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Katariina Raij

**TOWARD A PROFESSION**  
Clinical learning in a hospital environment  
as described by student nurses

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### **Clinical learning in a hospital environment as described by student nurses**

#### **Abstract**

The aim of this study is to describe clinical learning according to the student nurses' own conceptions. Clinical studies form the essential part of student nurses' education and most of them take place in hospital environments. Learning a profession in nursing education implies students achieve the competence of a registered nurse and are able to work in a multiprofessional health care team for a patient's good. Working as a professional demands also competence to integrate different types of knowledge in providing and managing nursing care. That is why, in this study, theoretical studies have been first considered. This in turn will be transformed in clinical studies.

The interest being in the student nurses' own conceptions, the phenomenographic approach has been selected to be used. The students' conceptions have been discovered by analyzing their learning diaries. Writing a diary offers a possibility to follow students' own learning processes in the way they have perceived and conceptualized them. The phenomenographic approach has been found meaningful in understanding how the students constitute their learning in clinical placements during different periods.

The study is educational by nature because its focus is in learning but it also belongs to the field of nursing science. The approach has been inductive but including a deep pre-understanding of the phenomenon. From this perspective constructing the whole study has implied a continuing dialogue between knowledge covering the theoretical part and the empirical part.

The findings show that the students have described their conceptions of 1) the sources of knowledge in clinical learning, 2) acquiring knowledge in clinical learning and also 3) their own learning strategies in the learning paths they have followed. The sources of knowledge and acquiring knowledge have been presented as the categories and subcategories discovered. The learning strategies have been discovered by following the students' changing conceptions while they advance from a beginner to a graduating student and achieve the learning objectives perceiving the idea of holistic nursing care in an individual way. It has been established that the students' clinical learning is context-oriented and based on the meanings they give to the contexts.

**Key words:** professional learning, clinical learning, clinical knowledge, acquiring knowledge, learning strategies

**TO**

Kari,

Karita and Kristian

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# 1 INTRODUCTION

## 1.1 BACKGROUND

Nursing education consists of theoretical studies and clinical studies. Theoretical studies take place in nursing institutes and clinical studies in clinical settings, where a nursing client is present directly or indirectly. Clinical learning is still an essential part of student nurses' learning, although its role has changed during the recent years. Earlier, in the beginning of last century, also in Finland, learning was based mainly on clinical work and students received small sums in payment. However, it was soon realized that theoretical studies are of great importance in nursing education and the proportion of clinical studies was reduced in relation to theoretical studies. Also the role of a student nurse has changed. Being an employee in a clinical setting, a student nurse became a student, who is able to set his or her own learning goals and direct his or her own studies to achieve the set goals. Student nurses have also the right to become facilitated in their learning processes by registered nurses and in Finland nursing institutes pay for clinical tutoring.

The Finnish nursing education has been changed frequently since 1987 proceeding from diploma - level to polytechnic level. The first experimental polytechnics, some of them including also nursing education, were begun in 1992 in Finland. At polytechnic level the length of studies as reflected by the number of study weeks has changed, the basic structure of the studies has been set by the Ministry of Education and the studies have been planned to correspond to polytechnic level. Otherwise the polytechnics are free to develop their own curricula, nursing education however has to take the EU-directives for the qualifications of registered nurses into account. Since 1998, all initial nursing education in Finland has been at polytechnics.

An International Nursing Education Programme also began as an experiment in Espoo in 1993. Espoo College of Nursing wanted to develop its own nursing centered curriculum covering the essential phenomena in nursing care and differing from earlier bio-medical approach or an "actor-centered" or a task oriented approach. It was approved by The National Board of Education as an experiment in 1993 and since 1994 as a continuing nursing education programme. At the beginning it was not yet a polytechnic programme but it was planned to correspond to the level of professional higher education and since 1997 it has been used as the basis of the polytechnic programme. The main idea was also to make sharing knowledge and developing nursing care internationally possible, that is why the language of instruction was changed to English which in turn has opened the doors to foreign students and nurse educators. This programme is present in this study with fifteen student nurses acting as informants.

According to the EU-directives, the theoretical instruction will support student nurses to acquire the knowledge, understanding and professional skills needed to plan, provide and assess total nursing care. Clinical instruction supports student nurses to plan, provide and assess the required total nursing care on the basis of their acquired knowledge and skills. A student nurse learns also to organize total

nursing care, including health education, as a team leader. Clinical instruction takes place in hospitals and other health care institutions and in the community under the responsibility of teachers who also are nurses. The theoretical instruction shall be balanced and co-ordinated with the clinical instruction. The length of the theoretical instruction must be at least one-third and that of the clinical instruction one-half of the minimum length of the programme which is 4600 hours (77/452/EEC and (89/595/EEC also ACTN 1992.) At its best this means that student nurses have their theoretical studies at the institutes directed by nurse educators and other experts. The nurse educators also follow their students in different clinical placements which deal with various learning experiences. They support students and their clinical tutors, who are registered nurses and assess students' clinical learning based on the students' own self-evaluation.

The EU - directives only call for minimum standards concerning nursing education, the member states are naturally allowed to exceed the directives. In Finland nursing education lasts three and a half years which involve 140 study weeks. Thus the length of clinical studies should be 57.5 study weeks, if one study week consists of 40 hours.

Clinical learning has always been problematic. It should be learning that takes place in an environment where students can integrate and apply the theoretical studies they have had at their institutes. It also should offer a place where students have clinical tutors guiding and supporting them to achieve their own goals. But there are many barriers in this path. Qualified nurses are very busy and there might not be enough of them to undertake supervisory duties, they work in three different shifts, they do not all have enough tutoring education or there is so much work to do that the student nurses are used only to help the nurses, mostly in so called basic nursing care. It has also often been said that theoretical studies, taking place in another organization nowadays, are far from reality that they are too abstract, too theoretical without having any contact to real nursing care. Now when theoretical studies are based on knowledge produced by nursing science and other related disciplines, discussing the meaning of theoretical studies has gone further to also include valuing nursing as a science and an art. On the other hand, the development of nursing care in clinical settings has many various forms and levels. For example planning nursing care can still be conducted using nurses' tasks without following the principles of primary nursing care as it is taught in nursing education. The institutes are willing to develop nursing education by applying the latest knowledge base.

As it is an essential part of nursing education, learning in clinical settings offers an interesting field for study. In developing polytechnic education in Finland emphasis is also being placed on the meaning of its connection to working life. A clinical setting, representing a nurse's working life, means an environment where holistic learning towards a future nurse's profession should take place. When the International Nursing Education Programme was begun with its own curriculum as an experiment it was decided research be combined with the clinical learning by

the pioneer group. This idea was supported by the decision to use the experimental curriculum as the basis of polytechnic curriculum. Thus the findings of this study will also be applicable in future.

This study is a description of what student nurses learn in hospital environments, where the majority of clinical studies take place. The purpose is to produce a more scientific understanding of learning in clinical situations conceptualized by student nurses which in turn would facilitate the development of tutoring in clinical learning and the development of nursing education. This study is educational and can be classified as didactics because it concerns learning. Nursing care as the future nurses' work is the learning object, therefore it also belongs to the field of nursing science as nursing didactics (c.f. Hentinen 1989b). Nursing education represents professional higher education. Clinical learning being a part of that represents learning professional skills and abilities needed in working life. Therefore, this study could also be of interest in understanding professional learning in general.

## **1.2 REVIEW OF EARLIER FINDINGS CONCERNING CLINICAL LEARNING**

Clinical learning has been found to be interesting by many researchers. This review is meant to introduce various approaches which has been used in order to clarify this phenomenon. Being aware of these earlier findings has also guided the development of the present students' education.

A number of studies in clinical nursing education have been conducted on clinical teaching focusing on clinical instruction. Many problems have been identified. According to Meleca, Schimfhauser, Witteman & Sachs (1981) clinical tutors lack formal education in instruction, they require lecturing skills and also communication skills and assessment skills. Wood (1987) points to the accountability of nurse teachers in demanding that they should improve their clinical competence. Karuhije (1986) makes a difference between the demands of classroom teachers and clinical teachers, who should have competence in nursing and competence in teaching and has planned educational preparation for clinical teaching. This is congruent with McCaugherty (1991), who discusses the conflicting expectations on tutors who should be teachers and expert practitioners. Hentinen (1989) has also observed the different expectations toward student nurses exhibited by nurse educators and clinical tutors, who focus more on practical issues. Behind these findings there is a basic question of how to facilitate a student nurse to integrate theoretical studies and clinical studies.

Very often theoretical studies are understood as theory, as a certain type of knowledge and clinical studies as practice, as daily doing. In the clinical environment a student nurse should then be able to integrate theory and practice (c.f. McCaugherty 1991). There is a clear gap between theory and practice and methods of bridging that gap have been considered and developed by e.g. Alexander (1983), Miller (1985), Moccia (1986), McMillan & Dwyer (1989), McCaugherty (1991), Smith (1992), Ferguson & Jinks (1994), Hewison & Wildman (1996) and Severinsson (1998). This gap is present also in discussions concerning once again the role

conflicts between classroom and ward teachers (e.g. Jones 1985) or a nurse educator's clinical credibility (e.g. Webster 1990 and Crotty 1993). Cook (1991) has also observed a conflict between the theories taught in the institutes and the theories underpinning student nurses' actual practices in clinical settings. However, as McCaugherty (1991) confirms, theory, meaning books and lectures in his presentation and the curriculum and nursing care on hospital wards should be in balance, which places new demands on staff developing nursing care.

Clinical learning has been studied also from the students' point of view and they have been found to have difficulties in integrating theoretical studies and clinical learning also in the Finnish studies reported by e.g. Mikkonen & Pitkänen (1988), Hentinen (1989), Leino-Kilpi (1991), Rajala (1991) and Veräjänkorka (1994). Veräjänkorka has also observed that student nurses need to integrate disconnected tasks and single phases in a patient's nursing care into a whole. Luukka (1998) in turn has described the important areas of nursing practice studies assessed by graduate nursing students as a learning environment, personal factors, other students' peer support, their own "know how" of nursing and assessment in nursing practice studies. It has been also established that student nurses value the competency of qualified nurses to teach and afford them regular clinical supervision as the studies done by e.g. Wong (1978), Lee & French (1997) and Li (1997) show.

However, tutoring in clinical learning can also be problematic. According to some researchers (e.g. Fretwell 1982, Alexander 1983, Clinton 1985, Jacka & Levin 1987 and Raji 1991) students do not receive enough supervision from their tutors or clinical staff. In my earlier study concerning student nurses' clinical learning from their tutors' point of view I also have established that in clinical nursing care many nurses do not think tutoring student nurses is one of their basic duties. They believe that taking care of their patients is most important and they can tutor their students if they have time. Most of the problems concerning tutoring have been left without trying to find a solution. (Raji 1991.)

Mogensen in turn has been interested in student nurses' learning in practice by observing and interviewing students doing various nursing duties. She describes how student nurses learn to do by organizing their earlier experiences in the forms of stories or pictures or having them in their "fingers" i.e. by kinetic shaping. Social learning is seen either as supporting a student's own growth or as preventing them from following the ideal principles. (Mogensen 1994.) Kosowski (1995) has observed that student nurses learn practical nursing in interaction with patients by learning caring and by creating caring. Karttunen (1999) has been interested in nursing students' conceptions concerning knowledge and how it relates to action, finding among other things that the nursing students regard the creation of their own concept of care as most important and they emphasize nursing of a patient or use their own or a nurse's action as a base of their knowledge development.

