with a problem and reflects on past situations to help solve this new problem.

Woolfolk (1995) summarized transfer as the "influence of previously learned material on new material" (p.314). Low-road transfer is "spontaneous and automatic transfer of highly practised skills." Years of research and experience show that students cannot automatically transfer what they learn to new problems. So how can teachers help? Salomon and Perkins (1989) assert that students will be more likely to transfer information to new situations if they have been actively involved in the learning process. Teachers must encourage students to form abstractions that they will apply later. Woolfolk (1995) suggests that newly mastered concepts and principles must be practised in a wide variety of situations. Positive transfer

is encouraged when skills are practiced under authentic conditions, similar to those that will exist when the skills are needed later. Woolfolk (1995) also concluded that greater transfer can be ensured by overlearning, practising a skill past the point of mastery. Overlearning helps students retrieve the information quickly and automatically when it is needed. Due to the complexity associated with the issue of transfer, it is clearly impossible for teachers to directly teach each particular task in each particular setting that students will encounter in their everyday lives. Instead, teachers have to find effective ways to promote the generalization of learning to enhance transfer of learning as best as they can.

Students' and Teachers' Expectations

What teacher characteristics are considered most essential by undergraduate students in the facilitation of learning? Do students at different levels of training consider different characteristics, or some teacher characteristics, to be of equal importance? Kiker (1973) maintained that "undergraduate students in nursing and in education place professional competence of a teacher higher than the teacher's personal attributes, whereas graduate students rank creativity first." In Wong's study (1978) on differences of perception of effective teaching behaviours, findings indicated that perceptions of the student at different levels of their training were different. The junior students were more concerned with apparent teachers' sensitivity to students' needs, whereas senior students rated apparent competency level of teachers as of importance. Additional studies by Brown (1981) and Coles, Dobbyn and Print (1981) supported the importance of

faculty support for good student performance. Their findings also demonstrated discrepancies between what students perceived as effective teaching behaviours and the behaviours demonstrated or preferred by the faculty. Therefore, clinical teaching strategies deserve attention to enable effectiveness in clinical facilitation of students application of theory to practice.

According to Good & Brophy (1997), teachers' expectations are inferences that teachers make about the future behaviour or academic achievement of their students, based on what they know about these students now. Teachers' expectations affect on student outcomes. However, expectations must be monitored and evaluated to ensure that they change appropriately, in response to changes in students (p.113). In their review on teachers' expectancies in the classroom, teachers' expectation effects are especially important when considered with other teaching abilities.

Research Aspects Relating to The Transfer of Learning in Perth Flowing from The Literature Review

Based on this literature review, and in view of the fact that what is true in one culture, or one situation in another country, is not necessarily true in Australia. There are at least six aspects relating to our knowledge of learning transfer from classroom to clinical practice in nursing education in Perth, which could be investigated. These are:

    1   The clinical teaching behaviours that are effective in nursing education, as perceived by the student nurses;

2 The difference between the perception of teachers and students of the importance of clinical behaviours to the transfer of learning;

3 The students' perceptions of the effective clinical teacher behaviours that are important for transfer of learning;

4 The difference between the perception of senior and junior students as to what facilitates transfer of learning best;

5 The characteristics of teachers that best facilitate transfer of learning; and,

6 The characteristics of students that best facilitate transfer of learning.

These aspects have guided the research questions for the present study.

Chapter 3

THEORETICAL MODEL

Introduction

This chapter discusses the major variables that are related to effective teaching and learning. The conceptual framework used for the present study, the Clinical Facilitation Model was based on an adaptation of the Dunkin and Biddle's (1974) model of teaching which is composed of three components, the Presage factors, the Process factors and the Product. The Presage - Process - Product (3P for short) model is a unidirectional, from Presage - to - Process - to - Product (Figure 3.1).

Presage	Process	Product
Student characteristics Ability Motivation Prior knowledge	**Teaching learning processes** →	**Student achievement**
Teaching content Teacher characteristics Curriculum Teaching methods		
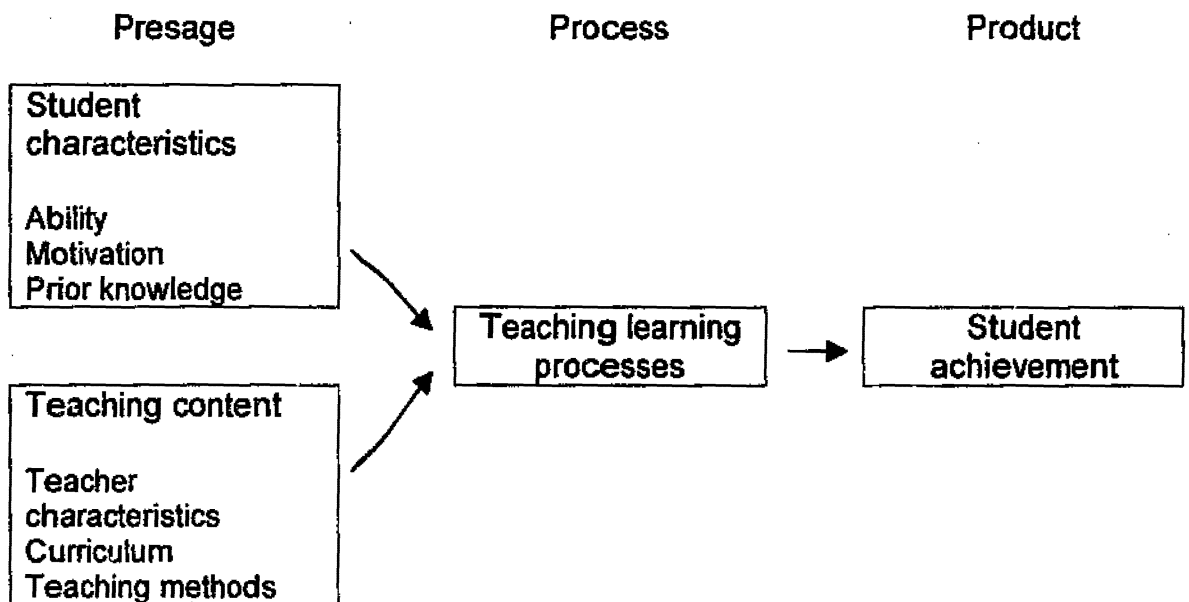
Figure 3.1. Presage, Process and Product in the Classroom
Source: Dunkin and Biddle (1974)

The Presage factors comprise the first stage. These are aspects of students' knowledge, experience and the teaching contexts that existed prior to the immediate action in the classroom. Presage factors are derived from the learner (for example, abilities, motivation and prior

knowledge) and the teaching situation (for example, teacher characteristics, curriculum, courses demands, pressures and teaching methods). These Presage factors feed into the Process factors.

Presage factors

<u>Ability</u>

Along with intelligence, expectancy, students possess other forms of intellectual aptitude that they can bring to bear as learning resources, if the forms of curriculum and instruction in the classroom allow them to do so (Good & Brophy, 1997, p.108). Gardner (1991) argues that people possess at least seven types of intellectual abilities in varying degrees. The abilities are linguistics, logical, mathematical, spatial, musical, bodily-kinesthetics, interpersonal and intrapersonal. An effective curriculum planning will allow students to develop their complete range of abilities. A nursing student can be given a variety of assessments to assess intellectual abilities. A tutorial presentation provides opportunities for demonstration of verbal abilities, whereas a practical assessment enables demonstration of cognitive and psychomotor skills. Students of nursing are also assessed on their mathematical abilities by having to pass a medical calculation test each semester, without the aid of a calculator. Therefore, a teacher should be aware of the students and their full range of abilities, view these abilities as resources that students will both develop and use in their learning. This knowledge will enhance the teaching-learning process and student-learning outcomes.

Reinforcement and Motivation

Humans' possess thinking and speaking abilities that enable them to learn by observing models and by being instructed. Students respond to motives such as self-actualization, cognitive consistency, curiosity and sometimes the desire for extrinsic reinforcement. Reinforcement from the teacher is only one of many factors influencing students' behaviour (Good & Brophy, 1997, p.143). Heckhausen (1991) asserts that there are individual differences in students' motivational systems. Teachers are likely to increase students' motivation to perform a desired behaviour only if they deliver some relevant motivational consequence following performance of the behaviour. However, teachers' motivational efforts may have negative effects when they are based on incorrect assumptions about students' motives. Heckhausen's study (1991) showed that if one begins to reward people for doing what they already were doing for their own reasons, the people's intrinsic motivation to continue the behaviour in the future is decreased.

In summary, reinforcement of student behaviour is likely to be effective only to the extent as reinforcers but otherwise can undermine intrinsic motivation and other natural outcomes of the behaviour. Motivation as a presage factor can affect the process of teaching and learning. Teachers need to specify desired behaviour in positive terms and maximise students involvement in productive activities.

Prior Knowledge

For learning to be meaningful, material must be relevant to the learner. Alexander, Kulikowich and Jotton (1994) assert that the most powerful and positive learning outcomes occur in context where students' knowledge and interest are well matched to the nature of the learning task. Therefore, reference to prior knowledge about a topic before presenting new material is very important. This can be student induced or teacher facilitated. Teachers should make a conscious effort to find out what students' informal knowledge is prior to teaching new concepts. When this informal knowledge is likely to conflict with teaching, attempts need to be made to alter students' misconceptions so that an adequate knowledge base is developed (Chinn & Brewer 1993). The teacher can assist by helping the students see the limitation in their understanding, then convincing them of the merits of the alternative.

Teaching Content, Curriculum, Methods and Teacher Characteristics

According to Freeman and Potter (1989), teachers act as decision makers, modifying the curriculum in relation to factors such as teachers' beliefs about students' aptitude, their instructional intentions and their subject matter knowledge. If teachers influence the curriculum, then their decisions about curriculum may help to determine performance expectation for students. Teachers' knowledge of subject matter is also an important factor that will affect the performance expectations that they communicate to students. Teachers' knowledge about some subjects or concepts affects their beliefs about the subject and how to present it to

the students. The knowledge and method of delivery can affect their expectation of what students should learn and by what method (Good & Brophy, 1997, p.106). Carlsen's study (1991) indicated that choice of instructional activity affects students' participation in classroom discussion. Findings revealed an increased level of classroom activities characterised by high rates of student questioning when teachers are knowledgeable with that subject. Good (1996) argued that a teacher's performance would improve student learning if teachers are knowledgeable about the subject matter. A teacher can control the nature of the learning environment by setting multiple goals, criterion referenced achievement standards, a broad range of activities and non-differential treatment of high and low achievers.

Teachers have individual differences, especially in their personal characteristics and their beliefs about teaching and learning. Some teachers are likely to show self-fulfilling prophecy effects, especially negative effects that will reduce students' achievement gains (Good & Brophy, 1997). Personal characteristics of teachers', for example, an overreactive or proactive teachers will interact their beliefs with the appropriate curriculum and teaching methods. The overreactive teachers will tend to select more action orientated lessons whereas the proactive teachers will focus on visionary student learning outcomes. These pedagogical characteristics of teachers will tend to have powerful expectation effects. Consequently, teachers' characteristics will affect the selection of curricular content, the teaching methods and therefore the

students' learning outcomes. The Presage factors of teaching content, curriculum, methods of teaching and teacher characteristics will affect the teaching-learning process.

The Teaching-Learning Process

The second stage of the 3P model refers to the Teaching-Learning Process. Depending on the students' predilections for a surface, deep or achieving approach to learning and depending on how students see the demand made by the teaching context, students usually clarify their intentions about handling the immediate task before them as well as their approach to the task (Biggs & Moore, 1993). The teacher's role is to provide, organise and present the content. The Teaching-Learning Process that occurs in the learning environment in turn produces the product of learning. These variables, teacher qualification and involvement in teaching will also be investigated for their impact on students' perception of clinical facilitation effectiveness.

The Product

Outcomes of learning are in large part determined by approaches to teaching, learning and studying. It is an important part of teaching to optimise the chances that the most appropriate approaches to learning are utilised. The learning outcomes are measured both quantitatively and qualitatively. Perceptions of outcome affect both students and teachers. The students' perceptions of outcome will determine their beliefs about their own efficacy that is crucial in determination of their quality and extent of their future and involvement in learning. Outcome measures

could also affect teachers' own beliefs about their ability to teach and their teaching methods (Guskey, 1986). Hence, in the 3P model adapted from Dunkin and Biddle, (1974) the Presage factors 'feed into' Process factors that in turn produces the Product. In the Process stage, the emphasis is more upon how 'something' is learned. The Product stage is usually quantified in terms of student learning outcomes or achievement.

The Clinical Facilitation Model

The Clinical Facilitation Model is an adaptation of Dunkin and Biddle's (1974). There are three major components in this Clinical Facilitation Model: two Presage components relating to the students and to the teaching context, one relating to the Teaching-Learning Process and one relating to the Product or Outcomes of Learning. There are interconnections between all components as set out for Figure 3.2. Like the 3P model as a classroom system by Biggs and Moore (1993), arrows in the model are extended to connect to all components. In the adapted model in Figure 3.2, lighter arrows indicate the main directional flow, from presage through Process to Product. The darker arrows between all components indicate the interactions of the whole system of clinical facilitation of transfer of learning from University to the clinical settings.

Presage Components   **Teaching/Learning Process**   **Learning Contents**

Student characteristics

☐ Age
☐ Gender
☐ Level of training
☐ Previous work experience
☐ Perception of teacher teaching theory
☐ High achiever

Teaching context

☐ Teacher Qualification
☐ Employment status
☐ Teachers theory unit

Meta-learning Processes
Facilitation of transfer

Outcomes of Learning
Quantitative / Qualitative
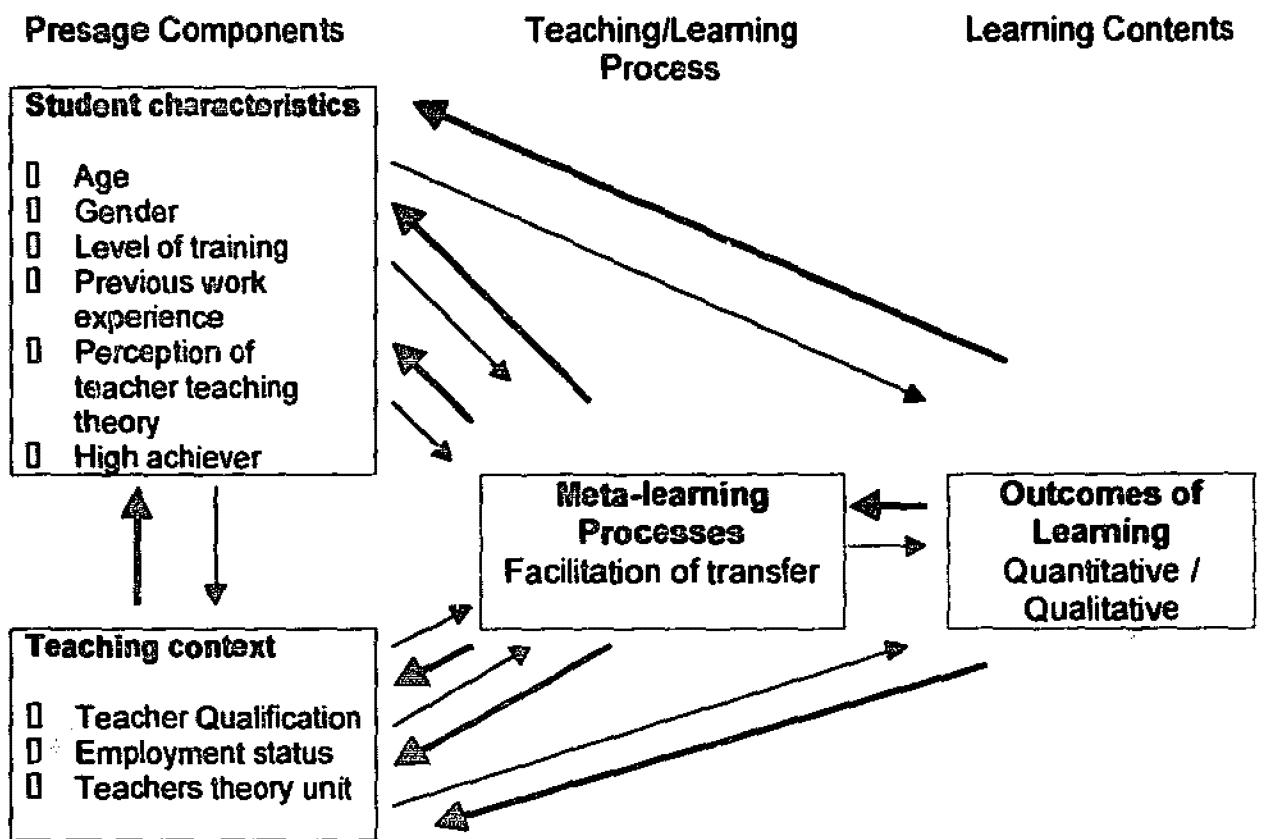
Figure 3.2. Clinical Facilitation Model

The Clinical Facilitation Model is chosen in preference to the 3P model because the multidirectional flow of the arrows indicate the interactions of the whole components, the student and teacher Presage, meta-learning processes and facilitation of transfer in the Process factor with the outcomes of learning. This Clinical Facilitation Model is an extension of the 3P model with inclusions of student characteristics such as age, gender, level of training, previous work experience and perception of clinical teacher's involvement in teaching theory, in the Presage factor component (Biggs & Moore, 1993). In the teaching context of the Presage component, teaching qualifications, employment status and teacher's involvement in teaching theory units, are included. Meta-learning and facilitation of learning are added to the teaching-learning process

component of the model. In the learning outcomes component of the model, qualitative and quantitative measurements are also included. The reasons for the inclusions of the additional factors will be discussed theoretically in the rest of this chapter.