Further clinical learning has been studied focusing on the effectiveness of various tailor-made programmes for student nurses. The focus has been on experiential learning related to reflection e.g. by Burnard (1992). Green & Holloway (1997) found that from the student nurse's point of view experiential learning is related to clinical learning and reflection is an essential part of experiential learning.

Richardson & Maltby have studied the meaning of reflective diary writing in enhancing student learning in a community setting, finding the level of reflectivity and its meaning in self-assessment and promoting learning. According to them most of the students freely expressed themselves and they liked the opportunity to evaluate their clinical progress through their diary accounts. (Richardson et al. 1995.) Ridley, Laschinger & Goldenberg (1995) have been interested in the effect of a senior preceptorship finding it meaningful for the development of student nurses' competencies. Severinsson (1998) has found a supervision programme for student nurses facilitates in integrating theory and practice and in understanding of the experiences of clinical situations in order to develop their nursing care skills and personal skills.

In conclusion, clinical learning has been studied from the perspective of a faculty, clinical instruction, theory - practice relationship and a student nurse. Attempts to find improvement in clinical learning have been often focused on some parts of it without taking the whole process into account. On one hand clinical learning has been seen to represent learning actual practices and theory, on the other hand, representing knowledge presented in books and lectures held at nursing institutes. The problem concerning the gap between theory and practice is being discussed continuously. It is also the basic question behind attempts to develop nursing education and both nurse educators' and clinical tutors' competencies in facilitating student nurses' learning processes. The findings of these studies are thought to be essential in selecting an approach for this study. They have led me to consider student nurses' clinical learning as a process during their study years. Awareness has also guided the team of educators in the development of the curriculum. It was made an attempt to bridge the gap between theory and practice by focusing on selecting the theories used, by supporting students in applying theoretical knowledge in clinical studies, and by developing team work. This team work has taken place between nurse educators and between educators and clinical tutors. Also, from the beginning students have been guided to become self-directed learners, who are responsible for their own studies.

### **1.3 THE PURPOSE OF THE STUDY**

In spite of the various interests in clinical learning the whole process experienced and conceptualized by student nurses has not been studied much. Understanding the significance of clinical learning for student nurses could however direct the development of nursing education in a student centered way. That is why I have wanted to find out how student nurses learn in clinical settings. The purpose in this study is to follow student nurses' learning paths in clinical placements in order to find out their own conceptions about their clinical learning. Because learning is seen as an individual process, it has been seen important to identify different conceptions student nurses have about their own learning and different processes they go through during their clinical studies.

On this journey student nurses will describe their clinical learning, covering their nursing education, in the way they perceive and conceptualize it. Descriptions will be analyzed and in that process student nurses' conceptions will be clarified. The first task is to find an answer to the question of what is to be found in student nurses' descriptions covering clinical learning. After that the more exact research questions will be formulated and they will be presented in connection with the findings. The length of nursing studies in Finland is 3.5 years. The first year consists mainly of theoretical studies. That is why my study of clinical learning in a clinical setting begins during the second study year and ends during the fourth study year. Three periods following each other in different study years have been selected for study. In this way the whole process will be followed, from a beginner to a graduating nurse (Figure 1).

Theoretical studies at the college		
Clinical skills at the college	Clinical studies at kindergartens and at homes for the elderly	Clinical studies in health care centers and in hospital environments
7.5 study weeks	6 study weeks	about 44 study weeks on different wards and out patient departments
The length of the studies 3.5 years involving 140 study weeks		

Figure 1. *Theoretical and clinical studies in the present nursing education*

During the first and second study year the student nurses study clinical skills at the institute. In the beginning of the second study year they also have their clinical studies at kindergartens and at homes for the elderly. In accordance with their learning objectives the students first study healthy people in different age groups in order to later obtain a deeper understanding of the significance of different dysfunctions. During their second, third and part of their fourth study years the students have their clinical studies in health care centers and in hospitals on different wards. The students have a possibility to select their clinical placements from the available places. During their final clinical studies they however return to the wards where they began in order also to be able to learn management and leadership in nursing care. In this study, the learning diaries were collected from hospital ward periods covering 5, 3 and 7 weeks during the second, third and fourth study year, a total of 15 study weeks. These hospital wards are medical and surgical in nature and they form the continuing clinical periods in the student nurses' education. On these wards also advanced professional studies take place during the last study year. The students are there as beginners, more advanced learners and graduating students.

This study concerns a group of student nurses, who are involved, as agents, in their own learning processes. They are all individuals, who have their own perceptions and who have their way to construct their own world. This is one part of their professional education to which they have given their own meaning. The focus is on the students' clinical learning. Because learning deals with knowledge and clinical studies follow theoretical studies, it has been decided to begin with an examination of the concept of knowledge in nursing education and the structure of theoretical studies in connection with knowledge. Describing the concept of learning related to clinical learning which is based on learning theories will in turn lead to the empirical part. It, in turn, deals with the conceptions of the student nurses of their clinical learning.





## 2 PHENOMENOGRAPHY AS A RESEARCH METHOD

Phenomenography is a special qualitative research method, developed by the so-called Gothenburg group, which focuses on human beings' ways to perceive their own world. There is a distinction between how things are and how they are perceived to be. The former is called the first order perspective and the latter the second order perspective. According to the second order perspective the only truth is how a person experiences something. It does not matter if the perceptions are right or wrong because they are real. The second order perspective directs studies in phenomenography. A researcher's interest in different conceptions related to a selected phenomenon is essential not the phenomenon itself. The reality exists without a person's perception but the meaning or the purpose of reality will be defined only by the perception of a person. Thus, it also means that the meaning of the object will not be defined until it is interpreted by someone. (e.g. Marton 1978, Marton 1981, Larsson 1986, Uljens 1988 also Uljens 1993.) Marton (1995) has clarified the dualist notion of the world by replacing the real world and the perceived world as the world experienced by an individual.

In phenomenology (Husserl 1962) it is assumed that a real world exists, the meanings of reality can be understood and the existence and its meaning do not depend on a subject's way of understanding an object. Whereas in phenomenography it is assumed that the existence and meaning of an object both depend on a subject's cognitive processes. Meanings will be created by experiences and reality will be determined by conceptions. What is of interest is exploring different conceptions of the world (e.g. Uljens 1988, Marton 1988, also Uljens 1992).

When establishing phenomenography as a research method attention was focused on qualitative aspects of students' learning (c.f. Marton & Säljö 1976 and Marton, Hounsell & Entwistle 1984). In phenomenography students' experience, understanding, conceptualisation and perception of the learning task in a specific context are emphasized (Marton 1986). The components in a phenomenographic study presented by Uljens (1988) are: 1) a phenomenon in a surrounding world, 2) selecting an approach to look at the phenomenon, 3) interviewing the conceptions persons have about a selected phenomenon, 4) transcribing tape-recorded interviews, 5) analyzing the written statements and describing the constructed categories.

In phenomenography there are two different perspectives in our conceptions: 1) the what - perspective and 2) the how - perspective. The former is related to our intentional thinking model, the latter includes the processes leading to demarcating our what - view. The what - perspective is dependent on the how - perspective. The different ways of seeing something are also dependent on our experiences and on the cultural context in which we live. The what - perspective can also be seen as a mental product and the how - perspective as a thinking process. (Uljens 1988 also Krosmark 1986.)

When building categories in a phenomenographic study there are three different possibilities: 1) the meaning of the statement will be used as a basis (class 1, class

2 etc.) 2) the relationships between single statements will be taken into consideration at the same time so that the statement will have its contextual meaning and 3) categories will be constructed by comparing interviewees' different conceptions. Single interviewees' conceptions are meaningful only in relation to each other, at a collective level. In phenomenography a researcher is not interested in the causes behind conceptions but accepts that conceptions are various and contextual. Succeeding in collecting wide enough conceptions will be possible if the informants are allowed to consider a phenomenon in many different situations. It makes possible the construction of a classification system, which is stable and can be generalized. It is also of value that a classification system will be constructed only by using the elements arising from the research material. It is not conducted by a theory or an earlier research. (e.g. Uljens 1988.) Also Ihde (1977) and Marton (1986) emphasize that the essence to be found in phenomenography is the structure behind alternatives.

According to Uljens (1988) there are also three different methods involved in constructing a classification system. 1) A horizontal system implies that different classes are equal in relation to each other. 2) In a vertical system classes are not equal. They differ from each other depending on the number of conceptions they include. This is useful if a researcher wants to compare conceptions presented at different times. 3) In a hierarchic system conceptions differ from each other because of their different value basis. Some conceptions represent more developed or comprehensive levels and are in a hierarchic relation to each other.

Phenomenography is a useful method if a researcher is interested in finding out what a learning task or a learning situation means to an individual learner and how a person's conceptions will change. Learning can be studied from a student's point of view and from a teacher's point of view. Also, effectiveness of learning can be deduced by using this method. (Uljens 1988 also Larsson 1986.) Interviewing is very often used as a data collection method but e.g. Larsson (1986) mentions, however, that also other qualitative data collection methods can be used.

In this study, because the interest is focused on student nurses' own conceptions covering clinical learning, the phenomenographic approach has been selected for understanding the students' conceptions. Students are seen as unique, holistic beings with their own historical, sociocultural backgrounds which direct their ways to interpret and understand the world. This kind of concept is embedded in studies, which focus on human beings' thoughts and ways to perceive a surrounding world (c.f. Gröhn & Jussila 1989). This study as it produces knowledge about learning that leads to the development of tutoring clinical learning can be said to be a general pedagogical study (see Larsson 1986, also Larsson 1993).

In order to find out divergent, changing conceptions which cover proceeding learning processes in clinical learning, plans were made to use learning diaries for research materials. By analyzing learning diaries, written in various clinical placements during different study years, conceptions covering the whole clinical learning process can be identified. We can also assume that the conceptions written in learning diaries are related to students' own actions. Interviewing, which was seriously considered, was rejected because in a learning diary the whole process can be described and followed. In this way it is also possible to avoid a criticism of

phenomenography that it can easily lead to a static view of human thought (see e.g. Simoila 1993). A learning diary is also a very effective way for students to reflect on their own learning experiences and in this way to get a deeper understanding of a phenomenon. It supports students' personal growth and helps to identify and evaluate their own learning processes. (e.g. Bowman 1985, Cooper 1980, Seldak 1992 and Richardson et al. 1995.)

Learning diaries provide very good material for analysis but their use demands informants' competencies in written self expression. That is why a pilot study was carried out in autumn 1992. Sixteen student nurses studying medical - surgical nursing care were asked to write learning diaries and describe their own conceptions of clinical learning during a hospital period. Those diaries were read and analyzed in order to find out if learning diaries can be used as a research material. It was discovered that the students described their own learning experiences and learning activities with their meanings in a very diverse and open way. This led to the conclusion of finding students' conceptions of clinical learning in diaries and to the decision of using them. The question of the trustworthiness of written material will be discussed later.

Students' ideas of learning have been studied e.g. by Säljö (1979), Giorgi (1986), Marton, Dall'Alba and Beaty (1993). Eklund-Myrskog (1996) has, on the basis of various studies, constructed different categories of learning. According to her synthesis learning has been seen 1) as a quantitative increase of knowledge, 2) as memorizing, 3) as application or increase of competence, 4) as a conceptual, qualitative change of meaning, 5) as a constructive activity aimed at understanding and as an interpretative process aiming at better understanding of reality and 6) as a personal change leading to personal development. In these studies, the interviewees were asked to present their conceptions of learning by answering questions. Whereas in this study the conceptions are to be found in learning descriptions, the first task being to discover how the students perceive their clinical learning as a process.

Phenomenography as a method related to know-how in nursing care has been used by Nousiainen (1998), who was interested in the conceptions in the areas of nursing know-how held by nursing supervisors. Karttunen (1999) in turn has used phenomenography in her study which deals with nursing students' conceptions concerning knowledge and how it relates to nursing action. This study in turn focuses on students' conceptions about clinical learning as their own process which has not previously been studied using phenomenography.

The student nurses, whose learning paths will be followed, entered the collage in autumn 1993 and began their clinical studies in different clinical placements during their second study year. The interest is focused on clinical learning in a hospital environment which is an essential part of nursing education. The present students' clinical nursing education has been preceded by theoretical studies covering the principles of clinical learning. This order will be followed by examining what is meant by knowledge in nursing education and the sources of knowledge in theoretical studies in the next chapters before entering the clinical learning environment.



### **3 KNOWLEDGE IN NURSING EDUCATION**

The purpose of this chapter is to consider the role of knowledge in nursing education. Because a traditional way to divide nursing education into theoretical and clinical or practical studies is not unproblematic my study is an attempt to open another way to look at nursing education by focusing on the kind of knowledge the above studies deal with.

#### **3.1 KNOWLEDGE IN A PRACTICE-ORIENTED DISCIPLINE**

Nursing is a science and an art about which wide unanimity prevails. As a science according to Smith, it seeks an understanding of specified phenomena and its purpose is knowledge development. She also states that organized knowledge about human health and healing through caring exists separate from its practice. (Smith 1994.) As an art, nursing can be understood according to Rogers (1970) that the creative and personal use of nursing knowledge in clinical settings is the art of nursing. As a professional discipline nursing is according to Donaldson and Crowley (1978) more than an academic discipline since it has theories and research informing its practice. Meleis (e.g. 1986 also 1991) presents nursing as a practice-oriented discipline because its members seek knowledge of human beings' responses to health and illness in order to help and support them at various phases. Smith (1994) agrees that nursing as a practice discipline develops knowledge about its practice.

A basic element in nursing is the interaction between a nurse and a patient. The nature of the interactive practice is the point of departure for the study of knowledge (Sarvimäki 1988). This interaction is based on caring. A loving, nurturing and caring presence that facilitate healing and honoring human dignity contain the critical attributes of the art of nursing (Smith 1990). Liaschenko's (1998) findings about knowing the patient as a case, as a patient or as a person in nursing care, however, show that the nature of interaction and the meaning of caring have various contents when viewed from different perspectives. As professionals nurses use approaches which focus on 1) case based knowledge, 2) knowledge related to nursing various types of patients and 3) knowledge about their patients' preferences when establishing nursing care plans.

As a science nursing is related to organized knowledge and as an art to applying organized knowledge. However, as Johnson (1996) contends, prescriptive truths, which organized knowledge also includes, are necessary but not sufficient for nursing as an art. According to her, nurses use prescriptive truths as serious guidelines and are able to understand their meanings in various situations. Thus the art means helping and supporting nursing clients who are seen as the recipients of nursing care, in the best way related to the context where they are. Consequently, as professionals nurses need organized knowledge and when they deal with their clients' health - illness events as facilitators, they need to know how to channel their awareness for a patient's good in a personal and creative way.

The roots for the separation between knowing that and knowing how can be traced according to the studies done by Hintikka to Plato's and Aristotle's writings. A maker's knowledge of how to make something can be separated from what to make. This includes a close relationship to two different types of knowledge: knowing that or propositional knowledge and knowing how or skill. Practical knowledge is, however, more complicated. Hintikka says that there is a difference between a craftsman's knowledge meaning doing something by following a model and an artist's knowledge meaning inventing the goals, creating something. He also points out the difference between a user's knowledge and a maker's knowledge referring to Plato who considers the user's knowledge more valuable than the maker's knowledge. In Aristotele's (e.g. 1983) and (1989) and Plato's (e.g. 1987) writings also morality or virtue as knowledge can be identified. Virtue in turn includes knowledge of the good, theoretical knowledge and also knowing how, practical knowledge. (e.g. Hintikka 1969 also Hintikka 1974.)

Nurses can be seen as "creative craftsmen or craftswomen" as artists because they are doing something when facilitating their patients' ill- and well-being but they are also creating something because they regard every patient as unique with meaningful experiences. A user's more valuable knowledge is also congruent with the principles of nursing. A patient's knowledge as a user's knowledge can be seen to be more valuable than a nurse's knowledge as a maker's knowledge. For example a nurse cannot know the meaning of pain or assess the impact of relieving interventions. The patient is the only one who has this information and a nurse has to find out this information to be able to help the patient.

Sarvimäki has followed the history of problematic knowledge and sums up the various views. There seem to be two different types of knowledge, theoretical and practical knowledge. Theoretical knowledge is defined as knowing that there is something and propositional knowledge and practical knowledge as a user's or doer's knowledge and procedural knowledge. There are however different opinions of how they are related to each other. (Sarvimäki 1988.)

The epistemological ways to look at knowledge are different depending on the philosophical point of view they represent. Sarvimäki when making her conclusions assumes that knowledge is created and constructed by a human being in interaction with the surrounding world. Within the axiological system knowledge consists of value-knowledge including moral and aesthetic knowledge. It answers to the questions of what is good and right or what is unfair and unjust. Within the epistemic system knowledge consists of factual knowledge corresponding to knowing "that". When using the concept of procedural knowledge Sarvimäki refers to knowing "how" meaning knowing how to carry out a process without being able to explain the process. (Sarvimäki 1988.) Cicourel (1986) on the other hand maintains that procedural knowledge includes knowing how to do something and knowing how to understand something while declarative knowledge is the knowledge of data.

Also Ryle defines knowing "that" and knowing "how" as logically and irreversibly separated. Knowing "that" means knowing what is and knowing "how" means knowledge of how to do things and how to carry out different tasks. Knowing "that" is possible without knowing "how" and on the contrary knowing "how" is

possible without knowing “that”. (Ryle 1976, 26 - 60.) Burnard (1987) has also discovered that an actor can be very skillful when doing something without knowing the reasons for or the consequences of doing it. However this kind of knowing or rather lack of knowing does not belong to a professional behaviour. Raij (1991) has noticed that in clinical nursing education nurses very often do not give reasons for their actions nor do they ask for reasons from their students. It usually does not mean that nurses do not know them, they have knowing “that” knowledge. It might, however, mean that student nurses will not have knowing “that” knowledge (reasons in this case), they will only have knowing “how” knowledge.

In conclusion in nursing education according to the definitions of nursing nurses should have:

1) knowing “that” knowledge to know what nursing is, including person, environment, health, interaction, nursing process, nursing therapeutics and transitions according to Meleis (1991) and also to be able as professional nurses who are responsible for their actions to have reasons for their actions

2) knowing “how” knowledge to be able to provide and manage nursing care, to act as a nursing expert, to teach and develop clinical nursing care based on research

3) knowing what is a patient’s good and how to produce good and also knowing that a user’s knowledge is more valuable than a maker’s knowledge.

### **3.2 THE TYPES OF KNOWLEDGE IN NURSING EDUCATION**

The knowledge needed in a practice oriented discipline, such as nursing, should naturally also guide the planning of nursing education. The different types of knowledge will be described by returning to the concepts of theoretical and practical knowledge and by looking at the types of knowledge presented by some nursing theorists.

Sarvimäki has also in her study analyzed knowledge in education and health care. As noticed earlier, interaction is the basic element in nursing as it is in education. In concluding her research she clarifies the problematic concepts theoretical and practical knowledge mentioned above in the following way. 1) Practical knowledge means knowing how to educate and how to provide nursing care 2) Practical knowledge is manifested in action consisting of implicit action schemata and implicit practice theories 3) Practical knowledge means knowing how to use skills and other types of knowledge in interactions and also moral knowledge about valuable life forms.

Theoretical knowledge in turn is according to Sarvimäki a view or a conception of the world or some part of it including a set of components and relations between the components. In health care it is a view of the conception of what is the case in practice and what should be the case. Also Sarvimäki points out that practical knowledge is a manifestation of theoretical knowledge which can also be implicit and unarticulated. It can be conceptualized in formulating scientific theories based on research. (Sarvimäki 1988.) Also, Johnson and Ratner when analyzing the conceptualizations of knowledge in nursing care conclude that there is speculative knowledge referring to knowing “what” and practical knowledge referring to

knowing “how” both being either subjective or objective. As subjective knowledge they represent insight about what is happening and insight about what should be done. (Johnson et al. 1997.)

Sarvimäki’s description of practical and theoretical knowledge can be easily applied to nursing which is practice oriented and based on interaction. Scientific research of nursing produces theoretical knowledge making implicit theories explicit. In nursing practice, knowledge is embedded in skills and abilities which is manifested in actions. In a nurse’s skills and abilities there is also moral knowledge embedded in actions of what is good and how to produce it, which will manifest itself in interaction between a nurse and a patient.

Among nursing researchers Meleis (1991) divides the types of knowledge into three different groups by connecting them with action. Clinical knowledge means practice, conceptual knowledge means theory and empirical knowledge means research. According to Sarvimäki’s conclusion both conceptual knowledge (propositions and prescriptions) and knowledge produced by research are part of theoretical knowledge. Meleis presents the types of knowledge in a traditional way including the idea about the differences between theory, practice and research. The question about the different types of knowledge they include is not answered.

Carper in turn divides the types of knowledge into 1) empirical, 2) esthetical, 3) personal and 4) ethical knowledge. Empirical knowledge is also according to Carper produced by research. Esthetical, referring to nursing as an art, and personal knowledge is interpretative and understanding knowledge also knowledge from a nurse as a person and an actor (c.f. Polany 1958) while ethical knowledge is knowledge about what is good. (Carper 1978.) Empirical knowledge represents theoretical knowledge however, it represents only part of it if compared to Sarvimäki’s conclusion, esthetical and personal knowledge seem to include part of the user’s, doer’s and creator’s knowledge (see e.g. Hintikka 1962) and ethical knowledge corresponds to moral knowledge.

Krause has observed the meaning of the types of knowledge in nursing education. She has applied Carper’s types of knowledge redefining the content of empirical knowledge. The knowledge base in nursing is multidisciplinary and applying it has been problematic. Krause proposes that a knowledge base derived from other disciplines (e.g. science of education, psychology, sociology) can be “filtered” by using nursing knowledge and knowledge derived from so called basic sciences (e.g. natural sciences) should be used as it is. (Krause & Salo 1992.) This seems to include the conception that also according to Krause theoretical knowledge means in nursing education knowledge which has been made explicit in theories and produced by research.

Holden in turn distinguishes the levels of knowledge in a hierarchic order as 1) affective knowledge including the capacity to empathize and sympathize with others 2) practical knowledge, 3) culturally dependent knowledge including the customs and beliefs of other cultures and 4) propositional knowledge. She emphasizes, however, the mastery of each level for the development of nursing competence.