Presage Components

Student Characteristics

Gender difference is an important factor in student Presage. Levinson (1997) found that the developmental tasks of women occurred within a different timeframe than man. For example, some women resume their undergraduate education in their thirties and forties, while most men have been working the whole time. Levinson's study also found that there was greater variety in the female's balance of family and career commitment than with man. This is relevant to the present study because current enrolment at a School of Nursing in Western Australia is about forty per cent of mature age students and sixty percent of school leavers. Caffarella and Olsen (1993) concluded that women, in contrast to men, place a high value on relationships and interdependence. The importance of relationships and a sense of connectedness to others was seen as central to the overall development process throughout a woman's lifespan. It was suggested that, unlike the 'female', the 'male' life course is constructed very differently, with an emphasis focused on relations of dominance and power. Gilligan (1986) argued that terms like 'separateness', 'autonomy' and 'independence' are essentially male values whereas females value relationships, responsibilities, empathy

and attachment, and interdependence rather that independence. While the identity of boys is built upon connectedness and separateness from their primary caregiver, the identity of girls is built on the perception of sameness and attachment to their primary caregiver. Gilligan argued that males tend to have difficulty with relationships while females tend to have problems with individualisation. These are evident when males tend to resolve problems personally rather than sharing with others whereas females tend to interact and share with others more freely.

The age and gender of students is expected to affect self-direction and importance based on connectedness from experiences in work, family and community life (Tennant, 1997). Under the Clinical Facilitation Model, the two student Presage factors of age and gender will be studied to investigate the impact on the other components of the model. The nature of gender differences in students, is expected to have a small effect on their learning outcomes as well as on their perception of clinical facilitation effectiveness. As male students tend to have difficulty with relationships, they are expected to be more in demand of the clinical facilitator's support. Conversely, the female students are expected to work more collaboratively with other team members and, therefore, have less demand of the clinical facilitator's attention (Tennant, 1997).

Using the Clinical Facilitation Model, students' perception of clinical teachers' involvement in theory teaching at the University will also be explored. Cook (1984) asserts that the ability to interpret the

communication and behaviour of others is a valuable by-product of 'person perception'. This is similar to the way an observer tends to form images or impressions based not only on what is actually said but also on observable non-verbal features such as voice qualities, body mannerisms, features and clothing. Burgoon, Buller, Ebesu, White and Rockwell (1996) have also reaffirmed that people form impressions from both visual and auditory cues. Daly, Bench and Chapell (1996) found that visual and auditory cues tend to be governed to a large extent by the perceiver's susceptibility to gender stereotypes. So, in the Clinical Facilitation Model, this student Presage factor, students' perception of teachers' involvement in teaching theory at the University, will be studied. It is expected, that if students perceive that their clinical teacher is involved in teaching theory, then the perception of clinical facilitation effectiveness will be more positive, than if it is not present.

Another student Presage factor in the Clinical Facilitation model is students' previous work experience versus those of school leavers. Students with previous work experience may cope differently from students with no work experience. Goleman (1995) views emotions such as enjoyment in newly found skills and pride in one's abilities are likely to energise learning and propel people into new endeavours (p.28). Students with previous work experience may experience social anxieties in learning settings. These include uncertainties about others' responses or demands and anger when others fail to meet their expectations. However, students with previous work experience will possess more

schemas than students with no previous work experience. Adams (1990) and Anderson (1993) claim that activation of relevant background knowledge can make learning of new context easier and more efficient, if the activated schemas are suitable to the instructional goals.

The last teacher factor Presage in the Clinical Facilitation Model is the teacher's involvement in the teaching of theory units in the University. Brown (1981) stressed that the clinical teacher must be constantly aware of relating theory to practice. It is essential for the student of Nursing to internalise the importance of applying theory to practice for provision of optimum health care to the patients. However, in the School of Nursing in Western Australia where this research is conducted, over ninety percent of the clinical teachers are employed on part-time or sessional contracts. It will be relevant to investigate the implications of clinical teachers who have no involvement in the teaching of theory units at the University, on the Teaching-Learning Process as well as the outcomes.

The surface approach to learning is generally associated with negative factors, such as poor performance, poorly structured learning, dropping-out, and poor academic self-concept. However, the deep approach to learning is associated with positive factors including 'rich' learning, good understanding and a good academic self-concept. The achieving approach is externally driven by the need to excel (Biggs & Moore 1993, p.32). The high achiever often takes the achieving approach and focuses on the Product. Students who are high achievers focus their strategy to

maximise their chances of obtaining high marks. If the teacher rewards accurate recall of details, a high achieving student will give good response to recall of details. Meta-cognitively astute students make use of their ability to recall learned knowledge. The achieving strategy student concentrates on cost-effective use of time and effort. Like the deep approach learner, the high achiever involves a high degree of meta-learning, relating both to context and to content (Biggs & Moore 1993). In the Clinical Facilitation Model, the student factor, high achieving, will be investigated to ascertain if this factor has an impact on the Learning-Process and outcomes.

The level of training of students of Nursing as a Presage factor in the Clinical Facilitation Model will be studied. Previous research has indicated that the perceptions of the students at different levels of their training were different (Wong, 1978). Senior students value different clinical teachers' behaviour compared to junior students. The more junior students placed more importance on teacher's sensitivity to student's needs as effective teaching behaviour. Senior students rated apparent competency levels of teachers as of importance.

Teaching Context

In addition to the 3P model, teacher qualifications, employment status and teacher's involvement in teaching theory is included in the teaching context of the Presage component.

Since clinical teaching can easily consume a large part of the teachers' instructional activities, it is reasonable to assume that faculty who teach in the practice profession must have acquired the requisite basic information and skills for its instructional responsibilities. Similarly, clinical teachers should have training courses in the functional area of clinical teaching (Karuhije, 1986). Davies (1990) asserted that the part-time labour force in nursing is often acknowledged or conveniently assumed to have lesser commitment than the full-time labour force. Hart (1993) reported that part-time staff working in traditional universities in the UK lacked status and were grossly exploited. These part-time staff felt less valued than their full-time colleagues. Previous research has found that part-time staff are not being fully informed, have feelings of vulnerability of not being included in communication networks and have pressure to work well beyond their paid hours of work (Wareham, 1996). One positive aspect identified was that flexible working hours enabled them to meet demands of work and home. In the University where this study will be implemented, clinical teaching is predominantly facilitated by part-time or sessional staff. Significantly, it is meaningful to study the effects of employment status on the teaching-learning and outcomes components using the Clinical Facilitation Model. It is expected to identify if part-time staff will be less or more effective in facilitation of students learning outcomes than full-time staff.

The last teacher factor Presage in the Clinical Facilitation Model is the teacher's involvement in the teaching of theory units in the University.

Previous research has found that the clinical teacher should be constantly aware of relating theory to practice (Brown, 1981). It is important for the student of Nursing to internalise the affiliation of theory to practice for provision of optimum health care to the patients. In the School of Nursing in Western Australia where this research is conducted, over ninety percent of the clinical teachers are employed on part-time or sessional contracts. It will be relevant to investigate the implications of clinical teachers who have no involvement in the teaching of theory units at the University, on the Teaching-Learning Process as well as the outcomes. Significant linking of theory to practice can facilitate effective learning outcomes. It is expected that teachers with no involvement in teaching theory units will be less effective than those with involvement, with facilitation of student learning in the clinical setting.

Meta-learning Processes

Unlike the teaching-learning process component of the 3P model, the meta-learning process is the focus in the Clinical Facilitation Model where students are taught meta-cognitive skills for planning, goal-setting, designing strategies and monitoring the whole process. Meta-learning skills prepare students for coping with everyday living outside of the University.

In nurse education, educators face a challenge in deciding on the most worthwhile content given the large amount of knowledge and vast array of skills essential in the professional field. Previous research has suggested

that teaching only the most central and problematic idea (core conceptions, principles and issues) improves learning and can serve as anchors for many other ideas (Bowden, 1990; Marton & Ramsden, 1988). Davey's (1994) study of students' learning about aseptic technique in dressing procedure had reinforced the evidence that students lacked understanding of principles. Teaching methods are perceived by students as a pervasive influence on how and what students learn. A number of teaching practices have been linked to deep engagement learning including provisions of choice, variety and control in relation to the contents and methods of learning (Trigwell & Prosser,1991). When students are overwhelmed with work and this being an apparent issue for nursing students (Trigwell & Prosser 1991; French 1992), poor motivation and superficial learning are likely outcomes (Ramsden & Entwistle, 1981; Watkins, 1982, 1984).

Assuming that a student nurse has completed three years of training, how can a trainer ensure that the trainee can retrieve and transfer the learned knowledge and skills to a different situation or within the same context that surrounded the original learning. Nisbet and Shucksmith (1984) advocate that for the learner to develop the capability of transferring learning strategies from one situation to another, the learner has to be able to articulate the strategies consciously. The learner must also have the opportunity to practice the strategies so that eventually they become part of the learner's habitual repertoire.

The teacher or facilitator can facilitate meta-cognition in three ways:

1. as a direct teacher of skills and strategies initially;

2. as a model who makes explicit the mental processes going on inside the mind as the teacher demonstrates a skill, solves a problem or composes criticism;

3. and as a provider of opportunities for students to practice what they have learned (Nisbet & Shucksmith, 1984).

Students can improve in meta-learning as a result of direct teaching of meta-cognitive skills (Bakopanus & White, 1990). In the Clinical Facilitation Model, inclusion of meta-learning and facilitation of transfer processes will impact on student learning outcomes, as well as on the student and teacher Presage components. It is expected that life long learning will be generated, if students have mastered meta-cognitive processes.

The last component of the Clinical Facilitation Model is the Outcomes of Learning. Although Process factors are very important, the Presage-Product component, linking is significant too. Biggs and Moore(1993) assert that approaches reflect students' predilections, not necessarily the process actually adopted. Often, approaches refer to the way the task is handled, not how well it is handled. It is possible, for example, for a brilliant surface student learner to get higher marks than a plodding deep or involved deep learner who is burrowing into something irrelevant to what is being assessed. Nevertheless, studying and learning approaches have consistent relationships with different aspects of performance. Clinical teachers employed on a part-time basis and having no

involvement with theory units, are likely to be equipped with minimal knowledge of teaching methodologies. These clinical teachers may affect the process of teaching-learning as well as the outcomes of student learning. It is expected that when a deep learner with extensive schemas from previous work experience, facilitated by a clinical teacher with commitment and a sound knowledge of student's learning styles and curriculum content, will facilitate effective student learning.

Summary

The Clinical Facilitation Model, an adaptation of Dunkin and Biddle's (1974) model of learning for transfer from the classroom to clinical practice, is arguably still the best model available to date. In this model, outcomes of learning to the clinical setting are based on student characteristics, the teaching context and meta-learning processes that facilitate transfer to the clinical setting. This is the model that is used in the present study. In this present study, the variables investigated are student's age, gender, level of training, previous work experience, students' perception of teachers' involvement in teaching theory units, the nature of the high achieving learner, teacher qualifications, teacher employment status, and involvement in teaching theory units. The influence of these variables on perception of clinical facilitation effectiveness is investigated.

Chapter 4

METHODOLOGY

Introduction

The methodology chapter discusses the research design, rationale for the study, the settings, instruments, data collection method and the participants. The procedure section reviews prior approval, the pilot and main study. Reliability and validity of the study is discussed followed by data analysis. This chapter concludes with a statement of the limitations and some ethical considerations.

This study used on both qualitative and quantitative approaches. In accordance with recommendations by Knafl (1988), there is a call for the development of creative new approaches in the study of learning in nursing. The desirability of a combination of diverse techniques was emphasized. In this study, the researcher had attempted to employ some diversity of techniques in the research design, and this is now explained.

Initially, a qualitative approach through interviews was conducted. This approach enabled the collection of students' and teachers' perception of effective clinical facilitators' behaviours. The researcher then searched for an existing tool with clinical behaviours compatible to the behaviours identified by interviews of the students and teachers. Two instruments were identified; these were the Nursing Clinical Teacher Effectiveness Inventory and Rauen's (1974) Clinical Instructor Characteristics Ranking Scale. The Clinical Instructor Characteristics Ranking Scale was

identified as more suitable because it contains 18 characteristics compared to the Nursing Clinical Teacher Effectiveness Inventory which contains 48 items. Sixteen characteristics out of the 18 characteristics were aligned with those found in one of the tool. This established that Rauen's (1974) scale was more content valid than the Nursing Clinical Teacher Effectiveness Inventory. The main method of data collection was through the use of a questionnaire that was derived from the Clinical Instructor Characteristics Ranking Scale. The data generated by the questionnaire allowed the researcher to add a quantitative dimension to the analysis of the data. This enabled the researcher to attach relative values to students' and teachers' comments on effective clinical facilitator behaviours. The data obtained from these questionnaires were used to answer the following specific research questions, listed together with referent indicated :

1. What are effective clinical teaching aspects, as perceived by students of nursing?

☐   Students' perception of effective clinical behaviours

☐   Frequency of perceived effective clinical behaviours from the students and teachers according to Rauen's Clinical Instructor Characteristics Ranking Scale categories.

2. What is the relationship between students' and teachers' ratings of the importance of certain established clinical behaviours to the facilitation of students' transfer of learning?

□   Correlation of students' and teachers' mean item scores

3. In what ways do students rate their clinical teacher demonstrate established effective clinical behaviours?

□   Students' rating of their clinical teacher's demonstration of established effective clinical behaviours.

4. Do teachers and students rate clinical teachers' demonstration of effective clinical behaviours differently?

□   Demonstration score as perceived by students

□   Demonstration score as perceived by teachers

5. Does the seniority (semester 4, 5 & 6) of the students affect their ratings of clinical teachers' effectiveness in facilitating students' transfer of learning?

6. What effects do teacher characteristics (appointment type, highest qualification, teacher's theory and/or clinical practice) and student characteristics (age, gender and employment status) have, if any on students perception of facilitation and transfer of learning from the university to clinical settings?

Instruments and Data Collection Method

Interview

Students of semesters 4, 5 and 6 were invited to participate in the interviews. The researcher requested fifteen minutes from semester 4, 5 and 6 lecture interval to enlist consent for interviews. A consent form (Appendix B) was signed by the students and utmost confidentiality was assured by the researcher that the tapes and transposed data would not be used or disclosed to anyone, except for the current study, and in the current study no names would be mentioned. Time slots were allocated and consenting students volunteered half an hour of their time for a one-to-one interview.

The process of the structured interview was explained to the students and interviews were conducted in the researcher's office with the door closed. Five clinical teachers were approached and interviewed. Perceptions of effective clinical behaviours were collected in the interviews from the 15 students and 5 clinical teachers. The tape recordings for students were transcribed and students were identified as participants 1 to 15. The tape recordings for teachers were transcribed and teachers were identified as participant teacher 1 to 5. Post transcription of tape interviews, common themes and patterns of clinical teachers' behaviours from the data were grouped. The grouped clinical behaviours were compared and cross-matched with the established effective behaviours from the Clinical Instructor Characteristic Ranking Scale (see Table 5.1). This process was

carried out to ensure validity of the use of the Clinical Instructor

Characteristic Ranking Scale for quantitative data collection for this study.

Questionnaire

The questionnaire was a modification of an existing instrument, the

Clinical Instructor Characteristic Ranking Scale, devised by Rauen

(1974). This instrument (Appendix E & Appendix I) was selected because

of its relevance to the present study and because it was considered to be

strongly content valid. The Clinical Instructor Characteristic Ranking

Scale includes eighteen (18) characteristics of clinical instructions with an

equal number of teacher, person and nurse characteristics. Some teacher

characteristics included provision of guidance, resources and evaluation.