(Holden 1996.) The capacity to empathize and sympathize is very much needed in providing good related to moral knowledge whereas knowledge about the customs and beliefs of other cultures can exist in different types of knowledge.

In conclusion, in nursing education student nurses will need

1) knowledge described in theories and models and produced by scientific research i.e. knowledge from nursing science and related disciplines describing and explaining the concepts and their relationships of the phenomenon

2) knowledge of how to provide nursing care meaning knowledge embedded in skills and abilities, manifested in action including user's, doer's and creator's knowledge

3) moral knowledge meaning knowing what is for a patient's good and how to produce this good.

### **3.3 KNOWLEDGE IN THEORETICAL AND CLINICAL STUDIES**

Nursing education studies are divided into theoretical and clinical studies. Clinical studies mean the studies taking place in the situations where a nursing client is present directly or indirectly (e.g. EEC/89/595, Salvage 1992). Because learning deals with knowledge, it is important in this study to consider what theoretical and clinical studies are and what kind of knowledge is included in theoretical and clinical studies.

An epistemological way to look at knowledge itself shows that the concept is very problematic. For example, Sarvimäki distinguishes three kinds of problems: 1) what is knowledge, 2) what are the sources of knowledge and 3) what is the justification of knowledge (Sarvimäki 1988). The concept of knowledge is also problematic when it is related to a phenomenon it covers. In nursing education we should recognize 1) knowledge in nursing, 2) the sources of knowledge and 3) the justification of knowledge to be able to construct a learning environment for theoretical and clinical studies.

Voutilainen, Mehtäläinen & Niiniluoto (1990) consider the same problematic knowledge concept connected to learning situations. In school instruction it is relevant to distinguish knowledge from information by defining it in a classical way as justified, true belief. Different conceptions of knowledge can be classified and identified in all teaching situations by recognizing: 1) the method of acquiring knowledge including experience and reasoning, 2) justification of knowledge, 3) dimensions; static / dynamic, 4) dimensions; passive / active, 5) skill/knowledge pair 6) appreciation of knowledge and 7) disconnected / holistic view.

This is an attempt to recognize them in the theoretical and clinical studies of nursing education. The above mentioned views can also be connected to different ways of learning which take place in various learning environments.

1) Acquiring knowledge means in theoretical studies using and reasoning with written materials, theories and models, concepts and their interrelationships. In clinical studies knowledge is acquired by providing nursing care which means doing, participating in patients' nursing care and experiencing. Participation in turn presupposes applying knowledge acquired in theoretical studies.

2) Justification of knowledge is actually presented in the outcomes of nursing education (e.g. European Health Committee 1994) where it has been said that knowledge to be applied when developing nursing care should be based on research. In definitions concerning nursing and nursing education it has been pointed out that knowledge is derived from nursing science and related disciplines. As professional nurses have to have explanations and rationales for everything they do. From a knowledge user's perspective to consider justification a moral issue will be included. Nursing care is meant for a patient's good. Thus, this means that a patient's own assessment should be taken into account when deciding what is justified.

3) In nursing the dignity, rights and values of individuals are emphasized. Nursing clients are met in different environments and cultures also in various continuously changing situations. It means that the knowledge needed in those situations cannot be based on unchanged qualities. It must facilitate acting as a professional nurse in the changing world. Knowledge based on research is growing so it continuously offers new perspectives to look at the phenomenon. To be of value learning knowledge in theoretical studies should be found on a level that makes it possible to apply it in clinical studies in very different situations.

4) Passive and active dimensions related to knowledge in theoretical and clinical studies in nursing care can be considered by identifying the learner's different roles when they are in the middle of the knowledge world. In theoretical studies especially at the beginning when a student nurse has no experience, knowledge might seem to be too abstract and too far from the meaningful world of a student. When receiving this kind of knowledge a student is more or less a passive recipient who tries to restore the knowledge, meaning new concepts and words, as it is taught. Active awareness will increase when the student has more clinical examples, contacts and experiences. It means finding the meaning of knowledge related to the learning object. In clinical studies a student nurse should be an active participant in order to be able to work as a nurse. What this activeness means, will be considered thoroughly later in this study.

5) Voutilainen et al. (1990) also point out that the most common differences between various knowledge conceptions are connected to the relationship between skills and knowledge. According to them skills can be defined as stable abilities to do something but doing something mostly presupposes knowledge. Theoretical studies are connected with learning by "reading" and clinical studies with learning by doing. As mentioned above knowledge is acquired in theoretical studies by "reading" written materials based on research in order to construct a conceptual framework to be applied in clinical settings. As a professional a nurse has to know what to do and how to do it and also find out rationales when selecting the performances between different alternatives. On the other hand when theoretical knowledge based on research is actually derived from clinical nursing the concepts theoretical studies and clinical studies are more complicated.

6) Appreciation of knowledge in theoretical studies in a professional education depends on the connection to clinical nursing. Lonka and Lindblom-Ylänne have shown also medical students found directly useful and applicable knowledge to be

of most interest. According to them this kind of finding is understandable because medical students as future physicians are concerned about taking care of their future patients. (Lonka & Lindblom-Ylänne 1996.) This is comparable to student nurses' learning processes. They know that they should be able to work as a professional nurse after three and a half years of studying and from this perspective they are very goal-orientated.

Appreciation of knowledge in clinical studies is connected to the professional behaviour nurses should have in different clinical settings. The knowledge which is found in clinical settings is dependent on the nature of the nursing environment. Appreciation is also connected to the learning goals students have set for themselves. In the beginning the students' demands concerning available knowledge differ from the demands on more advanced levels. At its best the knowledge in theoretical and clinical studies should be most congruent with the mission and values of nursing.

7) Dimension disconnected/ holistic is connected to knowledge both in theoretical and clinical studies. Disconnected knowledge as isolated facts in theoretical studies do not facilitate a student's possibilities to integrate theoretical studies into clinical nursing. As part of a whole, meaning nursing as a phenomenon, they are significant and meaningful to learn. In clinical studies disconnected knowledge can be seen as separated acts or tasks without any connection to the whole process. Holistic knowledge on the other hand covers the entity including the persons involved and moral issues.

In conclusion knowledge in nursing education as a justified true belief is derived from nursing science and related disciplines. Being based on research it is connected to clinical nursing and can be identified also in providing nursing care. The sources of knowledge in theoretical studies are from the above mentioned disciplines and the sources of knowledge in clinical studies are from providing nursing care. What providing nursing care means as a source of knowledge will be described in detail in this study. Because professional knowledge is meant for a patient's good, its justification should also include the nursing clients' participation.

When comparing different learning situations e.g. at institutes and in clinical settings the difference between theoretical and clinical studies is more complicated. In situations where theoretical studies take place, nurse educators, being also registered nurses, share knowledge derived from clinical settings. Clinical examples are used, "paper patients" are introduced and nursing care plans are established by applying different theoretical frameworks. It means that providing nursing care is present in a descriptive way and also in clinical settings theoretical studies are present explaining procedures, giving rationales and justification to procedures and nurses' work. Also, Sandin (1988) when describing competence development among student nurses in her study, has pointed out that student nurses understand theory through practice and theoretical knowledge makes practice comprehensible.



## **4 THE SOURCES OF KNOWLEDGE IN THEORETICAL STUDIES**

In the Finnish nursing education clinical studies follow theoretical studies, and clinical learning should be based on previous theoretical learning. The purpose of this chapter is to introduce the main sources of knowledge in theoretical studies in order to describe the content of knowledge students deal with before entering clinical placements.

### **4.1 THE MISSION OF NURSING**

A description of the mission of nursing can be found in the definitions of nursing. Nursing is promoting and maintaining health, preventing illness, taking care of the sick, supporting them in rehabilitation and finally supporting and caring for the dying (e.g. ICN 1989, WHO 1990, European Health Committee 1994.) In the recommendations of the European Conference it is added that nurses should involve individuals, families and communities in their care so that it is possible for them to take more responsibility for their health. Nurses should focus on working actively to reduce inequities in access to health care services. They are also working in multidisciplinary and multisectoral collaboration. Nurses focus on quality management in nursing care and the appropriate use of technology. (WHO/EURO 1989, ACTN 1992, ACTN 1995 also Salvage 1993.)

In the definition of the Finnish Federation of Nurses it is emphasized health as a target, knowledge and value base in nursing, interaction and cooperation between nurses and their clients being an individual, a family or a community. Nursing is also legalized by the government and is based on knowledge, skills and professional ethics acquired in nursing education. (Mölsä, Krogerus-Therman, Raatikainen & Tolvanen 1985.)

According to the recommendations given by the European Health Committee's working party on the role and education of nurses (1994) nursing is both an art and a science requiring the understanding and application of knowledge and skills. Knowledge and techniques can be derived from nursing science and related disciplines. The nurse has four main functions: 1) providing and managing nursing care, 2) acting as a nursing expert, 3) teaching and 4) developing nursing practice through critical thinking and research findings.

The mission of nursing can also be clarified by considering the domain of nursing. According to Meleis the central components in the domain of nursing care are 1) the main concepts and problems, 2) processes for assessment, diagnosis and interventions, 3) tools for the processes and 4) research designs and methodologies most congruent with nursing knowledge. Meleis presents the main concepts as a nursing client, environment, health, interaction, nursing process, nursing therapeutics and transits. (Meleis 1991.) The European Health Committee (1994) defines the domain of nursing as the role, function and responsibility of the nurse. In explaining what they mean, similarities with Meleis' description can be found.

In conclusion the mission of nursing means that nurses take care of their nursing clients (individuals, families, groups) and their environments in order to promote and maintain health, prevent illness, take care of sick people and help supporting the dying and their significant others. When taking care nurses are interacting with their patients in the different phases of the nursing process, they are supporting patients to go through various transitions by nursing therapeutics. Nurses base their activities on knowledge derived from nursing science and related disciplines and on humanistic values.

#### **4.2 VALUES IN NURSING CARE**

It has been noted that nursing is a science and an art the art being a moral art because it involves other human beings, the relationships with the human beings and the promotion of good - health. As the aim of nursing is to safeguard the welfare of other human beings it does not have a scientific end but rather a moral end when it involves the pursuit of good. (Curtin 1979 also Silva 1983.) The most difficult question to be discussed is whose good is to be promoted. Nurses are seen as advocates of their patients (e.g. Curtin 1979 and Tschudin 1986). In the economically difficult situations this is not always easy and self evident. From this moral point of view participation in the discussion concerning priorities in health care should be a professional nurse's serious obligation.

According to the humanistic concept of a human being we exist and realize ourselves in relation to nature, the objective world, other people and ourselves. A human being is seen as independent, individual and free in his or her own activities. Spirituality, growth and idealism are emphasized. In nursing this means that becoming ill is seen as a subjective experience including good and bad feelings and experienced needs. Becoming ill includes also a way of expressing oneself, expressing bad feelings and asking for help. Nursing activities are directed to support and take care of the anxious and people in pain. The relationship between a nursing client and a nurse is an equal interaction between two subjects. (e.g. Sarvimäki 1980 also Sarvimäki 1988.)