Person characteristics included personality of the instructor such as

empathy and honesty. Nurse characteristics dealt with the ability to

demonstrate nursing skills, knowledge and attitudes in patient care. For

this study, the 18 characteristics were rearranged in a random fashion

and not listed under the headings of teacher, person and nurse. Some

examples of the questionnaire items are: a) is available for help if I need

her guidance, b) demonstrates honesty to me and others and c) shows a

contagious enthusiasm for giving quality client care. The aim for the

rearrangement of the characteristics was to identify which category of

teacher behaviour would be considered more effective in facilitating

students' transfer of learning in the clinical settings. The selection of a

reliable and valid instrument can affect the accuracy of the study.

Reliability means consistency. Gay (1987) defined reliability as the degree to which a test consistently measures whatever it measures. Test - retest reliability showed the extent to which scores on a test can be generalised over different occasions. Rauen's (1974) reliability testing of the Clinical Instructor Characteristic Ranking Scale yielded a +0.75 test-retest reliability coefficient, evidence supporting that it was stable and reliable. For this study, the Clinical Instructor Characteristic Ranking Scale was tested for inter-rater reliability,($r = .92$) content validity and applicability, by one-to-one interviews with 15 students and 5 clinical teachers. Students and teachers were asked to list effective clinical behaviours that will facilitate transfer of students' learning. These perceived effective behaviours were compared with those listed in the Rauen's Clinical Instructor Characteristic Ranking Scale. Sixteen (16) out of the eighteen (18) characteristics were identically perceived as effective clinical behaviours of clinical teachers (Table 5.1). The content validity of the instrument used for this current study was established with 89 percent agreement of the effective behaviours.

The questionnaire (Appendix E & Appendix I) consisted of two main parts. In the first part the subjects were asked to respond to their perceptions of effective facilitator behaviour in facilitation and transfer of learning. For the second part, the subjects were requested to reflect on the effective clinical behaviours and then relate those behaviours to the current facilitation behaviours demonstrated by their clinical teachers in the clinical rotation. The respondents were asked to rate on a four-point

Likert scale as to the degree of effectiveness of the specified clinical behaviours in the questionnaire. Subsequently, the students were asked to rate the degree of those effective clinical behaviours being demonstrated by their clinical teachers at that current clinical location.

Participants

For the qualitative component of the study, 15 students and 5 clinical teachers from a university that conducts a 3-year pre-registration nursing course consisting of 6 semesters (2 semesters per year) were asked to participate in the study. Students have clinical experience in semesters 3, 4, 5 and 6. Semester 3 students were not selected because clinical experience pertains to health promotion agencies for them and these are not really clinical experiences. Students from semesters 4, 5 and 6 were selected for the study because they were seconded to clinical health agencies for their clinical experience. Clinical teachers are also responsible for clinical teaching in semesters 4, 5 and 6.

For the quantitative component of the study there were 200 students and 34 teachers/lecturers. All students of semesters 4, 5 and 6 (320) were invited to participate and 200 respondent students volunteered. Seventy students were from semester 4, 51 from semester 5 and 79 from semester 6. All clinical teachers were invited to participate. Thirty-four (34) clinical teachers who were seconded to clinical areas to facilitate students' learning volunteered. The professional qualification of clinical teachers included Registered Nurses and Post-basic qualifications (see Table 4.1). The clinical teachers in semesters 4, 5 and 6 were involved in

teaching their areas of clinical expertise in accordance to their professional qualifications. The clinical teachers' qualifications included Bachelor of Nursing, Postgraduate Diploma in Health/Applied Science (Nursing), and other tertiary qualifications. Teaching qualifications of the clinical teachers ranged from Postgraduate Diploma in Education, Diploma in Education, Diploma in Nursing Education, Masters in Education, Masters in Nursing, Masters in Health Science (Nursing) to Teaching Certificate. Some of the clinical teachers were also engaged in teaching theory units in the university.

Table 4.1
Professional Qualification of Clinical Teachers

Master's degree in Nursing	4
Master's degree in Education	1
Bachelor's degree in Nursing	10
Bachelor's degree in Social Science	1
Diploma in Nursing Education	1
Registered Nurse	17
TOTAL	34

Setting

The setting for the study was a 3-year university-based nursing programme with an average enrolment of approximately 250 students per year. At a university, the School of Nursing consisted of two departments, the Nursing Science Department and the Department of Clinical Services.

The School of Nursing consisted of approximately 82 academic staff members, 40 of them were employed on tenured or contract basis whereas the remaining 42 were employed on a sessional basis. Tenured and contract faculty staffs were assigned to classroom and clinical teaching duties as well as having responsibility for the implementation and evaluation of the programme. Sessional faculty staff was employed exclusively to teach within the clinical settings.

Students were assigned to a clinical agency for two 8-hour shifts, every four weeks in semesters 4 and 5, whereas in semester 6, students were assigned only to 3 clinical agencies every four weeks. In the last five weeks of semester 6, students were assigned to a clinical placement. Being the last five weeks prior to students' graduation from the course, semester 6 students were able to consolidate their learning in the clinical agencies. Unlike semesters 4 and 5 students who were supervised by clinical teachers employed by the university, semester 6 students were precepted by registered nurses employed by the clinical agencies. In the 5 weeks of preceptorship, these final semester students of nursing were allowed more autonomy and independence with patient care.

PROCEDURE

Prior Approval

Approval was obtained from the University committee responsible for the conduct of ethical research to access students to administer the questionnaires. The nature and purpose of the study was outlined in a

letter with the questionnaire. Only those students who completed and signed the consent form were involved in the study. Students and clinical teachers were reassured that information obtained would remain confidential and their names would not be disclosed.

Pilot Study

A pilot study was conducted using six students and two teachers. The students, two each from semesters 4, 5 and 6 participated. The purpose of this pilot study is to improve and refine procedures such as instrument administration, scoring routines and analysis techniques. Telephone contacts were made with the eight participants who participated in the pilot study to seek their views on the clarity and adequacy of the questionnaire. An analysis of the data obtained was performed to ascertain the research questions were satisfactorily answered. Minor amendments were made to the questionnaires. A change from a five to a four-point Likert scale was made because it would deter students from selecting the middle category when students were unsure of their choices, didn't want to answer or became tired or lazy. Instead of the participants responding to two separate pages of questions, two columns, A and B were designed to enable participants to report their views about effective clinical behaviours in column A, followed by perception of demonstration of each behaviour in column B.

Main Study

The questionnaires were distributed to semesters 4, 5 and 6 students, as well as to clinical teachers. Over a period of 6 months (during one academic semester), 200 students and 34 clinical teachers completed their questionnaires out of the 240 distributed to students and 60 to clinical teachers. Questionnaires were distributed to students at the end of a class period at the same time when course evaluation forms were given to students. The voluntary nature of completing the questionnaire was emphasized. Students who volunteered were given a consent form to complete. Emphasis was made that the survey was not a part of the course evaluation and that they should draw upon all their previous experience with clinical instruction in responding to items in the questionnaire.

Questionnaires were distributed to clinical teachers at the end of a half study day. Teachers who volunteered were given a consent form to complete and the voluntary nature of the completion of the questionnaire was emphasized. Volunteers were requested to complete their questionnaire before they left. The responses to all questionnaires were included in the data analysis.

Data Analysis

From the interview tapes, data was transcribed by the researcher. Due to the nature of the small sample of 15 students and 5 teachers, the reliability of the transcription were ensured by an independent rater,

transcribing two of the interviews. The researcher transcribed the two taped interviews. An independent rater transcribed the same two taped interviews. The transcripts from the researcher and the independent rater were compared. The inter-rater reliability was high (r=.92).

Non-parametric statistics necessitated the use of the alternative to one-way ANOVA. SPSS for Windows was used to perform a Kruskall-Wallis test on the ratings of clinical teacher demonstration of effective clinical behaviour for students enrolled in semesters 4, 5 and 6. The Mann-Whitney test was also used to test the correlation between teachers' and students' ratings of demonstration of effective clinical behaviours. These statistical analyses are described in the following chapter.

Ethical consideration

Permission to carry out this study was obtained from the university's Committee for the Conduct of Ethical Research. Transcriptions, audio tapes and questionnaires were kept in a locked cabinet by the researcher and were not accessible to anyone. A five-year period would be observed, as required by the university's Committee for the Conduct of Ethical Research, following which the tapes would be erased, and transcriptions and questionnaires would be shredded. Anonymity of subjects was maintained throughout data collection, analysis and reporting. Each volunteer for the study was given a consent form to sign and strict confidence and anonymity was ensured.

Limitations

This study has limited generalisability due to the restricted sample of students and staff. Strictly, inferences from this study must be limited to students from the particular tertiary-based Bachelor of Nursing programme at the university where the data were collected, as well as 6 months time frame when the data were collected. However, there are no obvious reasons to believe the results are not applicable to other 'nearby' time frames or to the nursing programmes at the other university in Perth, Western Australia.

Summary

This chapter has described the research methods and samples used to study the effectiveness of the facilitation of transfer of learning in students of Nursing from the University to the clinical settings, and to the ethical considerations and limitations addressed. Data obtained from the interviews and questionnaires have been analysed and the results are presented in the next chapter.

Chapter 5

RESULTS

Introduction

The results of this study are presented in three sections. Section I relates to students' perception of effective clinical teachers' behaviour. Qualitative data from interviews of 15 students and 5 teachers are transcribed and commonalities of perceived clinical behaviours from the Clinical Instructor Characteristics Ranking Scale are clustered. This process helped to justify the use of Rauen's Clinical Instructor Characteristics Ranking Scale for data collection. Teachers' and students' perception of effective clinical behaviour is also presented.

Section II contains data collected from the Clinical Instructor Characteristics Ranking Scale. The relationship between students' and teachers' ratings of the effectiveness of their clinical teachers' facilitation will be compared. Teachers' ratings of their own demonstration of perceived clinical behaviours will also be presented. This section reports results relating to whether seniority of students affects their ratings of clinical teacher effectiveness in facilitating students' transfer of learning.

Section III presents data on the characteristics that affect teachers' and students' perceptions of facilitation and transfer of learning from university to clinical settings.

Section I

<u>Students' and Teachers' Perception of Effective Clinical Behaviours</u>

From the one-to-one interviews, cumulative frequencies of perceived effective clinical behaviours selected by the 15 students and the 5 teachers were clustered into a smaller number of major categories. Out of the 60 perceived effective clinical behaviours from the 20 subjects, the majority alluded to 3 categories, teacher, person and nurse characteristics. These 3 categories are used by Rauen (1974) in her Clinical Instruction Characteristic Ranking Scale. Frequency of perceived effective clinical behaviours from the students and teachers were summarized in Table 5.1. Effective clinical behaviours identified by the 15 students and 5 teachers were clustered and checked against the characteristics listed in the Rauen's Clinical Instructor Characteristics Ranking Scale.

Comparative analysis of transcripts from the 15 students and 5 teachers revealed that these subjects made direct reference to 16 out of the 18 established effective clinical facilitator behaviours used in the Rauen's Clinical Instructor Characteristics Ranking Scale. The two established clinical behaviours not referred to were <u>shows empathy</u> and <u>shows a continued interest in applying improved methods of giving nursing care.</u> Other differences in the students' ratings included frequency of counts with regards to the teacher or nurse characteristics. Semester 6 students rated nurse characteristics 9 times compared to semester 5 students with a count of 5 and 2 counts by semester 4 students. The most commonly rated effective established clinical behaviour by semester 4 and 5

students were teacher characteristics. Semester 4 and 5 students rated teacher characteristics 5 times each whereas semester 6 students rated teacher characteristics with 4 counts. The most frequently ranked established effective clinical behaviour by semester 4, 5 and 6 students was a person characteristic behaviour, demonstrates honesty. Two established effective clinical behaviours least ranked were also person characteristic behaviours, avoids embarrassing students and shows genuine interest in student as an individual.

There are significant differences in students' and teachers' perceptions of effective clinical behaviours. For example, three semester 4 students identified teacher characteristics such as availability for guidance, as an effective behaviour. In contrast, only one semester 5 student and none of the semester 6 students perceived these characteristics as effective.

Additional perceived effective clinical facilitators' behaviours from transcripts not included in the Clinical Instructor Characteristics Ranking Scale included behaviours were effective use of questions, role model, student advocate, pedagogical knowledge, feedback, matching learning style and setting realistic goals. These behaviours were not identified as high priority in Rauen's (1974) study and therefore these behaviours were not included in the Clinical Instructor Characteristics Ranking Scale.

Table 5.1

Frequency of effective clinical facilitator behaviours within categories perceived by students

Characteristics (adapted from CICRS) K. Rauen (1974)	Semester 4	Semester 5	Semester 6	Teachers
Person characteristics				
❑ Shows genuine interest in student as an individual.	1	-	-	2
❑ Encourages students to be 'open', thereby respecting student's feelings and opinions	2	-	-	2
❑ Demonstrates honesty.	1	2	2	2
❑ Avoids embarrassing students.	-	-	1	1
❑ Shows empathy.	0	0	0	1
❑ Demonstrates kindness during interaction with people.	-	2	-	-
Teacher characteristics				
❑ Available for guidance.	3	1	-	1
❑ Demonstrates knowledge of scientific principle relative to patient care.	-	2	-	3
❑ Gives relevant argument that helps student transfer concepts to practice.	1	-	1	1
❑ Suggests helpful resources when students have questions.	1	1	-	2
❑ Encourages student to think for self.	-	-	2	3
❑ Evaluates student's progress in nursing in a fair manner.	-	1	1	2
Nurse characteristics				
❑ Demonstrates ability to do nursing skills.	-	-	2	1
❑ Demonstrates ability to use scientific principles relative to patient care.	-	2	2	1
❑ Demonstrates how to function in a real nursing situation.	1	1	2	2
❑ Shows a contagious enthusiasm for giving quality patient care.	-	1	1	0
❑ Rewards student effort to give quality nursing care.	1	1	2	1
❑ Shows a continued interest in applying improved methods of giving nursing care.	0	0	0	0

Perceived effective clinical facilitators' behaviours compared to

established effective clinical facilitators' behaviours used in Rauen's

Clinical Instructor Characteristics Ranking Scale had demonstrated that

16 out of the 18 established behaviours were relevant in the Clinical

Instructor Characteristics Ranking Scale. This outcome was the basis for

this researcher to utilize Rauen's Clinical Instructor Characteristics

Ranking Scale for quantitative data collection. Three effective clinical

facilitators' behaviours were not mentioned at the students' and teachers'

interview. The three behaviours are shows empathy, shows a contagious

enthusiasm for giving quality care and shows a continued interest in

applying improved methods of giving nursing care (see Table 5.1).

Relationships Between Students' and Teachers' Ratings of the
Importance of Certain Established Clinical Behaviours to the Facilitation of
Students' Transfer of Learning.

In this study, using Rauen's Clinical Instructor Characteristics Ranking

Scale, both students and clinical teachers were requested to scale the

established clinical teachers' behaviours which constitute effective

facilitation of transfer of learning (see Table 5.2). Using SPSS for

Windows, a Pearson product - moment correlation was conducted

between students' and teachers' mean item scores for the measure:

perceptions of importance of established clinical behaviours to facilitation

of students' transfer of learning. A strong, positive relationship between

students' and teachers' ratings was significant, $r(16)=.70$, $p<.01$ (see

Figure 5.1 and Table 5.2). The scatterplot suggested that the relationship

was approximately linear.
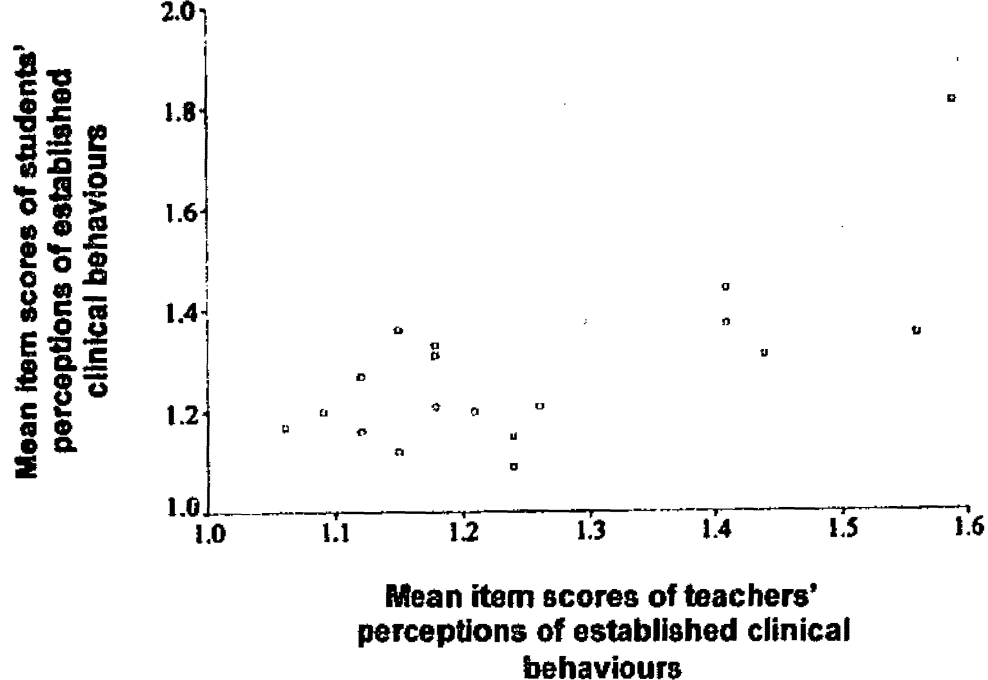
Figure 5.1. Relationship between students' and teachers' perceptions of established clinical behaviours (measured by Mean item scores).

Significantly, results from the questionnaires indicated very little difference between students' and teachers' perceptions of the importance of each behaviour listed in the Rauen's Clinical Instructor Characteristics Ranking Scale (see Table 5.2). The three most effective clinical facilitator behaviours as perceived by the students are:

☐ Being competent in nursing skills (procedures);

☐ Being available to students to provide guidance as needed; and

☐ Demonstrating how to function in real nursing situations.

Although student and teacher ratings are positively correlated, contrary to the students' perception, the clinical teachers' three most effective clinical facilitation behaviours are:

☐ Encouraging students to think for themselves;

☐ Demonstrating honesty towards students; and

☐ Showing enthusiasm for giving quality patient care and demonstrating

empathy towards students and others.

Both students and clinical teachers clearly perceived the same behaviour as least important; this is, providing assignments that relate syllabus concepts to actual patient care.

The data on students' and teachers' perception of clinical behaviour that are important to transfer of learning met the criteria necessary for conducting correlations (n >10, ordinal level scores and good variance in scores). The result showed the pattern of the students' and teachers' ratings are similar (Table 5.2). Pearson correlation of students and teachers data of .701 indicated a strong, positive correlation. The probability of getting this result by chance is p 0.001.

Table 5.2.

Pearson Correlation of Students' and Teachers' Perception of Effective Clinical Behaviour

		STUDENTS	TEACHERS
Pearson Correlation	STUDENTS	1.000	.701**
	TEACHERS	.701**	1.000
Sig. (2-tailed)	STUDENTS	.	.001
	TEACHERS	.001	.
Sum of Squares	STUDENTS	.458	.311
and Cross-products	TEACHERS	.311	.431
Covariance	STUDENTS	2.694E-02	1.830E-02
	TEACHERS	1.830E-02	2.533E-02
N	STUDENTS	18	18
	TEACHERS	18	18

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

Section II

Students' Rating of their Clinical Teachers' Demonstration of Established Effective Clinical Behaviour

In this study, students were requested to rate their clinical teachers' demonstration of effective clinical behaviours. The mean student rating of teachers' demonstration of effective clinical behaviours showed that students agree fairly strongly that their clinical teachers do demonstrate these behaviours (M=29.84, SD=9.44) (see Figure 5.2). When expressed as a mean item rating, the mean student score is the equivalent of a rating of 1.66 on the scale of (1) strongly agree, (2) agree, (3) disagree to (4) strongly disagree. Overall, the students agreed fairly strongly that their clinical teachers did demonstrate effective clinical behaviours.

The mean teacher rating of teachers' demonstration of effective clinical behaviour is 1.42. This showed that teachers' ratings of the degree to which they demonstrate effective clinical behaviours were significantly higher than students' ratings (see Figure 5.3).

Due to violations of the assumptions of normality and homogeneity of variance necessary for performance of a t-test, and because of the disparity in the sizes of the student and teacher samples (n=200, n=34, respectively,) see Table 5.3 and Figure 5.4, the alternative non-parametric test was performed. SPSS for Windows was used to conduct a Mann-Whitney test on the student and teacher ratings of demonstration of effective clinical behaviours. With correction for ties and z-score conversion, the result was significant, z=-2.30, $p<.05$. The Mann-Whitney

test showed that teachers' ratings of their demonstrations of effective
clinical behaviours were higher than students' ratings (see Table 5.4).

Std. Dev = 9.44
Mean = 29.8
N = 200.00

Mean value of rating
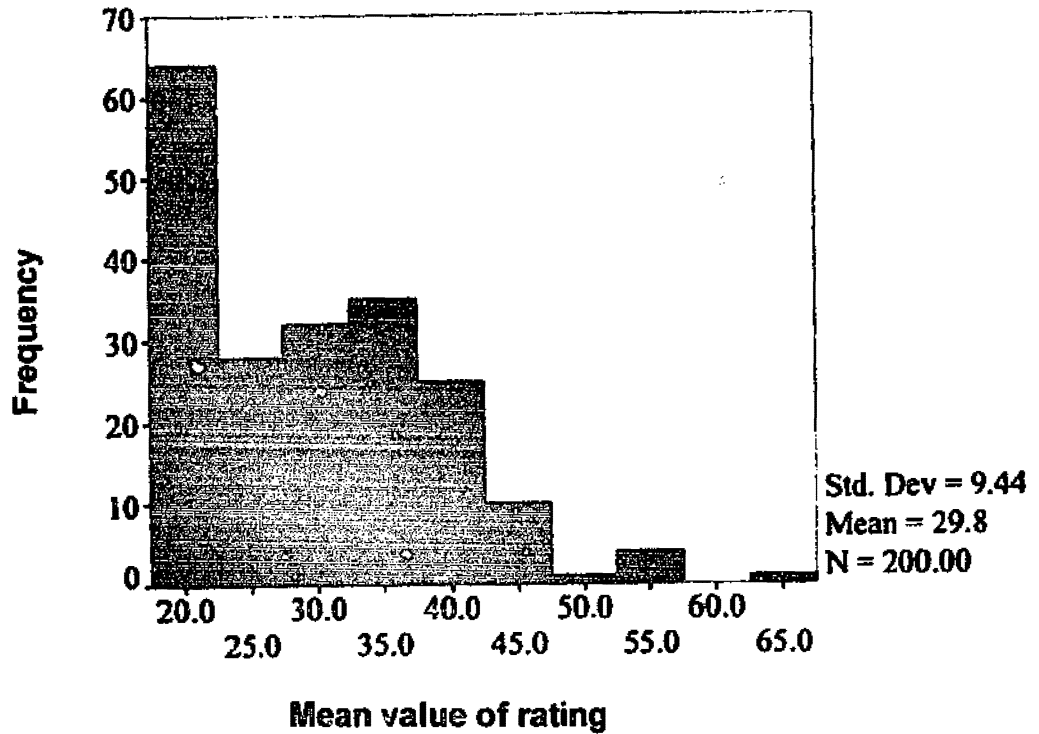
Figure 5.2. Students' rating of their clinical teachers' demonstration of
established effective clinical behaviour.

Std. Dev = 5.24
Mean = 25.5
N = 34.00

Mean value of rating
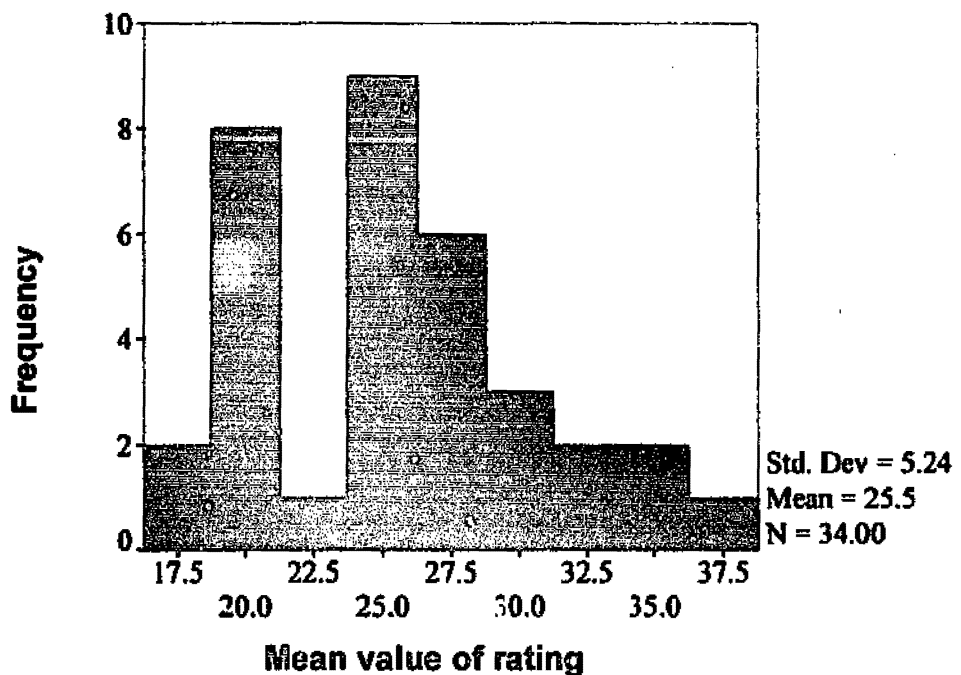
Figure 5.3. Clinical teachers' rating of their own demonstration of
established effective clinical behaviour.

Table 5.3.
Descriptive Statistics for Student and Teacher Ratings of Demonstration
of Effective Clinical Behaviour

Group	N	M	Mdn	SD	Range
Student	200	29.84	29	9.4	49
Teacher	34	25.47	25	5.24	19

Table 5.4.
Students' and Teachers' Ratings of Teachers' Demonstration of Effective
Clinical Behaviours

Ranks

	Group	N	Mean Rank	Sum of Ranks
Demonstration	student	200	121.69	24337.50
Score	teacher	34	92.87	3157.50
(Column B)	Total	234		

Test Statistics[a]

	demonstration score (Column B)
Mann-Whitney U	2562.500
Wilcoxon W	3157.500
Z	-2.298
Asymp. Sig (2-tailed)	.022

Student
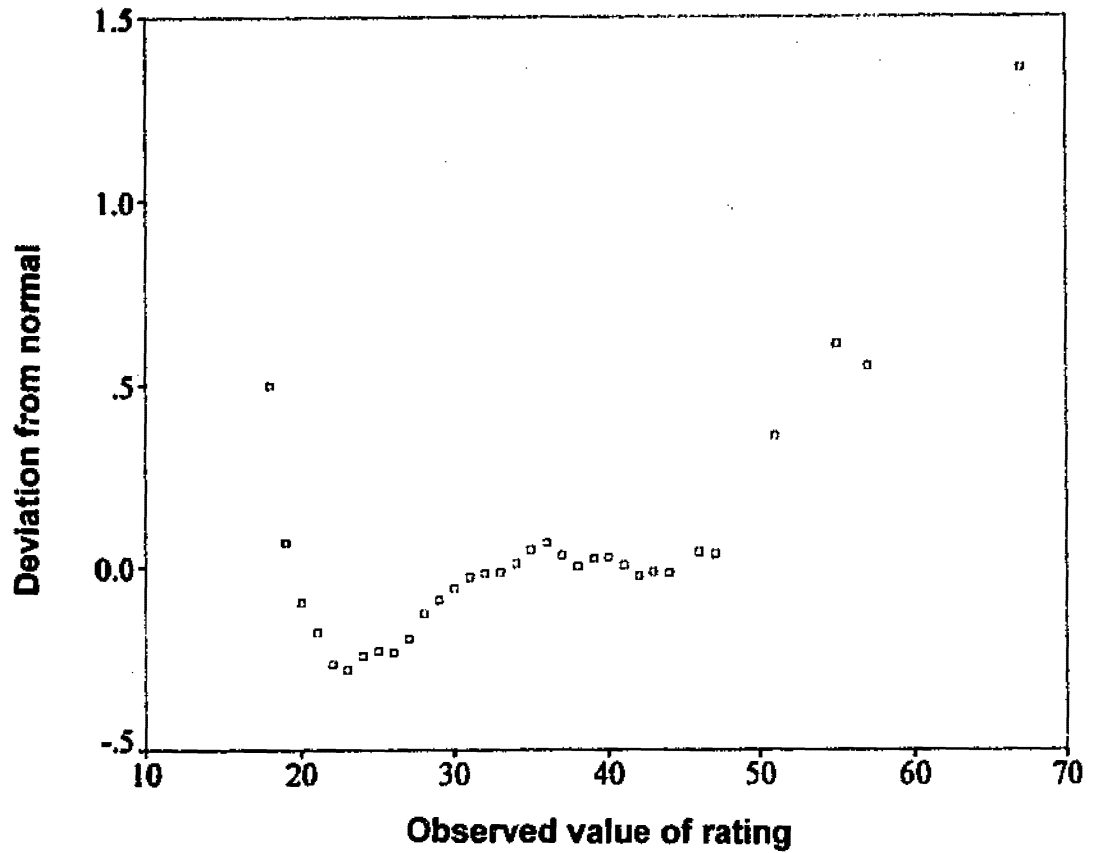
Teacher
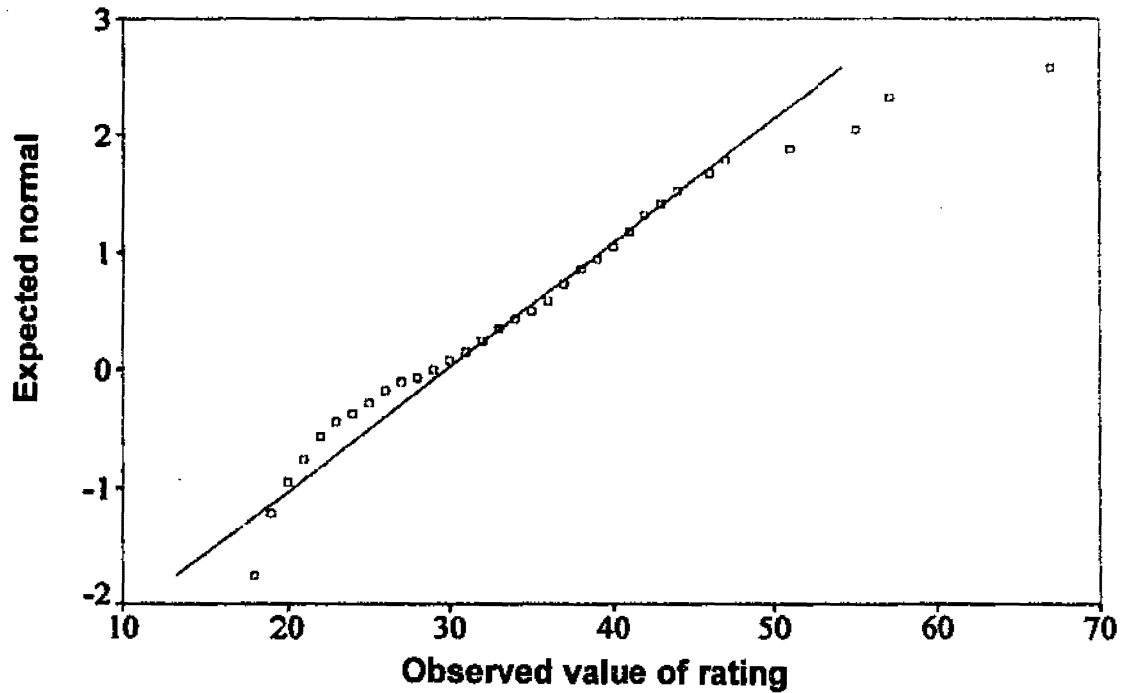
Figure 5.4. Students' and Teachers' Ratings of Teachers' Demonstration of Effective Clinical Behaviours.

A Mann-Whitney test showed a statistically significant difference between students' and teachers' ratings of demonstration of effective clinical behaviours by clinical teachers. This means the difference is unlikely to be due to chance or to the sample used. It is more likely to be a 'real' difference between students' and teachers' ratings.

The Relationship Between Seniority of the Students and their Ratings of Clinical Teachers' Effectiveness in Facilitating Students' Transfer of Learning

Data on the three student groups' (those enrolled in semesters 4, 5 and 6) ratings of clinical teachers' demonstration of effective clinical behaviours did not meet the criteria necessary for conducting an ANOVA. Due to violation of normality assumptions, together with unequal sample sizes (see Figure 5.5, Figure 5.6, Figure 5.7, Table 5.5 and Table 5.6), the appropriate non-parametric alternative to one-way ANOVA was conducted (Kruskall-Wallis test).