Caring as a concept is complicated. When accepting it as the core of nursing it is the substance and the necessity of nursing (e.g. Radsma 1994). Bouchard and Dutil (1993) state that caring as a concept evokes different images. It can be seen as caring between human beings, as professional caring, as caring about and being cared for. The philosophical perspective can be found in claims that being is interrelated and being is caring. As the essence of nursing caring is defined as a psycho-social being together - process based on interaction, meaning, interpretation and action. The characteristics of the being together - process can be found in the dimensions of the concept of caring identified by Puolakka. By referring to the literature she lists the following dimensions: 1) presence, 2) reciprocity, 3) courage, 4) love, 5) estheticism and 6) situation (Puolakka 1995). This is in line with Parse's true presence - concept. She also emphasizes that being together means joining and experiencing joy (Parse 1981 and Parse 1995).

Morse, Solberg, Neander, Bottorff and Johnson (1990) in turn state that if caring is to be retained as the essence of nursing the concept should be clarified. They have in their study identified five perspectives of caring. 1) Caring as a human trait is a part of human nature and essential to human existence. 2) Caring as a moral imperative or ideal is seen as a fundamental value or moral ideal in nursing. Morse etc. refer this point to Gadow (1985) and Watson (1988) who state, both from different perspectives, that the substantive base of nursing is preserving the dignity of patients. Moral imperative has an impact on interpersonal interaction and therapeutic intervention. 3) Caring as an affect means emphasizing the nature of caring extending from emotional involvement with or an empathetic feeling for the patient's experience. 4) The perspective caring as the nurse - patient interpersonal relationship emphasizes the nurse - patient relationship as the essence of caring. 5) Caring as a therapeutic intervention means linking caring directly to the work of nurses. In this perspective specific caring actions can be identified e.g. patient advocacy, touch, being there.

Different ways can be found to describe the concept of caring. They all mean however something good and this good is for nursing clients. When nurses are taking care of their clients they do it because they care. Also Ådstedt-Kurki (1992) notes that in nursing caring and a real interest in other people including being present, listening, discussing and guiding, can be found. These parallel the critical attributes of caring found by McCance, McKenna & Boore (1997), which are serious attention, concern, providing for and getting to know the patient. How to show caring to nursing clients depends on nurses' personal characteristics, abilities and skills. According to Kosowski also nursing students' conceptions about creating caring include the same issues; connecting, being holistic, advocating, being competent, touching, sharing and feeling good. They learn caring by imagining, reversing, role modelling, constructing and sensing. (Kosowski 1995.)

When we assume that nursing is based on caring and taking care of a human being we should look for an answer to the question, how does a human being exist. The holistic approach presented by Rauhala offers one perspective. It emphasizes the wholeness of a human being. According to him a human being exists by having a physical body (*kehollisena*) as a conscious being (*tajunnallisena*) and being a situational being. Having a physical body means existing as an organic being, consciousness includes mental - spiritual experiences and situationalism relationships with the reality. Mental and spiritual consciousness will be separated later. The meanings are subjective and developing. Self-actualization is the most important characteristic feature in emotional growth. By using self-reflection a human being can adjust the events in situations to choices. (Rauhala 1989, also Rauhala 1995.)

According to the humanistic concept of a human being nursing focuses on the experiences and feelings of a human being. Rauhala's holistic concept of a human being is in turn focused on the meaningful contents human beings have in their own worlds. In nursing this all means that nurses take care of their nursing clients with individual experiences and the meanings of experiences in their own situations.

Another perspective to consider the concept of a holistic being is found for example in Roy's (1991) adaptation theory. It offers a logical - empirical view and presents a human being as a bio-psycho-social whole where a whole is more than the sum of its parts. Existing as a biological being has been described as nine different physiological functions. As a psychological being we have a physical and personal self and as a social being three different roles and relationships meaning interdependence between human beings. Meeting a patient as a recipient of nursing care is based on humanistic values.

The question is whether different perspectives are required and how they should be dealt with in nursing education. This is a philosophical issue and it is beyond the scope of this study. However, if we consider the nature of nursing care with sometimes dramatically changing situations, controlling and managing them demands divergent approaches from nurses. Nursing care varies if a nurse takes care of an unconscious patient in a life threatening situation or if a nurse wants to understand the patient's anxiety in order to be able to support him or her.

Also, The Royal College of Nursing (1987) regards caring, justice and respect as the values derived from the humanistic concept of a human being. According to Krause and Salo these values lead to the commitment that a patient is always seen as a person with opinions, hopes, fears and expectations. A human being is valuable as an individual and has equal rights in access to health care services in a society. Respect means that a patient has a right to preserve his or her dignity in all situations and also has a right to be heard when decisions are made. A patient should feel he or she is cared for. (Krause et al. 1992.) These ideas are included in the definitions of nursing.

In conclusion, nursing services are founded on humanistic values. The dignity of a human being as an absolute value gives content to other values. Nursing care assumes a respect for the person, defending life, justice and the integrity of the individual. The interactive relationship rests on respect for equality, individualism and each person's own values and convictions. Every person is precious and has a right to live and to be cared for.

### **4.3 THE MAIN CONCEPTS IN NURSING SCIENCE METAPARADIGM IN NURSING EDUCATION**

The interest and the way to consider the phenomenon of nursing science can be found in its metaparadigm. The metaparadigm consists of concepts and propositions which guide us to find a unique subject to be studied and for practice. Concepts and propositions have to be abstract and neutral enough without representing any particular nursing model. In addition the content should be internationally wide so that they are value free in order for them to be accepted in different cultures. (Fawcett 1992.)

The main concepts in nursing science metaparadigm have been identified as a human being (person, nursing client, recipient of nursing care, patient), an environment (society), health and nursing by Yura & Torres 1975, Fawcett 1978



also 1984, Stevens 1979 and Chinn & Jacobs 1987). Kim in turn identifies the domain of client, the domain of environment and the domain of nursing action as knowledge domains in nursing science (Kim 1983).

Conway has criticized using nursing, the name of the discipline, as the main concept. According to her the body of knowledge and the activities of practitioners should be separated. (Conway 1985.) Meleis agrees with Conway and presents the activities of nursing as interaction, nursing process, nursing therapeutics and transitions (Meleis 1985, 1986 also 1991). This seems to be logical when the central concepts of nursing are considered.

What do the main concepts of the nursing science metaparadigm mean in nursing education? Krause (1985) has remarked that when expressing the central interest of nursing the main concepts offer a logical structure to develop a curriculum for nursing education. Also, Mölsä (1989) when describing the main subject of the nursing education curriculum has presented how the main concepts and relationships between the concepts give form to the subject. They have some other meanings too. If we consider the central concepts related to the phenomena such as nursing clients with their environments, health and nursing activities they represent something permanent. We can gain more knowledge, change our perspectives, develop our understanding and skills and abilities still the phenomena exist.

That is why the curriculum for the first international nursing education programme in Finland in Espoo has been constructed by using the main concepts of nursing science metaparadigm i.e. nursing client, environment, health, nursing care divided into interaction, nursing process, nursing therapeutics and transitions as modules. The modules in turn have been divided into items by using different nursing theories as frameworks. Selecting theories is important because they offer different types of knowledge and they are meant for various purposes (Espoo College of Nursing 1993 also Raji 1996). The present student nurses have followed this programme.

Also the working party on the role and education of nurses, called by the European Health Committee, has given its recommendations concerning curriculum development in nursing education. According to them the curriculum should be based on scientific knowledge and humanistic values including the main concepts of the nursing science metaparadigm i.e. person, environment, health and nursing. The curriculum should also include the domain of nursing: role, function and responsibility of the nurse. (European Health Committee 1994.)

#### **4.4 NURSING THEORIES IN NURSING EDUCATION AS THE SOURCES OF KNOWLEDGE**

Nursing theories used also in nursing education have been developed since 1950. Before this, nursing was first and foremost based on the bio-medical model of thinking. The number of nursing theories has increased rapidly during the last few years. In the development of nursing theories also the development of clinical nursing can be seen. Nursing theories have an important role in nursing education and a few of them are also applied in clinical placements. Some of them, mostly used in

the Finnish nursing education and representing different classifications, will be briefly presented in this chapter. The intention in this study is not to analyze the nursing theories, it falls outside the scope of this study. Thus theory critique will not be presented in detail.

Meleis (1991) has identified three schools of thought when following the time period of theory development. Need theories were developed to account for what nurses do. According to them nurses were satisfying their patients' needs or supporting them to fulfill their needs. Different hierarchical lists of needs were presented (e.g. Henderson 1966, Yura & Walsh 1973). The list presented by Yura & Walsh was shortened in the Finnish translation (Mölsä, Krogerus-Therman, Raatikainen and Tolvanen 1987) and much used in nursing education. However, as Meleis points out need theories are very close to a bio-medical approach. The nursing theory developed by Roper, Logan and Thierny belongs to this class as well. It presents the needs of nursing care in relation to human functions. Patients are dependent or independent on nurses' activities in different mostly physiological human functions. (Roper & al. 1980.) Also Orem's self-care deficit theory belongs according to Meleis to need theories. It emphasizes meeting an individual's needs for self-care action and the deficit between self-care capabilities and self-care demands of patients. (Orem 1971 also Orem 1983.) Because it focuses on self-care capabilities, nurses working in community nursing have been interested in it.

Interaction theorists were interested in the question of how nurses do what they do. Their focus is on the interaction process between a nurse and a patient. King's (1981) theory explains how a nurse and a patient meet each other, act, react, interact and transact in developing a nurse - patient relationship. According to Paterson and Zderad (1988) nursing is a lived dialogue including an intersubjective transaction where a nurse and a patient meet, relate and are totally present. They offer a humanistic approach to understand the interaction between a patient and a nurse.

The outcome theories are the third school of thought in Meleis' classification. These theorists have tried to find out why nursing care is needed. They have attempted to conceptualize the outcome of nursing care and describe the recipient of nursing care. (e.g. Meleis 1991.)

Rogers sees an unitary human being and the environment as an energy field. She also emphasises the symphonic interaction between a human being and the environment which has four dimensions. Health is an expression of the life process and in nursing knowledge concerning an unitary human being will be used in an imaginative and creative way. (Rogers 1980.) Johnson's interest (1980) in human behaviours, the subsystems of behaviours and the meaning of a balance between the subsystems has influenced Roy's work in developing her adaptation theory. Roy has developed her theory cooperating with the staff and student nurses in her own college originally in order to develop a tool for student nurses to learn clinical nursing. Roy's person as a bio-psycho-social being has been already described on page 22. A human being uses cognitive or regulator coping mechanisms when responding to the influencing factors representing an internal and external

environment. Health is seen as being or becoming something, as a balance and wellbeing. Nursing is a problem-solving process including six different phases. (e.g. Roy 1984 also Roy 1991.)

Roy's adaptation theory is widely used in nursing education because it offers a very applicable framework when operationalizing the central concepts in a concrete way. Roy's and many other theorists' way to consider nursing only as a problem-solving process has been criticized. If health is seen as a process of becoming and as a process to experience, it is not a problem to be solved (e.g. Page, 1994). We can also argue that prevention and maintaining health as important parts of the mission of nursing are not based on finding problems.

Alligood and Choi (1989, 21 - 45) have categorized nursing theories by following theory development in its historical order in a very similar manner to the classification used in the science of education (c.f. Carr & Kemmis 1986). At first they have identified nursing philosophies which represent the early theoretical models of thought in nursing. These models have been used later in developing nursing theories. Examples of the creators of philosophies which could be mentioned in Finnish nursing education are Nightingale (e.g. Tuulio 1987), who emphasized the interaction between a human being and the environment; Henderson (1966), already mentioned above; and Abdellah (1973) who presented 21 nursing problems to be identified when assessing the needs of nursing care. In the second group Alligood and Choi present the grand theories from which King's interaction theory has already been mentioned. Roy's adaptation theory and Orem's self deficit theory are also used as examples.