Std. Dev = 9.27
Mean = 30.7
N = 70.00
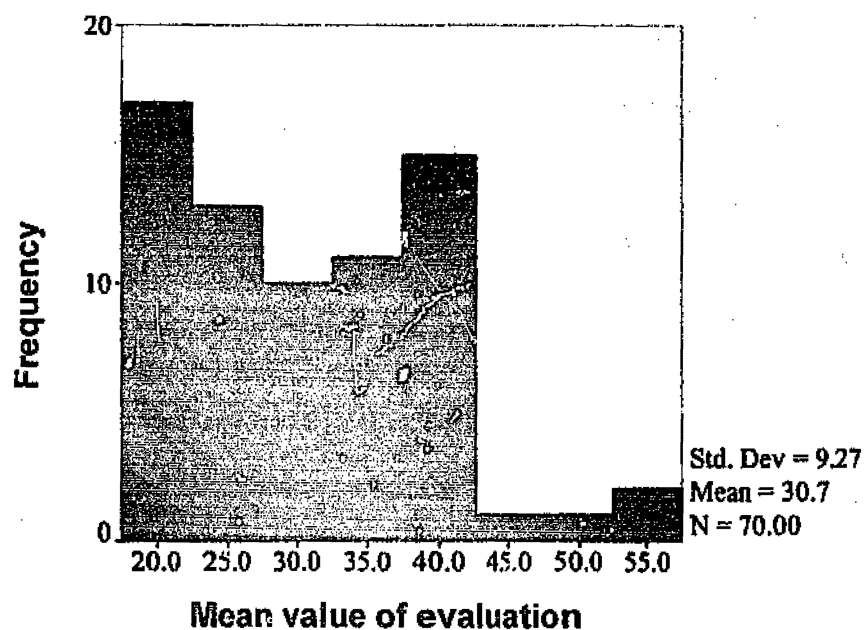
Figure 5.5. Semester 4 students evaluation of clinical teachers' effectiveness in facilitating students' transfer of learning.

Std. Dev = 10.14
Mean = 28.9
N = 51.00
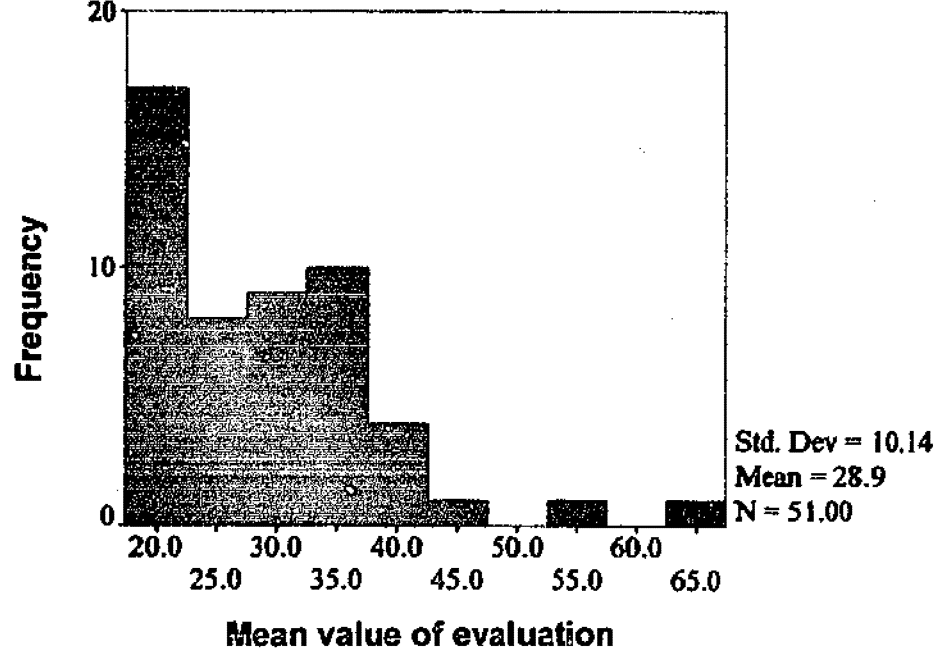
Figure 5.6. Semester 5 student evaluations of clinical teachers' effectiveness in facilitating students' transfer of learning.

Std. Dev = 9.17
Mean = 29.6
N = 79.00
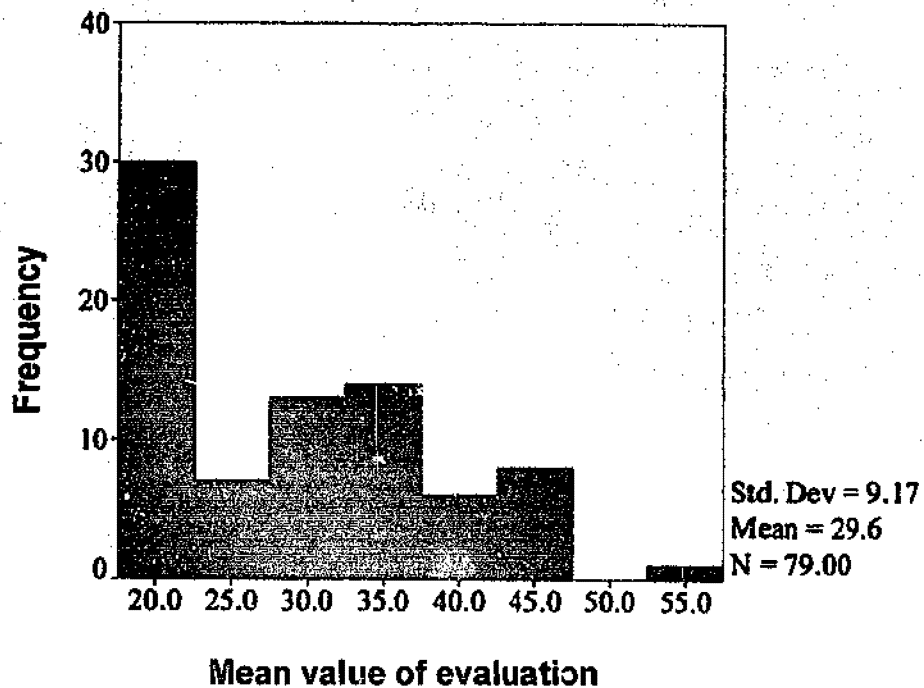
Figure 5.7. Semester 6 student evaluations of clinical teachers' effectiveness in facilitating students' transfer of learning.

Table 5.5.
ANOVA for Differences between Semester 4, 5 & 6 Ratings of
Clinical Teachers' Demonstration of Effective Clinical Behaviour.

		Sum of Squares	df	Mean Square	F	Sig.
demonstration	Between Groups	102.525	2	51.262	.573	.565
score	Within Groups	176225.0	197	89.467		
(Column B)	Total	17727.6	199			

ANOVA is not significant (> .05). Therefore, there are no significant

differences between the 3 groups of students' ratings of clinical teachers'

demonstration of effective clinical behaviours.

Table 5.6.
Semester 4, 5 and 6 students' Ratings of Teacher Demonstration of
Effective Clinical Behaviours.

Semester	n	M	Mdn	SD	Range
4	70	30.74	30	9.27	39
5	51	28.94	28	10.14	49
6	79	29.61	30	9.17	37

The Kruskall-Wallis test was deemed a suitable alternative to ANOVA.

It showed that seniority of students did not affect their ratings of clinical

teachers' effectiveness in facilitating students' transfer of learning

Table 5.7.
Kruskall-Wallis test for Effects of Students' Seniority and their Ratings

Semester of study Rank	N	Mean	mean	Students Scores for Column B
Students 4	70	107.31	Chi-Square	2.135
Mean 5	51	91.78	Df	2
Scores (Column B) 6	79	100.09	Asymp. Sig.	.344
Total	200			

Section III

<u>Characteristics that will affect Teachers' and Students' Perception of Clinical Teacher's Facilitation and Transfer of Learning from University to Clinical Setting.</u>

The results of Section III is presented in 2 sub-sections a and b. Sub-section a contains results of demographic characteristics of students including age, gender and employment. Sub-section b contain results of demographic characteristics of clinical teachers including qualifications, employment status, and engagement of teaching in theory units. Teachers' and students' rating of effective clinical behaviours is also compared.

a) <u>Demographic Characteristics of Students</u>

<u>Level of training of the participants</u>

Out of the 200 participants, there were 70 in Semester 4, 51 in Semester 5 and 79 in Semester 6.

<u>Age</u>

The mean age of the 200 students was 24.91 with a median of 21. Standard deviation of their ages is 7.51. The mode age of the student was 18 compared to the oldest of 52 years. (see Table 5.8)

Table 5.8.
<u>Age of Students</u>

N	Valid	200
	Missing	0
Mean		24.91
Median		21.00
Std. Deviation		7.51
Minimum		18
Maximum		52

Gender

13 male students (6.5%) participated in this study. The remaining 93.5 % were females.

Employment

17.5% of the student participants in this study were engaged in full time work and pursued part-time studies at the university. The remaining 165 students (82.5%) were full time students with part-time employment.

Students' perception of their clinical teachers' employment status

From Figure 5.8, students' responses indicated that 17.5% of their teachers were employed on a full-time basis compared to the 82.5% who were employed part-time.
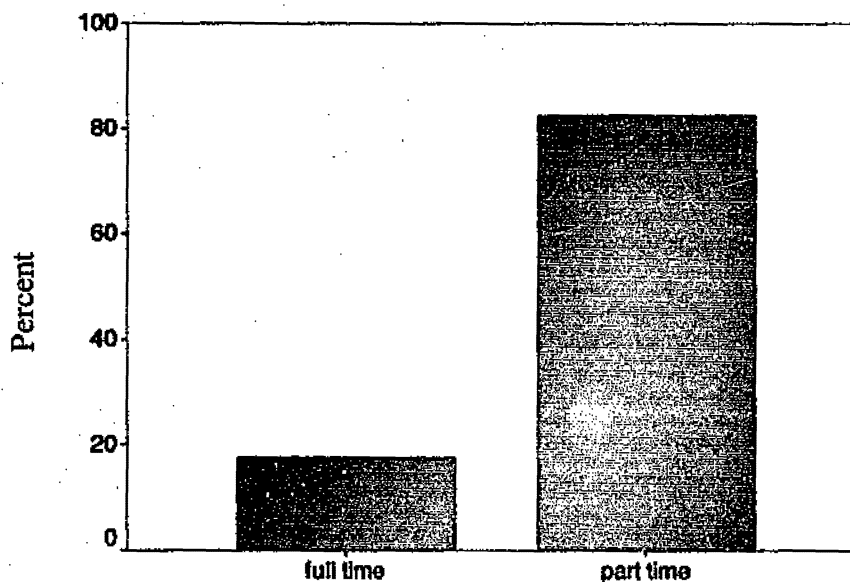
Figure 5.8. Teacher employment status

Students' perception of their clinical teachers involvement in teaching theory units in the university

Data from this study showed only 11% of the teachers were teaching theory units at the university. The remaining 88.5% were employed for clinical teaching (see Figure 5.9).
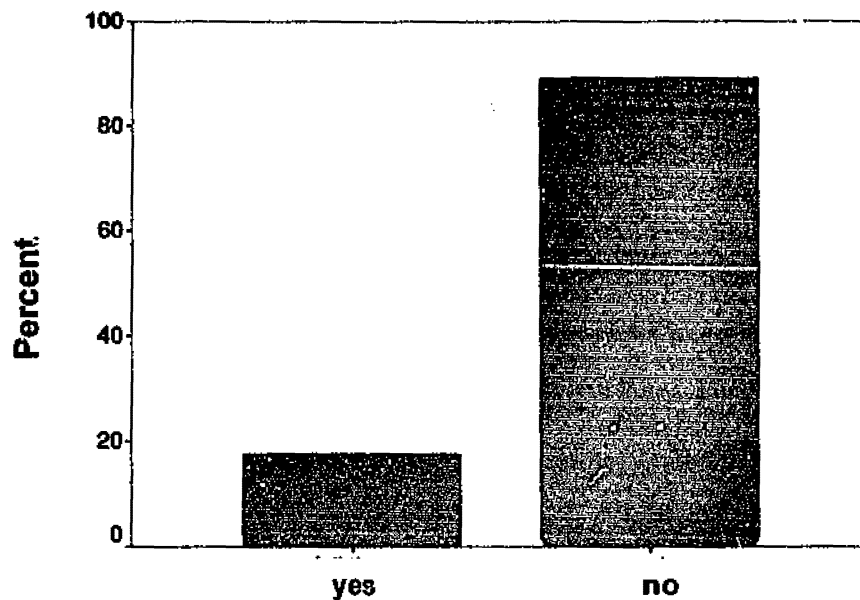
Figure 5.9. Teacher's involvement in teaching theory

b) Demographic Characteristics of Clinical Teachers Qualifications

Thirty-four clinical teachers participated in this study. Five (17.8%) completed a Master's degree, 1 (3%) completed a Diploma in Nursing Education, 11(32%) completed a Bachelor's degree and 17 (44.8%) were Registered Nurses (RN).

Employment

Three clinical teachers (8.8%) were employed on a tenured basis, whereas 4 (12%) were on contractual agreement. The remaining 27 (79.2%) were employed on a sessional basis.

Theory Teaching in the University

Seven clinical teachers (12.8%) were involved in teaching theory units in the university compared to the 27 (79.2%) who were employed primarily to facilitate students in the clinical settings.

Effects of Students' and Teachers' Characteristics on students' perception of Clinical Teachers effectiveness in Facilitation and Transfer of Learning from University to the Clinical Settings

Significant differences were identified in teachers' and students' ratings of effective clinical behaviour (see Table 5.9). The mean teachers' and students' scores are measured on a rating scale of (1) *strongly agree* to (4) *strongly disagree*. All students' characteristics do not affect their ratings of clinical teachers' effectively in facilitating students' transfer of learning (see Tables 5.10, 5.11, 5.12, 5.13, 5.14 & 5.15).

Table 5.9.
Mean Scores of Teachers' and Students' Ratings of Effective Clinical Behaviour

	quest	allstdnt	stdnt4	stdnt5	stdnt6	teachrs
1	1	1.12	1.14	1.12	1.15	1.15
2	2	1.33	1.14	1.20	1.25	1.18
3	3	1.81	1.36	1.38	1.59	1.59
4	4	1.09	1.13	1.12	1.12	1.24
5	5	1.21	1.18	1.18	1.17	1.18
6	6	1.31	1.27	1.17	1.25	1.18
7	7	1.20	1.18	1.17	1.16	1.09
8	8	1.36	1.26	1.22	1.25	1.15
9	9	1.37	1.28	1.24	1.23	1.41
10	10	1.15	1.18	1.15	1.12	1.24
11	11	1.31	1.26	1.15	1.25	1.44
12	12	1.17	1.17	1.17	1.13	1.06
13	13	1.16	1.20	1.14	1.12	1.12
14	14	1.35	1.26	1.32	1.23	1.56
15	15	1.44	1.32	1.31	1.30	1.56
16	16	1.27	1.25	1.14	1.22	1.12
17	17	1.20	1.20	1.14	1.17	1.21
18	18	1.21	1.19	1.16	1.18	1.26

(see denotation on next page)

Note (for Table 5.9)

1. quest means question from the questionnaire (see Appendices E & I)
2. allstdnt means the mean rating of all the students
3. stdnt4 means the mean rating of semester 4 students
4. stdnt5 means the mean rating of semester 5 students
5. stdnt6 means the mean rating of semester 6 students
6. teachrs means the mean rating of all the teachers

Tables 5.10, 5.11, 5.12, 5.13, 5.14 & 5.15

Table 5.10.
Correlation between Gender of Students' and their Perception of Effective Facilitation of Learning

	Value	df	Asymp. Sig.(2sided)
Pearson Chi-Square	2.772[a]	6	.837
Likelihood Ratio	3.111	6	.795
Linear-by-Linear	.222	1	.637
N of Valid Cases	200		

Table 5.11.
Correlation between High Achieving Students and their Perception of Effective Facilitation of Learning

	Value	df	Asymp. Sig.(2sided)
Pearson Chi-Square	1.674[a]	3	.643
Likelihood Ratio	1.686	3	.640
Linear-by-Linear Association	1.593	1	.207
N of Valid Cases	200		

Table 5.12.
Correlation between Previous Work Experience of Students and their Perception of Effective Facilitation of Learning

	Value	df	Asymp. Sig.(2sided)
Pearson Chi-Square	6.453[a]	3	.092
Likelihood Ratio	6.927	3	.074
Linear-by-Linear Association	.828	1	.363
N of Valid Cases	200		

Table 5.13.

Correlation between Students' Perceptions of Teachers' Involvement in Teaching Theory and their Perception of Effective Facilitation of Learning

	Value	df	Asymp. Sig.(2sided)
Pearson Chi-Square	5.424[a]	3	.143
Likelihood Ratio	7.886	3	.048
Linear-by-Linear Association	5.194	1	.023
N of Valid Cases	199		

Table 5.14.

Correlation between Students' Ages and their Perceptions of Effective Facilitation of Learning

		AGE	PERCEPTION
AGE	Pearson Correlation	1.000	.016
	Sig.(2-tailed)		.818
	N	200	200
PERCEPTION	Pearson Correlation	.016	1.000
	Sig.(2-tailed)	.818	
	N	200	200

Note
1. Perception means student perception of effective facilitation of learning

Table 5.15.
Correlation between Teacher Qualifications and their Perception of
Effective Facilitation of Learning

		QUALIF	PERCEPTION
QUALIF	Correlation Coeff.	1.000	.016
	Sig.(2-tailed)		.818
	N	34	200
PERCEPTION	Correlation Coeff.	.154	1.000
	Sig.(2-tailed)	.385	
	N	34	34

Note
1. Perception means student perception of effective facilitation of
   learning

None of the students' characteristics; gender, high achiever, previous

experiences, perception of teacher's involvement in theory and age

showed significant differences in students' perceptions of effective

facilitation. Similarly, teachers' qualifications have no significant

correlation with their perception of effective facilitation.

Summary

In summary, results from the one-to-one interviews of the 15 students and

5 teachers had supported the basis for this researcher to utilize Rauen's

Clinical Instructor Characteristics Ranking Scale for quantitative data

collection.

Both students' and clinical teachers' ratings of established clinical

teachers' behaviours showed the patterns of the teachers' and students'

perceptions were similar. Overall, the students agreed fairly strongly that

their clinical teachers did demonstrate effective clinical behaviours. However, teachers' ratings of their demonstration of effective clinical behaviours were higher than students' rating. The results also revealed that seniority of students did not affect their ratings of clinical teachers' effectiveness in facilitating students' transfer of learning.

Characteristics, namely, levels of training of participant, age, gender, employment, students' perception of their clinical teachers' employment status, clinical teachers' involvement in teaching theory unit and qualification of teachers were explored. Each of the students' and teachers' characteristics were not related to their ratings of clinical teachers' effectiveness in facilitating students' transfer of learning.

The subsequent chapter discusses the above results and their implications. The six research questions are answered and a number of recommendations are made to enhance effective clinical facilitation to promote effective students' transfer of learning.

Chapter 6

DISCUSSION

Summary of the study

The aim of this study was to investigate the effectiveness of clinical facilitation and transfer of learning from university to clinical settings in nurse education. The Clinical Facilitation Model and adaptation of Dunkin and Biddle's (1974) model was used to guide the collection of data for this study. Undergraduate students in Nursing were considered to be in the best position to observe their teachers' teaching behaviours and so nursing students were asked to participate in the study (N=300 asked, N=200 volunteered). Thirty-four clinical teachers also volunteered to take part. Rauen's (1974) Clinical Instructor Characteristics Ranking Scale was modified for a questionnaire and used as a main method of data collection. The independent variables of this study included students' characteristic such as levels of training, age, gender, employment, perception of teachers' involvement in teaching theory and teachers' characteristics such as involvement in theory teaching and qualification.

This chapter summarizes major findings and related discussion. Implications for research, teaching and administration are explored and suggestions recommended in this chapter. The recommendations are made with the aim to facilitate cooperative and collaborative teaching-learning environment that will enhance students' transfer of learning.

Major Findings and Related Discussions

Students' and Teachers' Perception of Effective Clinical Behaviours

From the interviews, semester 6 students rate nurse characteristics as more important than person and teacher characteristics. Semester 4 and 5 students rate teacher characteristics as more important than nurse characteristics. Two established effective clinical behaviours least ranked were person characteristic behaviours; that is, avoids embarrassing students, and shows genuine interest in students as an individual. Semester 6 students identified nurses' characteristic behaviours as more important compared to semester 4 students who perceived teacher characteristic behaviours as most important. Semester 5 students rated teacher and nurse characteristic behaviours as more important than person characteristics.

From the student interviews, the most important effective clinical behaviour rated by all the students was a person characteristic behaviour, that is, demonstration of honesty. Compared to the findings from the questionnaires (see Table 5.9), the most rated effective clinical behaviour was another person characteristic behaviour, that is avoidance of embarrassing students. The second most highly rated behaviour is again, a person characteristic behaviour, that is, shows genuine interest in student perceived as an individual. The two most important effective clinical behaviours stated by students of nursing are the importance of sound interpersonal skills and a positive attitude. The most perceived important clinical behaviour in this study is avoidance of embarrassing students, followed by another person characteristic behaviour that is, showing genuine interest in student as an

individual. Clinical teachers with strong person characteristic behaviours can assist in enhancing students' self-confidence. By showing genuine interest in the student as an individual and avoiding embarrassing students, nursing teachers can assist students to feel free to ask questions or to seek help. A teacher who shows genuine interest in students as individuals will be available for students as a resource and be willing to address students' questions. This is supported by previous studies (Flagler, Loper-Power, & Spitzer 1988).

From the teacher interviews, clinical teachers rate teacher characteristic behaviours of more importance than effective person and nurse characteristics. Two clinical behaviours of highest ratings were
a) demonstrate knowledge of scientific principles relative to patient care and
b) encourages student to think for self. Similar to the results found by Mogan and Knox (1987), students did not identify teaching characteristic behaviours as important, whereas teachers rated teaching ability characteristics as most important. High ratings by students in people characteristic behaviours might reflect high student anxiety in the clinical settings, which interfered with their learning. A teacher who did not embarrass them and accepted them as individuals would reduce their anxiety. Discrepancies might also have been due to students' greater emphasis on teacher characteristics that affected them personally. Students perceived their teacher to be less effective, if they embarrassed their students. Similar to the findings of McKay (1974) and Bronstein (1979) students tend to rate teachers on personal qualities.

In this study, the findings from the questionnaires (see Table 5.9) established that clinical teachers rated teacher characteristic behaviours as most important for facilitation and transfer of students' learning. The teacher characteristic behaviours are; evaluates students' progress in nursing in a fair manner and being available for students. Fothergill-Bourbonnais and Higuchi (1995) regarded the clinical teachers to be the most suitable people to conduct clinical teaching as they have an in-depth knowledge of the patient and the ward environment. Similar to the results of Li's study (1996), teachers rated teacher characteristic behaviours as more important than nurse characteristic behaviours. In this study, 88% of the clinical teachers were employed on a sessional part-time basis, and only 11% of the clinical staff were also engaged in teaching theory units in the university. With limited teaching experience and well-established nursing experience, clinical teachers may be consciously cognisant of their role as clinical teachers and therefore, their rating of teacher characteristic behaviours as important is significant to clinical transfer of learning.

Despite some minor differences between students' and teachers' perceptions of effective clinical behaviours, findings from this study demonstrated a strong, positive relationship between students' and teachers' ratings. There were very similar patterns of students' and teachers' ratings of effective clinical behaviours. A person characteristic behaviour most highly rated by students and teachers was, demonstrates honesty. Significantly, results from questionnaires indicated very little differences between students and teachers' perception of the importance of each behaviours listed in the

Rauen's Clinical Instructor Characteristics Ranking Scale. Students rated 3 most effective clinical facilitator behaviours as, being competent in nursing skills; being available to students to provide guidance as needed and demonstrating how to function in real nursing situation. Contrary to the students' perception, the clinical teachers rated the most effective clinical behaviours as, encouraging students to think for themselves and showing enthusiasm for giving quality patient care as well as demonstrating empathy towards students and others.

Students' and Teachers' Rating of the Clinical Teachers' Demonstration of Established Effective Clinical Behaviour.

From this study, the mean student rating of teachers' demonstration of effective clinical behaviours showed that students agree strongly that their clinical teachers did demonstrate effective clinical behaviours to enhance transfer of learning. When expressed as a mean item rating, the mean student score is the equivalent of 1.66 on the scale of (1) Strongly agree. (2) Agree, (3) Disagree and (4) Strongly disagree. The mean teacher rating of teachers' demonstration of effective clinical behaviours showed that teachers' ratings of the degree to which they demonstrate effective clinical behaviors were significantly higher than students' ratings ($z= -2.30$, $p<.05$) (see Table 5.3 and 5.4). The overall higher ratings of teachers' demonstration of effective clinical behaviour might be due to the anxiety felt by students in the clinical situation. Because teaching and learning of clinical skills takes place in an environment where errors can occur, students see how easily errors can occur, even with experienced clinical staff. Clinical staff are more

used to errors, more accepting of them, and more used to ways to overcome errors than students. This may explain why clinical teachers gave higher ratings of effective facilitation of transfer of learning than students did.

According to Benner (1984), nursing students are described as being at the novice stage of skill development. They not only need to follow the procedural steps and rules rigidly, but also need enormous clinical guidance from the clinical teachers. Kiker (1973) indicated that students needed to have teachers who could function as role models and demonstrate skills, attitudes and values that the students hope to develop. Rauen (1974) and Stuebbe (1980) also supported Kiker's (1973) conclusion that a large part of nursing skills and behaviours learned by students were directly related to behaviours observed in their clinical teaching. Although one would expect students to recall their most recent clinical experiences in some detail, one can only speculate as to what extraneous factors contributed to their recall of 'older' clinical experiences.

One can only speculate whether clinical teachers were adequately prepared for their roles, and were perceived as effective clinical teachers to the students. Extraneous factors can affect the findings. For example, when clinical teachers were seconded from the clinical agencies or when there was inadequate preparation for their roles as clinical teachers, the findings might not be as positive as they could be. Some students could, too, have been allocated to a clinical setting whereby the nursing staff's attitude towards students may not have been as conducive to learning as it should be.

From this study, the findings established some discrepancies between students' and teachers' ratings of demonstration of effective clinical behaviours. The mean teacher rating of teachers' demonstration of effective clinical behaviour showed that the teachers' rating of the degree to which they demonstrate effective clinical behaviours were significantly higher than students' ratings. These significant discrepancies might be due to the inadequate job description ascribed to the role of the clinical teachers. Since the evaluation of clinical teacher performance is often guided by the behaviours listed in the job description, a clinical teacher would be ineffective in self-evaluation unless the job description clearly identified the behaviours required to facilitate transfer of learning. Another explanation of the discrepancies between teachers' and students' evaluation of demonstration of effective behaviours might be due to the inadequate preparation of the clinical teacher. In this study, only about 55% of the clinical teachers had completed tertiary education. Researchers Nugent, Bradshaw and Kito (1999) assert that formal education and years of teaching experience could influence teacher self-efficacy. From their findings, one could assume that clinical teachers, who were confident in their abilities to assist students in bridging the gap between theory and practice, would evaluate self-performance more positively.

The Relationship Between Seniority of the Students and their Ratings of Clinical Teachers' Effectiveness in Facilitating Students' Transfer of Learning.

Findings from this study showed no significant differences between the 3 groups of students' ratings of clinical teachers' demonstration of effective clinical behaviours. However, data from the interview demonstrated

discrepancies between the semester 4, 5 and 6 students, ratings of effective clinical behaviours. Semester 4 students rated nurse characteristic behaviours as least important compared to Semester 5 students whereas Semester 6 students rated nurse characteristic behaviour of most importance.

Semester 4, especially during the first clinical experience, were confronted with concepts of fear, pain, emotional, trauma and death. Such confrontation could make the students feel inadequate (Kendrick & Simpson, 1992). A supportive clinical teacher relationship would lessen such anxiety. From this study, clinical teachers might have been providing a student-supportive environment to enable semester 4 students to rate the clinical facilitation to be significantly positive. From the interviews, semester 5 students had rated teacher and nurse characteristic behaviours of equal importance. Kleehamer, Hart and Keck (1990) regarded the initial clinical experience as anxiety producing. Once students survived the initial experience, they were more prepared to pursue application to nursing patients and to learn the new clinical skills and application of theory to practice. Explanation for the insignificant differences between students' ratings of teachers' demonstration of effective clinical behaviours and teachers' ratings, might be the reduction of anxiety encountered in the clinical settings, as well as the semester 5 students' increased confidence in the theory and practice of nursing.

Semester 6 students rated nurse characteristic behaviours of most importance in this study. The situation was much better for these semester 6

students than semester 4 and 5 students because, being in their final semester prior to graduation, they were anxious to learn and practise as much as possible. The need to be proficient in nursing practice might be the reason for semester 6 students' ratings of nurse characteristic behaviours of most importance. Especially in the Western Australian clinical settings, most semester 6 students were precepted by clinical nurses. There was less demand to seek the presence of the clinical teachers, except for evaluation purposes. Semester 6 students might identify clinical nurses as their role models and most likely rated nurse characteristic behaviours as most crucial.

A most likely explanation for the insignificant findings differences between senior and junior students' ratings of effective clinical facilitation might be the good supportive environment provided in the clinical settings by preceptors. Most of the clinical settings where semester 6 students mostly attend for their clinical experience were high dependent settings staffed by mostly high skilled clinicians. All of these might have contributed to the teaching-learning environment that could have influenced the semester 6 students' ratings of the effective clinical facilitation.

Characteristics that Affect Teachers' and Students' Perception of Clinical Teacher's Facilitation and Transfer of Learning from University to Clinical Settings.

Teaching effectiveness is a widely known concept within education and traditionally is determined by students, peers and self (Gien, 1991; Melland, 1996). Brophy and Good (1986) and De Young (1990) assert that quality teaching is based on a combination of personal traits, interpersonal

relationship skills, competency and professional decision making. The specific research questions posed in this study acknowledge the diversity of teacher variables. From this study, none of the students' and teachers' characteristics affected their ratings of clinical teachers' effectiveness. Data analysis on characteristics such as student gender, learning style, previous work experience, perception, age and teacher's qualification did not show any significant effects on their ratings of clinical teacher's effectiveness in facilitating students' transfer of learning. An explanation for these finding might be the high anxiety levels of the students in the clinical settings. Due to the increased acuity of patients' conditions, there is a higher expectation of students' performance in clinical practice from the nurses, patients and their families. When the clinical teachers are available to facilitate students learning, the students are more complacent and less likely to be critical of the teachers' facilitation. Another most likely explanation for the findings might be due to the clinical teachers' demonstration of the effective clinical teaching behaviours in the clinical settings. The clinical teachers in this study might have been well prepared for their roles as clinical teachers. Schools of Nursing might have organize courses or orientation workshops to develop the clinical teaching behaviours in Rauen's Clinical Instructor Characteristics Ranking Scale (see Table 5.1). With the increasing number of sessional staff seconded from clinical agencies and recruiting agencies, there has been a bigger need to develop and strengthen identified effective clinical behaviours.

An ideal way to enhance students' transfer of learning to the clinical situation is by adequate preparation of clinical teachers. Bergman and Gaitskill (1990)

emphasized that special attention be given to prepare the clinical teachers to relate underlying theory to clinical practice. It is also important to take into account when planning and implementing the curriculum content in education of students of nursing. To enhance retrieval and transfer of learning at a later date, it is crucial that careful sequencing of content and instruction be planned. Educators from the university can promote successful experiences and increase student confidence (Mager, 1968).

The best way to ascertain that learning can be transferred to the clinical situation, is by provision of adequate experience with the original task. Magill (1989) asserts that the more practice a person has, the better the eventual performance will be. Students must be provided with extra practice time to enable them to develop a memory representation of the skill. This practice is desirable to achieve effective transfer of learning.

Implications for Research, Teaching and Administration

Implications for Further Research

It is suggested that this research be replicated in another university where nursing is taught for transfer to the clinical situaton. This can give more insight into the roles and effectiveness of clinical teachers in relation to effective facilitation of transfer of students' learning. Rauen's Clinical Instructor Characteristics Ranking Scale could be used for the quantitative part of the study. There is a need to select larger numbers of student and teacher samples for more effective analysis. The qualitative part of the study could be replicated by requesting the students to rank the three most

important perceived clinical behaviours. The findings from the replicated study will enlighten the researchers as to what variables will affect effective clinical facilitation for transfer. The researchers can compare the differences or similarities of the two studies and make inferences from the findings.

It will be of great value to devise a valid and reliable evaluation tool so clinical teachers can be appraised and assigned to clinical areas. A reliable appraisal of effective clinical behaviours can enhance the clinical teachers to effectively facilitate students at different levels of seniority. This can be achieved by the use of a Rasch Measurement Model computer programme (Andrich, Sheridan, Lyne & Luo, 2000) to create an internal scale and measure attitude and item difficulties on the same scale.