The third group consists of middle range theories which have been developed from theories developed earlier. They are narrower than grand theories but more concrete and specific. (Alligood & Choi 1989.) Leininger's (e.g. 1989 also 1991) cultural care represents one of them and is used a lot in multicultural nursing education. She has clearly pointed out how important cultural factors are in nursing. Her Sunrise Model offers a framework to be used when operationalizing the factors that explain similarities and differences between different cultures. They can also be found in a more abstract way in the framework developed by Berry, Poortinga, Marshall and Dasen (1992). Parse's (e.g. 1981 also 1995) theory and methodology offer a phenomenological approach to consider a nurse - patient relationship. Parse's Man-Living-Health theory and later Human Becoming theory emphasize the meaning of a true presence and the unitary human being. It has some similarities with Rogers' theory.

The meaning of nursing theories and theory development has been considerable in developing nursing from a set of practioners' activities to a discipline. Clinical nursing has been developed from a task - oriented model of working toward patient centeredness and nurses have found their own independent role related to the mission of nursing. In the theories the main concepts of the nursing science metaparadigm and relationships between the concepts have been described by using divergent approaches. In nursing education nursing theories offer at their best a framework to deal with the different types of knowledge derived from nursing science and related disciplines. When selecting theories to be used, a discussion concerning

their scientific and philosophical assumptions is needed. The theories mentioned above represent different traditions in philosophy of science. Roy's adaptation theory offers a logical-empirical approach to consider the concepts whereas Parse's human becoming theory and Paterson's & al. humanistic nursing are phenomenological by nature. The presence of various approaches in nursing education can be defended. Student nurses need to know what to do and how what they do should be done, to become professional nurses. There are different theoretical frameworks to be used in relation to knowing the patient as a case, as a patient and as a person (c.f. Liaschenko 1998). However, as e.g. Walton (1986) has mentioned some of the theories are too abstract and general by nature to be applied in practice. That is why nurse educators should know the possibilities and limits of the theories explaining various phenomena. Otherwise their students will not be able to apply them in clinical nursing care (c.f. Munnukka 1996). This would result in a gap between theory and practice. The use of nursing theories in the present students' nursing education is described in Figure 2.

THEORETICAL STUDIES		
the first year	the second year	the third and fourth year
Roy's adaptation theory as a frame in a nursing process	to be applied in different nursing studies	Roper, Logan & Thierry
Kim's domain of environment		King
King's interaction theory		Orem           to be Rogers        applied in Parse         students' Leininger     own studies
CLINICAL STUDIES		
Roy's adaptation theory to be applied		the theories selected by students to be applied

Figure 2. *Nursing theories in the present students' nursing education*

During the first year of study Roy's adaptation theory is the object of learning to be applied as a framework in the nursing process. It has been found useful when operationalizing the human being as a bio-psycho-social being. The environment is seen as internal and external influencing factors. Kim's domain of the environment is also used as a frame in the module environment. Interaction, the basic element in nursing, can be clarified by King's interaction theory. Later during the third year of study other nursing theories, representing for example the historical order in theory development, are dealt with in a deeper way. Analyzing theories and their

possibilities to clarify concepts and their relationships facilitate students' learning to become critical thinkers. The students apply nursing theories in clinical studies when establishing a nursing care plan for a patient or patients and also later when participating in developing nursing care in the unit and in their own research work.

In conclusion, the sources of knowledge in theoretical studies can be presented in the following way:

1) The mission of nursing care in which a nurse is seen as a professional actor providing nursing care in a society in relation to the whole health care system. It includes the different role functions and responsibilities nurses have, an explanation what for nurses are needed.

2) The values in nursing care based on the concept of a human being related to the meaning of caring in nursing.

3) The main concepts in the nursing science metaparadigm and the relationships between them to be used as a structure and to be dealt with knowledge derived from nursing science and other related disciplines.

4) Nursing theories offering tools to operationalize the main concepts to be applied in providing nursing care.

When following the logical and systematic structure (c.f. Krause 1985) given by the main concepts, the sources of knowledge are present in a nursing education curriculum where the modules deal with knowledge covering 1) The person as a holistic being, 2) The environment as physical, social and symbolic, 3) Health as a status and process including dysfunctions caused by various illnesses and 4) Nursing in action based on humanistic values including interaction, the nursing process, nursing therapeutics and transitions experienced and met by nursing clients.



## 5 CLINICAL LEARNING IN NURSING EDUCATION

The interest of this study is in clinical learning described and conceptualized by student nurses. That is why it has been seen of value to consider clinical learning from learning theories' point of view. This view offers the point of departure to understand and interpret the students' conceptions.

### 5.1 CLINICAL LEARNING AS A PROCESS

The concepts of learning can be divided into empiricist - behaviorist conceptions where external control is stressed and cognitive - constructive conceptions where internal control is stressed. Some conceptions can be identified as derived from humanistic psychology e.g. experiential learning and learning activity theories. (Rauste-von Wright 1991 also Rauste-von Wright and von Wright 1994.)

When learning conception based on cognitive psychology replaced mechanical behaviorism (e.g. Skinner 1954), information processing became important and the distinction between surface and deep approaches (Marton & Säljö 1976) gave a new direction to study learning from different perspectives (e.g. Säljö 1979, Entwistle & Ramsden 1983, Marton, Hounsell & Entwistle 1984, Thomas & Bain 1984, Biggs 1985, Vermun & van Rijswijk 1988 and Eklund-Myrskog 1996). The meaning of cognitive learning in clinical nursing has been considered by e.g. Yoder (1993), Cust (1995) and Mckenna (1995) by emphasizing problem-solving techniques related to understanding a whole as an insightful process in clinical situations.

Learning is seen as a cognitive activity also in the complete learning process developed by Engeström (1984) which has six phases: 1) motivation, arising from a cognitive conflict, 2) orientation, which means that a learner forms a model how to approach a cognitive conflict, 3) internalization, meaning that a student integrates old and new knowledge into a new internal "model", 4) externalization, meaning that a student applies and uses a new model in action, 5) evaluation, meaning the truthfulness and validity of the "learned model" and 6) control meaning controlling a learner's own process. Galperin (1979) says that orientation takes place when the actor is confronted with a new situation. It involves investigating the situation and alternative means which also clarify the object of the actual need.

This is understandable when we consider student nurses entering a new clinical placement. They are confronted by new challenges offering many cognitive conflicts and they are supposed to form new models by integrating old and new knowledge. Students externalize knowledge when they make implicit theories explicit or manifest theoretical knowledge in providing nursing care. When evaluating knowledge leads to find its truthfulness in explaining the present situation, appreciation of knowledge (c.f. Voutilainen & al. 1990) increases and might raise new cognitive conflicts. Controlling one's own learning includes a student's awareness of learning objectives and the level she or he has achieved in order to be able to continue.

According to the constructive learning concept based on the cognitive tradition, learning is seen as individual activities which lead to changing conceptions about the phenomena and events in a learner's environment (Yrjönsuuri 1989). A human being is seen as an active constructor in his or her own world - an idea which can be found also in Rauhala's (e.g. 1991) holistic concept of a human being and in Giddens' (1988) idea of human agency in a social reproduction in his theory of structuration. Information processing is comprehensive including receiving, dealing with and interpreting knowledge. When acquiring knowledge a human being can be seen as an active actor who selects and interprets information. Perception includes also selecting and interpreting information which depend on the given meanings, expectations, goals and conceptions already existing. Learning is related to action thus learning will take place by acting for action always in interaction with the context (Rauste- von Wright & von Wright 1994 also von Wright 1996.)

Sarvimäki's (1988) conclusion was that learning is a change in the internal action determinants and facilitates appropriate action in forthcoming situations and that learning takes place in acting and interacting throughout the process of living. Constructive learning has also been described by e.g. Blais (1988), von Glaserfeld (1989), Resnic (1989), Duffy, Lowyck & Jonassen (1993), Prenzel & Mandl (1993), Steffe & Gale (1995), Vermunt (1995) and Lonka (1997), who has studied constructive processes in student learning among e.g. medical students.

Phillips (1995) has labeled the many faces of constructivism as the good, the bad and the ugly faces. Behind them there are philosophical questions concerning a process by which we know or whether or not there is knowledge without human construction. They have also been discussed by von Wright (1996). In his article he clarifies some misunderstandings related to constructivism being based on pragmatic constructivism. Some of them are relevant within the scope of this study. von Wright affirms that in constructivism learning skills are not underestimated although learning them was forgotten when learners concentrated on learning concepts, experiences and creative actions. von Wright says that constructivism offers another new way to interpret learning skills. This new way emphasizes the significance of understanding. Another misunderstanding is to be seen in the claim that delivering information e.g. by lecturing do not belong to constructivism. von Wright questions the existence of given knowledge and argues that students construct their own knowledge in spite of the learning methods used.

Transfer in learning is an important concept which means that knowledge including skills learned in one context will be applied in another context. Von Wright says that transfer in psychomotoric skills seems to happen but transferring concepts or conceptual interpretations presupposes also understanding. He refers to Dewey (1938) who regards concepts as tools when learning from the environment where they are used and also from the concepts themselves. When considering transfer in metacognitive abilities some experiments have shown that for example critical thinking abilities seem to become more general if they are practised in many different connections. The significance of transfer has been much criticized that is why von



Wright suggests that in education it should be based on active transfer. This means that different types of knowledge will be organized to respond to students' future needs. (von Wright 1996 also Rauste von Wright and von Wright 1994.)

In professional nursing education active transfer can be supported by constructing a learning environment as a continuum between an institute and clinical placements where all the various types of knowledge are present supporting each other. The cooperation of nurse educators and clinical tutors should, in turn, be constructed so that a student can feel and recognize the continuum as an intergrated one. Applying Sarvimäki's (1988) ideas about the distinction between latent and manifest practical knowledge and between implicit and explicit knowledge, an active constructor in clinical learning can be seen as a student who learns to manifest in action knowledge which has in theoretical studies been made explicit. A student on entering a new clinical placement has a lot of theoretical knowledge of providing nursing care proved in various exams, assignments and portfolios. However, it is still latent because a student has to learn at first to manifest it in action and then having this experiential knowledge base a student can utilize it when the situation demands.

Problem-solving emphasizes also a participant's activity and can be seen as a way to construct a problematic situation in a succesful way. Creedy, Horsfall and Hand (1992) see the constructivist learning approach underpinning problem-based learning, which in turn develops links between theory and clinical practice. The same conclusion have been made by Laschinger, Foran, Jones, Perkin & Covan (1993) and Crowe (1994).

Problem-solving has also been used as a learning method in Finnish nursing education especially since 1970 when interaction theories became more known in Finland and the first Finnish nursing models based on problem-solving (e.g. Leminen 1972) were developed. This approach has, however, some disadvantages. Nurses do meet many problems when providing nursing care but if they are only problem - oriented it can be difficult to deeply understand the significance of the patient as a person (c.f. Liaschenko 1998) with some strenghts. Problem-solving can be useful as a method in some cases if the students will also learn that there are some other, valuable approaches in meeting a patient.

Bandura's (1977) social learning theory has been applied when clarifying the meaning of role behaviours. In this theory learning takes place in an interaction between an individual, behaviour and the environment. According to Bandura complex behaviour forms can be produced only by modelling. This theory differs from behaviorism as it takes into account cognitive funtionalism including self regulating control processes. Thus behaviour is not seen only as a stimulus-response model. New behaviour will be developed and encouraged by model behaviours. It will happen in two different phases from admitting surface behavioral characteristics to applying model behaviour in practice.

Social interaction between nurses' behaviours, student nurses and environments has also been found significant in nursing education. According to Betz (1985) the nursing faculty member models the role of a professional nurse and represents the behaviours which are the characteristics of professional nursing. Also, Sandin maintains in her study that all the requirements of the profession are personalized

by nurses. Student nurses, at the beginning of their studies, get oriented to nurses and their activities becoming more critical as they proceed in their studies. Professional competence will be developed in close relationship to practical reality. (Sandin 1988.)

Social learning in clinical nursing education means that nurses are considered as role models and students perceive themselves as practising the role model's behaviours (e.g. Wiseman 1994 also Wilson 1993 and Price & Archbold 1995). When they proceed in their clinical studies, student nurses at first admit surface characteristics by following nurses' behaviours and they then apply these behaviours modelled on their tutor nurses in practice.

According to this view, qualified nurses as role models are significant in student nurses' education which makes clinical learning more complicated. The curricula in Finnish nursing education have been changed three times since 1987 and nursing education is now part of the polytechnic system representing higher professional education. Many changes have taken place. It is obvious that nurses who have fulfilled the requirements of previous nursing education programmes and have not followed developments in nursing and nursing education cannot be good role models for their present students. If Sandin's view about one of the requirements of the profession personalized by nurses is guiding student nurses, selecting students' clinical tutors should be done carefully. The question is who could be the best models. On the other hand it has also been noticed that student nurses learn by reversing as Kosowski's (1995) study of learning caring shows. It, however, requires deep understanding how the nurses should behave.

Experiential learning derived from humanistic psychology emphasizes the significance of self-reflection in learning. A learner's experiences and thought processes focused on them are essential. By reflecting on one's experiences and their meanings, self can be identified and the development of self will be possible. Discussions based on learners' outcomes of reflection are meant to increase learners' capabilities to assess their own understanding, learning, the outcomes of learning and learning strategies. (e.g. Kolb 1984, Schön 1987 and Rauste - von Wright 1994.)

According to Kolb (1984) learning is a holistic adaptation to the world and in the learning process knowledge is created through the transformation of experience. The four phases can be identified as 1) immediate concrete experience, 2) observations and reflection on experience, 3) construction of a "theory" and 4) testing implications of the "theory" in new situations. Learning is seen as a continuous four-stage cycle.

Miettinen (1998) however criticizes Kolb's model as he claims that the concepts and terms are based on very different theoretical and philosophical assumptions. This observation leads to the conclusion that Kolb's model is not congruent with the bases it claims to be founded on. It also challenges researchers who want to apply Kolb's model in a more critical way.

Kolb's learning cycle has been applied in many studies and also in explaining learning. It has some similarities with the complete learning process presented by Engeström (1984). Kolb's concrete experience and observations and reflection on

experience can be seen raising a cognitive conflict and leading to orient oneself to a situation. Construction of a theory is in line with Engeström's internalization and externalization where a new model will be formed by integrating and finally tested which phase can also be found in Kolb's learning cycle.

Burnard's (1987) own ideas of an experiential learning cycle are close to Kolb's ideas. There are only some additional phases in his cycle. The fourth step is discussion based on the outcomes of reflection. New learning is planned and developed. The fifth step means evaluation of learning and planning to apply the learning. Jarvis (1992) wants to emphasize that planning, monitoring, reflecting and evaluating must accompany the experience or action before learning can take place. Burnard (1987) and (1992) refers to Roger's (1983) description of experiential learning and Polanyi's (1958) concept of personal knowledge when he defines experiential knowledge as gained through direct personal encounter with a subject, person or a thing. Experiences include perceptions and feelings as well. Burnard, however, remarks that when we try to make experiential knowledge explicit, we turn it into propositional knowledge. This leads to the conclusion that a description of one's own experiences is not experiential knowledge any more. Also in phenomenography when informants describe their experiences with various meanings, which was experiential knowledge, they will be conceptualized. The conceptions, in turn, include informants' propositions of the world they know. Based on the description of experiential knowledge, experiential learning is redefined as any learning activity which facilitates the development of experiential knowledge (Burnard 1987). According to Burnard's (1992) findings experiential learning among student nurses and their tutors is seen as 1) learning by doing, 2) personal learning and 3) involving reflection. The outcomes are increasing self-awareness and the development of interpersonal skills.

The meaning of reflection in clinical learning has been shown to be important in many studies. Learning by reflecting is related to bridging the gap between theory and practice and to dealing with complex situations based on the problems student nurses have experienced (e.g. Sedlak 1992, Malkin 1994, Stockhausen 1994, Paterson 1995, Richardson & Maltby 1995, Pedley & Arber 1997, Severinsson 1998 and Lowe & Kerr 1998), who also claim that reflective teaching methods have enormous potential for enhancing learning when used alongside the conventional methods. Experiential learning in nursing care has also been emphasized by e.g. Guinn (1992), Laschinger (1992), Laschinger & MacMaster (1992), Burnard (1993), Fox (1993), Howard (1993), Bayne, Barker, Higgs, Jenkin, Murphy & Synoground (1994), Ridley, Laschinger and Goldenberg (1995), Parker, Webb & D'Souza (1995), Stutsky (1995) and Green & Holloway (1997). Projects based on students' experiential learning have provided an opportunity for students to improve their use of interpersonal skills, to enhance their professionalism, improve management and leadership skills and also facilitate their application of theoretical frameworks into clinical settings. Reflection is seen as an essential part in a professional growing process. By reflecting on different learning experiences student nurses can not only achieve a deeper understanding of different phenomena but they are also able to clarify their own feelings and conceptions in various situations.

However, Lowe's & al. (1998) comment on the conventional methods alongside is remarkable. It has to be remembered that clinical learning also means learning technical skills related to the equipment they necessitate. The outcomes of students' performances are controlled because of a patient's safety, thus the students also have "to see" the right models. The most important aspect is, however, that they understand what they see to be able to construct it in their own ways.

It has been noted earlier that knowledge is changing and new knowledge is produced by research. In clinical nursing, where a new knowledge base should be applied in the development of nursing care, the concept of expanding learning (Engeström 1987) seems to be the key concept. According to Engeström if learning is considered as expanding learning it helps to control for an unprepared future. Applying Engeström's ideas at an individual level, all the earlier acquired learning experiences represent a history and they provide the tools to reconstruct a new world. Learning expands by sharing knowledge and reflecting on the experiences of individual student nurses and qualified, more experienced nurses.

Benner (1984) in turn, does not focus on learning itself but has studied the development of nursing skills founded on personal experience by applying Dreyfus' framework. This process includes the following phases: 1) the novice as a beginner, 2) an advanced beginner having more experiences, 3) competent with long-term goals and plans, solving problems in a systematic way, 4) proficient looking at the total situation and 5) an expert with a lot of experiences and intuition to be used. Benner's ideas have been applied but they have been also criticized by e.g. English (1993) and Kesselring (1994) because she focuses mainly on working experiences in the process from novice to expert. Expertise in nursing care, however, is based on the integration of different types of knowledge having roots in interaction between a patient and a nurse.

## **5.2 LEARNING STYLES IN CLINICAL LEARNING**

A learning strategy as a concept refers to an action or to an action plan. Various action plans have been presented as strategies. In research concerning problem solving processes a concept strategy means qualitatively different, systematic and automatic approaches or different ways to solve problems. (von Wright 1984.) Learning strategies can also be seen as individual ways to learn or to orientate oneself to learning tasks. A generalized learning strategy in turn is called a learning style (e.g. Leino & Leino 1990 and Ruohotie 1991) or a general tendency to apply a particular strategy (Pask 1976). According to Child (1985) a learning style consists of individual mechanisms a person uses in his or her learning process and Kolb (1984) describes learning styles as the means by which an individual processes information, which varies from situation to situation.

Royce & Powell (1983) have presented the ways of knowing as rational, empirical and metaphorical. They have been further investigated and developed by e.g. Rancourt & Dionne (1982) and Leino (1987). According to Royce and Powell the rational style emphasizes analytical, rational skills. It also includes testing one's ideas about reality in terms of logical consistency. The empirical style means

emphasizing the use of the senses when looking for new knowledge. Testing one's ideas about reality takes place in terms of reliability and validity of observation. The metaphorical style emphasizes symbolic experiences including analogical, intuitive and holistic reasoning. This, in turn includes testing one's ideas about reality in terms of their universality. These are comparable to Kolb's ideas about assimilatory, convergent and divergent styles. Kolb has also named an accommodative style as a fourth learning style. According to him the assimilator's strength lies in inductive reasoning and the creation of theoretical models, the converger's strength are problem-solving, decision-making and practical application, the diverger's strength are imagination and an ability to see things from different perspectives and the accommodator's strength are being practical, risk-taking, problem-solving through intuition and trial-and-error which are actually very close to the converger's strength.

These learning styles represent different adaptive competencies. The assimilative competencies include building conceptual models, designing experiments, organizing information, analyzing information and testing theories and ideas. The convergent competencies include making decisions, generating alternative ways to do things, experimenting with new ideas and approaches, choosing the best solution to a defined problem and setting goals. The divergent competencies include listening, being sensitive to values and people's feelings, imagining implications of situations and gathering information. The accommodative competencies include in turn committing oneself to objectives, influencing and leading others, dealing with people, seeking and exploring opportunities and being personally involved. Kolb is here describing the competency circle, which means that in various learning situations and learning environments an individual can use different learning styles. (Kolb 1984.) When comparing the adaptive competences to the requirements of qualified nurses the similarities are remarkable (c.f. Pelttari 1997). They could be said to correspond with the outcomes of nursing education.

Pask (1976) in turn has differentiated two different learning styles, holistic and serialist. These are two different ways to structure a personal world. The former focuses on perceiving the whole and the latter means focusing on its parts as series. It has some similarities with the deductive and inductive approaches in logical reasoning when the object of learning as a phenomenon is known (c.f. Niiniluoto 1982).

The meaning of the learning theories presented and learning styles in students' nursing education is neither in direct application nor in focusing on some of them. The most important is that the educators involved are aware of the different perspectives and their meanings in professional learning. Constructivism is related to cognitive functioning with a learner's emotions, motivation and values and gives a framework to plan and implement education whereas e.g. problem-solving, experiential learning and reflection can be seen more as learning methods to be applied in some contexts. The descriptions of theories, models and styles are meant to facilitate understanding variations in learning processes and variations between students and their educators.