A few main research questions on transfer of learning need to be answered. Should training institutions focus on tasks, learners or contexts in teaching for transfer? What extent of transfer can be expected for a learner to achieve? What should teachers teach in order to enhance transfer? How should teachers teach in order to enhance transfer? Future researches should rethink the philosophy of learning. With the rapidly changing world, there is a tremendous variety of tasks and settings. It will be impossible for teachers to teach a specific task in a specific setting that student will encounter in everyday lives. Researchers must strive to find effective ways that can promote generalization of learning and better ways of teaching for transfer.

Implications for Administrators and Nursing Educators

It is suggested that the orientation of new university teachers in nursing education should consist of a comprehensive overview of the curriculum, evaluation process as well as clinical teaching, before they begin teaching for transfer to the clinical setting. The proposed orientation programme could comprise of a five-day workshop. The workshop should address the school's philosophy, vision and a comprehensive overview of the curriculum contents. Clinical teaching, assessment and feedback could be detailed and new teachers be given opportunities to practise during the workshop. An on-going programme could be offered to the new teachers while they are out in the clinical settings with students. From this study, findings showed that only 12.8% of the clinical teachers were involved in teaching theory units whereas, the 79.2% were employed primarily to facilitate the students in clinical setting. The proposed orientation programme could empower the clinical teachers to be more effective facilitators of student transfer of learning.

It is suggested that all new clinical teachers be mentored with experienced faculty or clinical staff. Guidance and mentoring can enhance the teaching learning environment. This suggestion will incur extra financial cost to support the mentoring opportunities. Funding may be available from faculty staff development initiatives. The 79.2% of clinical teachers could benefit from the mentoring programme by establishing communication networks between the university and the clinical setting. Experienced mentors could

empower new clinical teachers' professional credibility and self-esteem by providing support, encouragement and feedback.

It is suggested that all clinical teachers be informed of their roles in their job description with amendments regulated as necessary, before beginning their university teaching. New clinical teachers could be informed of their roles during orientation, on commencement of their employment. A written copy of their job description could be issued to students, clinical teachers as well as the clinical agencies. Periodic performances appraisals of all clinical teachers could be carried out by their employers. Feedback of their performances to the clinical teachers, could enhance more effective clinical facilitation of students learning. Promotional incentives could be given to clinical teachers who are performing well. In this study, 79.2% of clinical teachers were employed on a sessional basis and promotion to more permanent contractual arrangement could increase clinical teachers' commitment to their roles, thereby, enhancing more effective facilitation of students' learning.

It is suggested that the university could increase the employment of contractual staff instead of continuing with the high percentage of sessional staff. It would be desirable that sessional staff who have completed two semesters of clinical teaching, should be converted to a contractual status. Good performance appraisal results could be criteria for contractual employment. Staffs employed on more permanent bases would tend to be more committed to their roles and would be more effective in facilitation of students' learning.

It is suggested that the university match teachers' clinical behaviours to the different levels of student training. This could be achieved following further research on effective clinical behaviours as identified by the students at different levels of their training. These desired behaviours could be developed in clinical teachers or strengthened if behaviours are already in existence. From the result of this study, there are significant differences in students' and teachers' perceptions of clinical behaviours. Clinical teachers who were confident in bridging the gap between theory and practice would evaluate self-performance more positively. An increase in desired behaviour could increase clinical teachers' confidence and abilities to facilitate students' transfer of learning.

It is suggested that the selection of clinical settings be emphasized. The university could plan clinical experience to match theory to practice correlation. The timing of theory to practice is important for effective transfer of learning to the clinical setting. For example, students who are enrolled in a unit whereby principles of infectious control are explored should ideally be allocated to clinical settings where these students can see the principles of infectious control being implemented in the clinical settings, within the same week, not months later. Students would be more likely to transfer information to new situations if they have been actively involved in the learning as well as being given the opportunity to apply newly mastered concepts and principles in a recent time frame. These strategies could enhance students' transfer of learning.

Implications for Nursing Teachers

It suggested that clinical teachers be flexible and make appropriate modifications to their clinical behaviours, according to the levels of students, so as to meet their learning needs for transfer of learning to the clinical setting. Professional development opportunities could be offered to assist clinical teachers to develop and strengthen effective clinical behaviours. Professional development programme should comprise educational innovations involving introduction to learning strategies, teaching methods, meta-cognitive strategies, assessment and feedback of learning outcome. It is suggested that arrangements be made for both clinical teachers and faculty staff to update clinical and theoretical skills. Confidence can enhance staff self-efficacy and the transfer of learning.

It is suggested that clinical teachers act as mediators and communicate between the university and clinical setting to facilitate cooperative and collaborative teaching-learning environment for students. This could be implemented by clinical teachers' communication with organisers of clinical setting with regards to student expectations, limitations and objectives of the clinical secondment. Clinical agency organisers could also communicate their expectations and limitations. With a good understanding of student and staff expectation, there could be more effective facilitation, cooperation and collaboration of student learning and patient care.

References

Adams, J. (1990). Historical review and appraisal of research on the learning, retention and transfer of human motor skills. *Psychological Bulletin, 101,* 41-74.

Alexander, P., Kulikowich, J. & Jotton, T. (1994). The roll of subject matter, knowledge and interest in the processing of linear and non-linear texts. *Review of Educational Research, 64, 210-52.*

Anderson, J.R. (1993). Problem solving and learning. *American Psychologist, 48,* 35-44.

Andrich, D., Sheridan, B., Lyne, A. & Luo, G. (2000). A windows based computer program for Rasch Unidimensional Measurement Models. Perth: Murdoch University.

Armington, C., Reinkka, E. & Crighton, H. (1972). Students' evaluation: Threat or incentive. *Nursing Outlook, 20(12),* 789-792.

Athanansou, J.A., *Adult Educational Psychologist.* NSW: Social Science Press.

Australian Teaching Council, (1996). Case Studies Illustrating National Competency Framework for Beginning Teaching, National Project on the Quality of Teaching and Learning. Canberra : AGPS.

Bakopanus, V., & White, R. (1990). Increasing meta-learning. Part I: *Encouraging Students' to ask questions.* Set research information for Teachers, Number I, item 11.

Benner, P. (1984). *From Novice to Expert: Excellence and Power in Clinical Nursing Practice,* Menlo Park: California, Addison - Wesley.

Bergman, K. & Gaitskill, T. (1990). Faculty and student perceptions of effective clinical teachers. *Journal of Professional Nursing, 6,* (1), 33-44.

Biggs, J. & Moore, P. (1993). *The Process of Learning (3rd ed.).* Singapore: Prentice Hall.

Borko, H. & Livingston, C. (1989). Cognition and improvisation; Differences in mathematics instruction by expert and novice teachers. *American Educational Research Journal, 26,* 473-98.

Bowden, J. (1990). Curriculum development for conceptual change learning : a phono memographic pedagogy. Occasional paper 90.1. *Educational Research and Development Unit,* Royal Melbourne Institute of Technology, Melbourne, Australia.

Brophy, L. & Good, T.L. (1986). *Teacher behaviour and student achievement*. In M. C.Wittrock (Ed.). Handbook on research on teaching (3rd. ed.). New York: MacMillan.

Bronstein, R. (1979). Teacher evaluation in the health professions. *Journal of Allied Health. 8*, 212-219.

Brown, S. (1981). Faculty and students' perception of effective clinical teacher. *Journal of Nursing Education, 20*, 4-15.

Brown, D. & Hayes, E. (1979). Evaluation Tools: Student's Assessment of Faculty. *Nursing Outlook, 27*, 778-781.

Brown, G. & Atkins, M. (1990). *Effective teaching in higher education*. London : Routledge.

Burgoon, J., Buller, D., Ebesu, A., White, C. & Rockwell, P. (1996). Testing interpersonal deception theory: effects of suspicion on communication behaviours and perceptions. *Communication Theory, 6*, 243-267.

Caffarella, R. & Olsen, S. (1993). Psychosocial Development of Women. *Adult Education Quarterly, 43*, 125-131.

Calderhead, J. (1987). A psychological approach to research on teachers' classroom decision making. *British Educational Research Journal, 7*, 51-57.

Candy, P. (1994). *Developing lifelong learning through undergraduates education*. Canberra: Australia Government Pub. Press.

Carlsen, W. (1991). Questioning in classroom: A sociolinguistic perspective. *Review of Educational Research, 61*, 157-178.

Chinn, C. & Brewer, W. (1993). The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science instructions. *Review of Educational Research, 63*, 1-49.

Chow, S. (1991). *Transfer of Learning*: Teacher Effectiveness and is Impact on Students Transfer of Learning, (unpublished), Edith Cowan University, Perth, Western Australia.

Coles, J., Dobbyn, M. & Print C. (1981). Nursing Students' perceptions of teaching in the clinical area. *Australian Nurses Journal, 11, (7)*, 47-49.

Commonwealth Department of Human Services and Health, Nursing in Australian Universities: report of the national review of nurse education in the higher education sector - 1994 and beyond. Executive summary. AGPS, Canberra, 1994.

Cook, M. (1924). *Issues in person perception*. London: Methuen.

Craddock, E. (1993). Developing the facilitator role in the clinical area. *Nurse Education Today, 13,* 217-224.

Daly, N., Bench, J. & Chappell, H. (1996). Interpersonal impressions, gender stereo types and visual speech. *Journal of Language and Social Psychology, 15,* 468-479.

Davey, J. (1994). Aseptic technique: What and how students of nursing learn. Unpublished treatise, Faculty of Nursing, University of Sydney, Sydney.

Davies, C. (1990). The collapse of the conventional career, the future of work and its relevance for post registration education in Nursing. London, United Kingdom : English National Board.

de Tornyay, R. & Thompson, M. (1982). *Strategies for teaching nursing.* (2nd ed.). New York: John Wiley & Sons.

De Young, S. (1990). *Teaching Nursing.* Menlo Park, California. Addison Wesley.

Dunkin, M. & Biddle, B. (1974). *The Study of Teaching.* New York: Holt, Rinehart & Winston.

Flagler, S., Loper-Powers, S. & Spitzer, A. (1988). Clinical teaching is more than evaluation alone! *Journal of Nursing Education 27,* (8), 342 – 348.

Fothergill-Bourbonnais, F. & Higuchi, K. (1995). Selecting clinical learning experiences: and analysis of the factors involved. *Journal of Nursing Education, 34,* (1), 37-41.

Freeman, D. & Potter, A. (1989). Do textbooks dictate the contents of mathematics instruction in elementary schools? *American Educational Research Journal, 26,* 403-421.

French, P. (1992). The quality of nurse education in the 1980's. *Journal of Advanced Nursing, 17(5),* 619-631.

Gardner, H. (1991). *The unschooled mind* : How children thinks and how schools should teach. New York : Basic Books.

Gay, L. (1987). *Educational Research Competencies for Analysis and Application* (3rd ed.). Columbus, Ohio : Merrill Publishing Company.

Gien, L.T. (1991). Evaluating of Faculty Teaching Effectiveness: Towards Accountability in Education. *Journal of Nursing Education, 30,* 92-94.

Gilligan, C. (1986). *In a Different Voice*. Cambridge : Harvard University Press.

Good, T. (1996). *Teacher effectiveness and teacher evaluation*. In J. Sikula, T, Buttery, & E. Guyton (Eds.). *Handbook of research on teacher education* (2nd ed.). pp. 617-665. New York: Macmillan.

Good, T. & Brophy, J. (1997). *Looking in Classrooms*. New York: Addison Wesley Educational Publishers Inc.

Goleman, D. (1996). *Emotional intelligence*. London : Bloomsbury.

Griffiths, J. & Bakanareskas, A. (1983). Student-instructor Relationships in Nursing Education. *Journal of Nursing Education, 22*, 104-107.

Guskey, T. R. & Passaro, P.D. (1994). Teacher efficacy : A Study of Constructive Discussions. *American Educational Research Journal, 31*, 627-643.

Hart, A. (1993). *Part-time, Poor Deal* : A Survey of Part-time Staff in Traditional Universities. London, United Kingdom : AUT.

Heckhausen, H. (1991). *Motivation and Action Basic Books*. (P. Leppman, Trans.), Berlin, Germany : Springer - Verlag.

Hunter, M. (1971). Teach for transfer, El Segundo, California : Tip Publication. *Education, 25, (4)*, 137-144.

Infante, M. (1985). *The clinical laboratory in Nursing Education* (2nd ed.). New York: John Wiley & Sons.

Kiker, M. (1973). Characteristics of the Effective Teacher. *Nursing Outlook 21, (11)*, 721-723

Jacobson, M. (1966). Effective and ineffective behaviour of teachers of Nursing as determined by their students. *Nursing Research, 15*, 218-224.

Kanitsaki, O. & Sellick, K. (1989). Clinical nurse teaching: an investigation of students perceptions of clinical nurse teacher behaviour. *The Australian Journal of Advanced Nursing, 6, (4)*, 18-24.

Karuhije, H. (1986). Educational preparation for clinical teaching: perceptions of the nurse educator. *Journal of Nursing Education, 25, (4)*, 137-144.

Karns, P. & Schwab, T. (1982). Therapeutic communication and clinical instruction, *Nursing Outlook*. Jan., 19-43.

Kendrick, K. & Simpson, A. (1992). *The nurses' reformation : philosophy and pragmatics of project 2000*. In Themes and Perspectives in Nursing (Soothill, K., Henry, C. & Kendrick, K. eds) London : Chapman & Hall.

Kleehammer, K., Hart A., & Keck, J. (1990). Important Clinical Teacher behaviours as perceived by university nursing students in the clinical setting. *Journal of Nursing Education*. 29, (4), 183-187.

Knafl, K.A. (1988). Blending qualitative and quantitative approaches to instrument development and data collection. *Journal of Professional Nursing*, Jan/Feb., 30-37.

Knox, J. & Mogan, J. (1985). Important clinical teacher behaviours as perceived by university nursing students, students and graduates. *Journal of Advanced Nursing Education*, 10, 25-30.

Krichbaum, K. (1994). Clinical Teaching Effectiveness Describes in Relation to Learning Outcomes of Baccalaureate Nursing Students. *Journal of Nursing Education*, 33, (7), pp. 306-315.

Levinson, D. (1997). *The seasons of a women's life*. NY : Ballantine.

Li, M. (1997). Perceptions of Effective Clinical Teaching Behaviours in a Hospital – based Nurse Training Programme. *Journal of Advanced Nursing*, 26, (6), pp. 1252-1261.

Lowman, J. (1984). *Mastering the techniques of teaching*. San Francisco, California: Jossey Bass.

Mager, R. (1968). *Developing an attitude towards learning*. Belmont, CA : Fearon.

Magill, R. (1989). *Motor learning*: Concepts and application (3rd ed.). Dubuque : S.M.C. Brown Publishers.

Malek, D. (1986). A model for teaching critical thinking. *Nurse Educator*, 11(6), 20.

Marriot, A. (1991). The Support, Supervision and Instruction of Nurse Learners in Clinical Areas : A Literature Review. *Nurse Education Today*, 11, 261-269.

Marsh, H. (1987). Students' evaluation of University teaching : research findings, methodological issues, and directions for future research. *International Journal of Educational Research* 11, 253-288.

Marton, F. & Ramsden, P. (1988). *What does it take to improve learning?* In : Ramsden, P. (ed.). Improving learning, new perspectives. London: Kogan Page.

Mc Hale, C. (1991). Job mobility among nurse teachers. *Nursing Standard*. 6, (1), 30-32.

McInerney, D. & McInerney, V. (1998). *Educational Psychology : Constructing Learning* (2nd ed.). Sydney : Prentice Hall.

McKay, S. (1980). A peer group counselling model in nursing education. *Journal of Nursing Education*. 19 (3), 4-10.

Medley, D. (1979). *The effectiveness of teachers.* In P. Peterson & H. Walberg (Eds.), Research on teaching: Concepts findings and limitations. Berkley, CA: McCutchan.

Meiland, H. (1996), Great researcher......good teacher? *Journal of Professional Nursing*. 12, 31-38.

Mogan, J. & Knox, J.E. (1987). Characteristics of ' best ' and ' worst ' clinical teachers as perceived by university nursing faculty and students. *Journal of Advanced Nursing*, 12, 331-337.

Myrick, F. (1991). The plight of clinical teaching in baccalaureate nursing education. *Journal Of Nursing Education*, 30, (1), 44-46.

Napthine, R. (1996). Clinical Education -- A System Under A Pressure. *Australian Journal of Nursing*, 3, (9), pp. 20-24.

National League for Nursing. (1982). Nursing data book. 1981. New York : National League for Nursing. Publication #19 -1982

National Nurse Education Review (1994). Commonwealth Department of Human Services and Health, Nursing in Australian Universities: report of the national review of nurse education in the higher education sector-1994 and beyond. Executive summary, AGPS, Canberra.

Nehring, V. (1990). Nursing clinical teacher effectiveness inventory: A replication study of the Characteristics of ' best ' and ' worst ' clinical teachers as perceived by university nursing faculty and students. *Journal of Advanced Nursing*, 15, 934-940.

Nisbet, J. & Shucksmith, J. (1984). *The Seventh Sense*. Edinburgh : Scottish Council for Research in Education.

Nugent, E., Bradshaw, M. & Kito, N. (1999). Teacher Self-Efficacy in New Nurse Educators. *Journal of Professional Nursing* 15, (4), 229 - 237

O'Shea, H., & Parsons, M. (1979). Clinical instruction : Effective and ineffective teacher behaviours. *Nursing Outlook*, June, pp. 411-415.

Peterson, R. (1992). *Managing Successful Learning. A Practical Guide for Teachers and Trainers*. London: Kogan Page.

Phillips, D. (1995). The good, the bad and the ugly. The many faces of constructivism. *Educational Researcher, 24,* 5-12.

Pohlman, J. (1975). A description of teaching effectiveness as measured by student ratings. *Journal of Education, 12,* (1), 49-54.

Pratt, D. (1986). *Three perspectives on teacher effectiveness.* 29th Annual Adult Education Conference. University of Calgary, USA.

Pratt, D. & Magill, M. (1983). Educational contract: A basis for effective clinical teaching. *Journal of Medical Education.* (58), 462-467.

Rafferty, D. (1992). Implications of the theory / practice gap for Project 2000 students. *British Journal of Nursing, 1.* (10), 507-513.

Ramsden, P. & Entwistle, N. (1981). Effects of academic departments on students' approaches to studying. *British Journal of Educational Psychology 51.* (3), 368-383.

Rauen, K. (1974). The clinical virtues as role model. *Journal of Nursing Education, 13,* (8), 33-40.

Reeve, M. (1994). Development of an instrument to measure effectiveness of clinical instructions. *Journal of Nursing Education, 33,* (1), 15-20.

Reilly, D.E. & Oermann, M.H. (1985). *The clinical field.* Norwalk, Connecticut: Appleton-Century Crofts.

Reynolds, A. (1992). What is competent Beginning teaching? *A Review of Educational Research. 62.* 1-35.

Russell, T. & Munby, H. (1992). *Teachers & teaching: from classroom to reflection.* New York: Falmer Press.

Ryan, D. (1961). Some relationships between pupil behaviour and certain teacher characteristics. *Journal of Educational Psychology. 52* (2), 82-90.

Salomon, G. & Perkins, D. (1989). Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologists, 24,* 113-142.

Sabers, D.; Cushing, K. & Berliner, D. (1991). Differences among teachers in a task characterised by simultanity, multidimensionality and immediacy. *American Educational Research Journal, 28.* 63-88.

Schimpfhauser, F.; Wittleman, J.K. & Sachs, L. (1981). Clinical instruction in nursing : A National Survey. *Journal of Nursing Education, 20,* 32-40.

Sellick, K. & Kanitsaki, O. (1991). A comparison of faculty and student perceptions of clinical nurse teacher behaviours. *The Australian Journal of Advanced Nursing, 9* (1), 3-8.

Shulman, L. (1987). Knowledge and teaching : Foundations of the new reform. *Harvard Educational Review, 19* (2), 4-14.

Sieh, S. & Bell, K.S. (1994). Perceptions of Effective Clinical Teachers in Associate Degree Programmes. *Journal of Nursing Education, 33* (9), 389-394.

Soodak, L.C. & Podell, D.M. (1996). Teacher efficacy : Towards the Understanding of a Multi-facetted Construct. *Teaching and Teacher Educator, 12,* 401-411.

Stafford, L. & Graves, C. C. (1978). Some Problems in Evaluating Teaching Effectiveness. *Nursing Outlook, Vol. 21* (8), 494-497.

Stuebbe, B. (1980). Student and faculty perspectives on the role of a nursing instructor. *Journal of Nursing Education, 19* (7), 4-9.

Swanson, H., O'Connor, J. & Cooney, J. (1990). Influence of meta-cognitive knowledge and aptitude on problem solving. *Journal of Educational Psychology, 82* (2), 306-314.

Synder, B. & Pressley, M. (1990). *Introduction to cognitive strategy instruction.* In M. Pressley & Associates (eds.). Cognitive strategy instruction that really improves children's academic performance. Cambridge. MA: Brookline Books.

Tanner, C. (1993). Teaching clinical judgement. In : Fitzpatrick J. Tauton R. (ed.). *Annual Review of Nursing Research, Vol. 5.* Springer. New York. pp. 153-173.

Tennant, M. (1997). *Psychology and adult learning.* (2nd ed.). London: Routledge.

Townsend, J. (1990). Problem-based learning. *Nursing Times, 4* (86). 61-62.

Trigwell, K., & Prosser, M. (1991). Relating approaches to Study and Quality of Learning Outcomes at the course level. *British Journal of Educational Psychology, 61* (3), 265 -275.

Wareham, P. (1996). An explanatory study into the experience of part-time nurse teachers compared to full-time nurse teachers. *Nurse Education Today,* pp. 376-384.

Watkins, D. (1982). Factors influencing the study methods of Australian Tertiary students. *Higher Education, 11* (4), 369-380.

Watkins, D. (1984). Student perceptions of factors influencing tertiary learning. *Higher Educational Research and Development, 3* (1), 33-35.

Wilson, M. (1994). Nursing student perspective of learning in a clinical setting. *Journal of Nursing Education, 33* (2), 81-86.

Wilson, S., Shulman, L. & Richert, A. (1987). *150 different ways of knowing: Representation of knowledge in teaching.* In exploring teachers' thinking. Calderhood, J. (Ed). New York: Macmillan Publishing Co.

Wittrock, M. (1986). *Handbook of Research on Teaching.* (3rd ed.). New York: Macmillan Publishing Co.

Woolfolk, A. (1995). *Educational Psychology* (6th ed.). Boston :Allen and Bacon.

Wong, S. (1978). Nurse Teacher Behaviours in the Clinical Field: Apparent Effect on Nursing Students' Learning. *Journal of Advanced Nursing. Vol. 3* (4), 369-372.

Zimmerman, L. & Waltman, L. (1986). Effective clinical behaviours of faculty: A review of the literature. *Nurse Educator, 11,* 31-34.

Dear Student,

This is part of a project I am undertaking in the course of my studies. I am particularly interested in how students can apply principles to practice. I believe teachers play a vital role in facilitation of transfer of students' learning. Would you please assist by completing the questionnaire?

A random sample of students in semester 4, 5 and 6 will also be invited to complete a questionnaire. They will be evaluating their own perception of how clinical teachers are facilitating students' transfer of learning in clinical areas.

All information collected will be maintained in strict confidence and anonymity

Thank you.

I write to ask if you would be willing to join me in my Masters study about learning in the Bachelor of Nursing. The purpose of this study is to examine student perceptions about the effectiveness of clinical facilitation and transfer of learning from the university to clinical settings in students of nursing. As Hassenplug (1966) cited, (Kiker, 1973, pp. 721) " In nursing, the good teacher is one who helps the students relate past knowledge to a new experience, is a learner with the students and eager to share newly gained knowledge, and serves as a role model."

Overall, the study will involve you completing a questionnaire and / or participating in an interview. The whole process will only take half an hour. You will not be identified in any way and you need do nothing more beyond completion of the questionnaires and / or participate in the interview. All data gathered will be treated with the strictest of confidentiality

If you choose not to participate in the study, then that will in no way affect or relate to your grades in any unit in the course. If after giving consent, you changed your mind about participation in the questionnaire and / or interview, that is within your right to do so. Again, I state that such a decision will in no way affect or relate to your progress in the course.

Any questions concerning the project entitled 'Facilitation and Transfer of Learning from the University to clinical settings in Students of Nursing' can be directed to Shirley Chow (Nursing Science, 9273 8574). If you are interested in participating in the study please complete the consent form below.

Thank you.
SHIRLEY CHOW

....

CONSENT SLIP

I ....have read the information about the **study and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity.**

Please tick: Questionnaire   ☐   and Interview   ☐

I realise I may withdraw any time. I agree that the research data gathered for this study may be published provided I am not identifiable and that full confidentiality is observed.

Signature... **Date**................

Investigator's Signature... **Date**................

Thank you for agreeing to be interviewed. I am working on a research project to look at nursing students' thoughts about effectiveness of their clinical teachers in facilitation of students' transfer of learning from the university to clinical settings.

The whole interview should take about 20 minutes. I would like to tape record the interview so I can listen to it more carefully later on. Do you agree with that? When I have finished with the reviewing the taped interview. I will erase all content on the tape.

Question 1
Please recall the most effective clinical teacher you've had so far and list three most outstanding characteristics that you can remember.

      a)   If you cannot recall, maybe just think who (clinical teacher) sticks in your mind and what makes him or her so special - you do not have to state the name.

Question 2
What are the characteristics of this instructor that enhanced your application of theory to practise in the clinical settings?

      a)   Can you expand on that?
      b)   How does the clinical teacher help you apply?
      c)   Try to remember the incidents when the clinical teacher helped you put theory to practice

Question 3
You have had at least 3 or more clinical instructors in your clinical rotations. I am going to ask you about your opinions on 3 qualities of those instructors which is most critical to your learning? (You may identify qualities that are different from those you have discussed earlier)

      1.
      2.
      3.
      Please rank them 1, 2 or 3

Question 4
Are there any factors you would like to mention, that affect your learning in the clinical setting?

_____

_____

_____

Thank You.

Age ☐   Gender: Male ☐ Female: ☐
I have previous experience in nursing   Yes ☐   No: ☐
I am a high achiever   Yes ☐   No: ☐

Semester   Please tick   4 ☐   5 ☐   6 ☐

Facilitation and Transfer of Learning from the University to Clinical Settings in Students of Nursing.

This questionnaires consist of two (2) main stages. In effect, you will complete the questions twice. In approaching this questionnaire you will be required to work through it twice. On the first occasion, you are to respond recording your views about effective facilitation and transfer of learning. When you have completed this first stage, then you will proceed to the second stage

Stage 1
Each behaviour stated in the questionnaire is about what constitutes an effective facilitation and transfer of learning. Would you please

1.   Think about each behaviour, and
2.   Respond to each behaviour by placing in Column A, only one number between 1 and 4 in each box

      Please use the following scale when making your decisions.

      1   means you strongly agree (SA) with this behaviour
      ^   means you agree (A) with this behaviour
      3   means you disagree (D) with this behaviour
      4   means you strongly disagree (SD) with this behaviour

Stage 2
When you have completed responding in Column A, please refer to Column B. Would you please think about each behaviour again but now relate the behaviour to your current facilitation ie Do I demonstrate this behaviour?

Again, using the same 1-4 scale, please respond in Column B only.

Thank you for participating.

APPENDIX E QUESTIONNAIRE FOR STUDENTS STAGE 2

	1 = SA	Strongly agree
	2 = A	Agree
	3 = D	Disagree
(Adapted from CICRS C. Rauen)	4 = SD	Strongly disagree

	Effective Clinical Facilitator Behaviours	Column A What constitutes an effective teacher	Column B My teacher demonstrates these behaviours
	Being available to students to provide guidance as needed		
2	Knowledge of scientific principles relative to patient care		
3	Providing assignments which relate syllabus concepts to actual patient care		
4	Being competent in nursing skills		
5	Showing interest in working with students on an individual basis		
6	Being able to promote and encourage students to be "open" and express their opinions and feelings		
7	Demonstrating honesty towards students		
8	Being able to use scientific principles relative to patient care		
9	Being able to provide a variety of resources to help students with questions		
10	Demonstrating how to function in real nursing situations		
11	Avoid embarrassing students		
12	Encourage students to think for themselves		
13	Showing enthusiasm for giving quality patient care		
14	Evaluating students progress in a fast manner and keeping students informed		
15	Rewarding students' efforts in giving quality care		
16	Demonstrating empathy towards students and others		
17	Demonstrating kindness in daily interactions with people		
18	Demonstrating continued interest in applying improved methods of giving nursing care		

As a student I perceive the facilitation and transfer of my learning from the university to clinical setting, to be effective

Please respond to the above statement by ticking in the appropriate column.

Strongly Agree	Agree	Disagree	Strongly Disagree

Thank you for your participation.

Dear Colleague

This is part of a project I am undertaking in the course of my studies.
I am particularly interested in how students can apply principles to practice. I
believe teachers play a vital role in facilitation of transfer
of students' learning. Would you please assist by completing the
questionnaire?

A random sample of students in semester 4, 5 and 6 will also be
invited to complete a questionnaire. They will be evaluating their own
perception of how clinical teachers are facilitating students' transfer of learning
in clinical areas.

All information collected will be maintained in strict confidence and anonymity.

Thank you.

Thank you for agreeing to be interviewed. I am working on a research project to look at nursing students' thoughts about effectiveness of their clinical teachers in facilitation of students' transfer of learning from the university to clinical settings.

The whole interview should take about 20 minutes. I would like to tape record the interview so I can listen to it more carefully later on. Do you agree with that? When I have finished with the reviewing the taped interview, I will erase all content on the tape.

Question 1
Please recall the most effective clinical instructions you've had so far in helping students transfer their theory to practice.

    a) What behaviours are crucial in assisting the students' transfer of theory to practice? List 3 of them.

Question 2
What are characteristics / behaviours you consider important in order to enhance students' application of theory to practise in clinical settings?

    b) Can you expand on that?
    c) How did you help the student apply?
    d) Try to remember the incidents when you actually assisted or enhanced your students' learning.

Question 3
You have been a clinical teacher for quite a long time. For how long?

    a) In your opinion, what are the 3 qualities you consider vital in helping students learn in clinical areas?

        1.
        2.
        3.
        Please rank them 1, 2 or 3

Question 4
Are there any factors you would like to mention, that affects your facilitation of students' transfer of learning from university to the clinical settings?

_____

_____

_____

Thank you.

Appointment   **Please Tick**

    Sessional   ☐
    Contract   ☐
    Tenured   ☐

Highest qualifications attained: _____

_____

I am engaged in teaching theory units in the University   **Yes / No**

I am engaged in clinical facilitation in clinical settings   **Yes / No**

Facilitation and Transfer of Learning from the University to Clinical Settings in Students of Nursing.

This questionnaires consist of two (2) main stages. In effect, you will complete the questions twice. In approaching this questionnaire you will be required to work through it twice. On the first occasion, you are to respond recording your views about effective facilitation and learning. When you have completed this first stage, then you will proceed to the second stage.

Stage 1
Each behaviour stated in the questionnaire is about what constitutes an effective facilitator of transfer of learning. Would you please:

1. Think about each behaviour, and
2. Respond to each behaviour by placing in Column A, **only one number** between 1 and 5 in each box.

    Please use the following scale when making your decisions.

1. means you **strongly agree (SA)** with this behaviour
2. means you **agree (A)** with this behaviour
3. means you **disagree (D)** with this behaviour
4. means you **strongly disagree (SD)** with this behaviour

Stage 2
When you have completed responding in Column A, please refer to Column B. Would you please think about each behaviour again but now relate the behaviour to your current facilitation ie Do I demonstrate this behaviour?

Again, using the same 1-4 scale, please respond in Column B only.

Thank you for participating.

APPENDIX I   QUESTIONNAIRE FOR TEACHERS STAGE 2

1 = SA   Strongly agree
2 = A   Agree
3 = D   Disagree
4 = SD   Strongly disagree

(Adapted from CICRS. C. Rauen)

	Effective Clinical Facilitator Behaviours	Column A What constitutes an effective teacher	Column B I demonstrate these behaviours
1	Being available to students to provide guidance as needed		
2	Knowledge of scientific principles relative to patient care		
3	Providing assignments which relate syllabus concepts to actual patient care		
4	Being competent in nursing skills		
5	Showing interest in working with students on an individual basis		
6	Being able to promote and encourage students to be "open" and express their opinions and feelings		
7	Demonstrating honesty towards students		
8	Being able to use scientific principles relative to patient care		
9	Being able to provide a variety of resources to help students with questions		
10	Demonstrating how to function in real nursing situations		
11	Avoid embarrassing students		
12	Encourage students to think for themselves		
13	Showing enthusiasm for giving quality patient care		
14	Evaluating students progress in a fast manner and keeping students informed		
15	Rewarding students' efforts in giving quality care		
16	Demonstrating empathy towards students and others		
17	Demonstrating kindness in daily interactions with people		
18	Demonstrating continued interest in applying improved methods of giving nursing care		

As a clinical facilitator, I perceive my facilitation and transfer of students' learning from the university to clinical setting, to be effective.

Please respond to the above statement by ticking in the appropriate column.

Strongly Agree	Agree	Disagree	Strongly Disagree

Thank you for your participation.