In conclusion a clinical learning process has the following characteristics from a student's point of view. 1) When student nurses enter a new clinical situation, they meet a working environment. The first step is to find their own ways to orient themselves. In this process they use their personal ways of knowing. 2) Student nurses are there as learners who participate in providing and managing nursing care. They are supposed to learn "to control" the whole situation. They use different learning methods and their learning styles vary in changeable learning contexts. 3) Students meet many people. They are supposed to learn to meet the patient as a case, as a patient and as a person and deeply understand the meanings of different health dysfunctions. They are also supposed to learn to find the best solutions to the patients' health problems as the member of the health care team. 4) Student nurses receive and transfer different types of knowledge and deal with knowledge by integrating old and new knowledge and reflecting on their own experiences. They test and interpret knowledge and construct their own experiential consciousness in order to achieve a future nurse's competence. 5) Students' perceptions are selective, depending on the given meanings based on earlier experiences, on the levels they have achieved and on the admitted learning strategies. 6) The learning process requires continuing evaluation and controlling one's own learning. 7) Student nurses proceed from a beginner to a graduating student nurse by learning to manifest theoretically conceptualized knowledge in action and by finding clinical knowledge, not conceptually explicit, to be manifested in action for a patient's good.

### **5.3 OBJECTIVES OF CLINICAL LEARNING**

In the recommendations presented by the European Health Committee (1994) the goals set for nursing education are related to four different role functions nurses have in clinical nursing: 1) goals for providing and managing nursing care, 2) goals for acting as an expert in a multidisciplinary team, 3) goals related to teaching (a patient, a patient's relatives, colleagues, a student nurse) and 4) goals for developing nursing care by critical thinking and based on research.

1) Achieving goals for providing nursing care involves a student nurse being able to promote and maintain health, to prevent illness, to take care of sick people, to help and support in rehabilitation and to help and support a dying person. When providing and managing nursing care a student nurse is able to follow nursing principles and to apply theoretical knowledge in action. It also involves being aware of the meaning of professionalism in nursing. Professional interaction skills facilitate cooperation with patients and their significant others for the patients' good. A student is also able to plan nursing care, to assess patients' needs for help, to work in a goal oriented and systematic manner, to evaluate nursing care and the outcomes and document nursing care. Planning and managing nursing care services and ability to work in different health care sectors, public and private, are parts of the desired goals. A student is able to take ethical and also economical aspects into account when making decisions in nursing care and is aware of the legislation concerning health care services.

2) In order to act as an expert in multidisciplinary health care teams and in society a student is able to work effectively for the well-being of people and their environments. A student is able to participate actively when planning, leading and developing health care and making health care decisions. This involves the ability to take policy and political situations into account. Acting as an expert also calls for the ability to represent nursing and the possibilities nursing care can offer in a multiprofessional team.

3) To act as a teacher involves a student being able to internalize the meaning of the mission of nursing and being able to share knowledge for improving a patient's health status and living conditions or for developing nursing care and its education.

4) In order to develop and change nursing care a student is able to think critically. A student is able to apply and share research knowledge and take care of its presence. A student is able to manage quality and is willing to develop him or herself.

The nursing education outcomes (European Health Committee 1994) presented above parallel that of the nurses' functions described by Salvage (1993) and also the standards for assessing the quality of nursing education in Finland presented by The Finnish Federation of Nurses (1993). In the qualification requirements of nurses' work now and in the future presented by Peltari (1997) interaction skills, empathy, friendliness, responsibility, caring, an holistic ability to meet and help people with various problems, the ability to act as the patient's advocate, health promotive skills, constant self updating and competence to develop oneself, multicultural abilities and an ability to cope with change are emphasized. As skills they are included in the above mentioned objectives and standards, personal characteristics being however presented in connection to nurses' actions. The described learning objectives are also to be found in the present student nurses' curriculum.

The objectives set for nursing education cover both theoretical and clinical studies. They also can be seen as the objectives for clinical learning, because a nurse's exam is a professional exam. The purpose of the whole education is to prepare student nurses to achieve competencies for working as qualified nurses. It means having a competency to manifest all the integrated types of knowledge in nursing action for peoples' good. The objectives are related to a nurse's functions and because a nurse is responsible for nursing care, they cover the whole field. This field, in this study, is called holistic nursing care, which is the final goal of the education of a student nurse.

#### **5.4 A STUDENT NURSE LOOKING FOR DIFFERENT TYPES OF KNOWLEDGE IN DIFFERENT LEARNING ENVIRONMENTS**

Self-directedness is seen as the opposite of the directed learning conception which is based on the teacher's authority, technical planning and control system. Self-directed learners in turn are seen as subjects in their own learning processes setting their own goals looking for appropriate learning methods and assessing their own learning in relation to the outcomes of the profession. (e.g. Knowles 1975 also

Knowles 1980.) According to Skager (1984) self-directedness necessitates high self-esteem, awareness of one's own learning strategies, the ability to take risks, to tolerate uncertainty, flexibility, a willingness to change and an openness to new challenges. Carcia-Otero & Teddlie (1992) have shown that knowledge of learning styles also improves clinical performance in the cognitive and affective domain. In clinical nursing education this means that a student nurse in becoming oriented to a new environment sets his or her own learning goals, selects his or her own learning strategies to achieve the goals, guides his or her own activities directed by the learning goals and also evaluates and controls the knowledge acquired, learning strategies and the outcomes. In this self-directed learning process a teacher and a clinical tutor play the role of facilitators guiding, supporting and encouraging a student nurse. Self-directedness, however, cannot be thought of as an acquired quality but rather as an objective and in this process a student needs a lot of support.

It has been mentioned earlier that studies in a nursing education curriculum are divided according to the EU-directives into theoretical and clinical studies. In practice, studies are very often divided into theoretical and practical studies, which unfortunately falsely implies that theory and practice are two different things. It also includes the idea that education in the institutes is one thing and practicing in different nursing environments another. By opening a new door to consider nursing studies as the types of knowledge being available in various learning environments, a bridge over the gap between theory and practice could be built.

Theoretical knowledge in nursing education has been dealt with the following concepts: 1) knowing "that" knowledge, 2) factual knowledge or true beliefs, and 3) conceptual knowledge. Theoretical knowledge is also knowledge described in theories. In education knowledge in implicit "practice theories" and knowledge in explicit "practice theories" should be considered including also knowledge presented in scientific research based theories. (Sarvimäki 1988.)

When we consider nursing education it is problematic to find out the implicit practice theories or schemata in clinical nursing care unless they are made explicit by reflective action. Theoretical studies in nursing thus include knowing "that" knowledge and knowing what is good - knowledge. Clinical studies include knowing "how" knowledge and knowledge of how to produce good.

Applying theoretical knowledge in clinical settings might sometimes cause difficulties for student nurses. If context in a clinical setting differs very much from the class context transfer does not take place. The reason for this might be that a student does not have the required abilities and skills. Also it might be that a student can "read" the situation correctly and know what he or she should do but is not able to act in an appropriate way. (Sarvimäki 1988.) Leino-Kilpi (1993 also 1995) assumes in observing that some student nurses like clinical studies but have difficulties in applying theories because they have to deal with two different organizations. Hakkarainen (1982) has noted out that the ability to apply new knowledge in a new context presupposes a high level of knowledge internalization. It also requires a high level of externalization and is connected to time. Laschinger



(1990) on the other hand has shown the meaning of a nursing theory as a tool for student nurses in their clinical studies when they establish a nursing care plan for their patients.

In this study the learning process will be considered from a learner's point of view focusing on a learner who is seeking different types of knowledge in various learning environments. In clinical settings they all should be present and be applied and integrated for a patient's good. The types of knowledge in nursing education are interrelated and equal. A student nurse also tests the meaning of knowledge as worth learning by collecting experiential knowledge and by manifesting latent knowledge in action. (Figure 3.)

It has been mentioned earlier that the nursing domain includes the central concepts of nursing science metaparadigm and the relationships between them, the processes and tools and nursing research (e.g. Meleis 1991). Thus, a student nurse is looking for knowledge concerning a holistic human being, interaction between a human being and the environment, experiencing health as a process, interaction between a nurse and a patient, the nursing process, nursing therapeutics and transitions being according to Meleis (1991) developmental, situational and health - illness events. This is all called holistic nursing care. On completion of their nursing education students have proceeded from a beginner to a graduating nurse. To become registered nurses, student nurses have to achieve the goals set in nursing education, which, in their own way, cover the phenomenon of holistic nursing care.

The whole world is seen as a learning environment where all the types of knowledge are present in divergent forms. The main path, however, is to be found in a continuum between an institute and clinical placements. Knowledge in theories and models is more to be found in nursing institutes whereas knowledge embedded in skills and abilities is more present in clinical placements. Moral knowledge is to be found on a theoretical level and in patients' experiences and preferences. Experiential knowledge is a student's own knowledge base which increases during the study years. All these types of knowledge are interrelated influencing on each other. Students test and integrate them in constructing their own professional learning to achieve the competence of registered nurses.

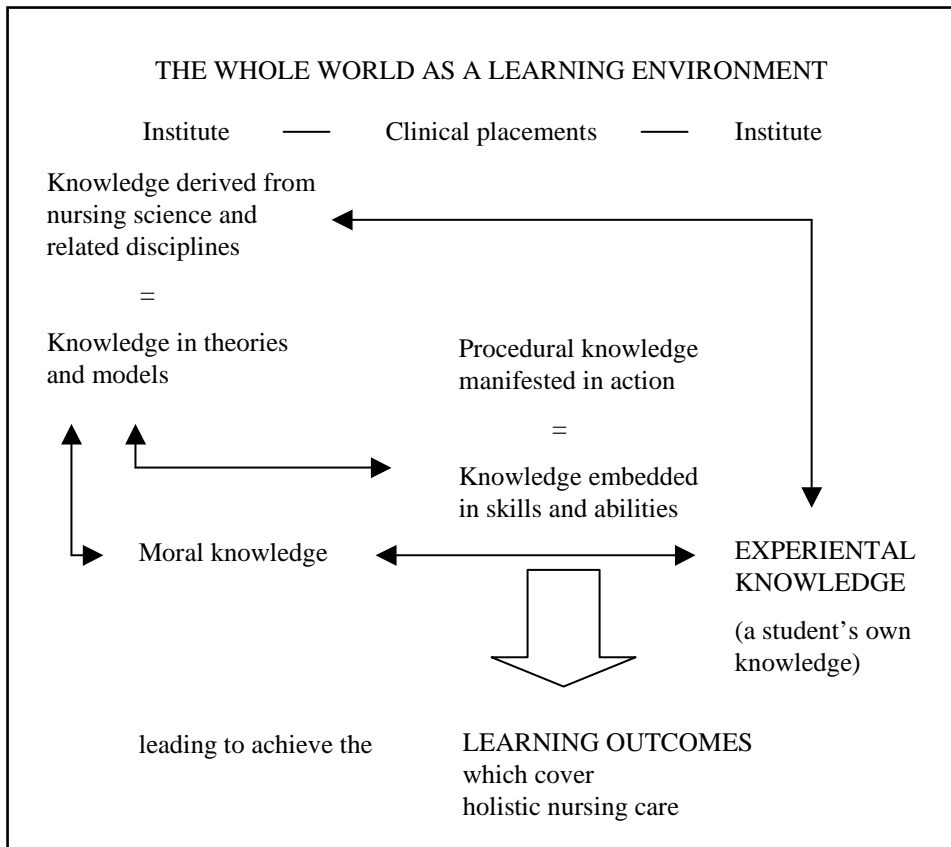


Figure 3. *A student nurse looking for different types of knowledge which are constructed into an integrated whole by reflection in order to become a professional nurse. The process from a beginner to a graduating student nurse .*

## 6 INFORMANTS IN THIS STUDY

The informants in this study are student nurses, who began their studies in autumn 1993 and graduated in December 1996. They were the first students in the international nursing education programme (INE 93) developed and organized by Espoo College of Health Care and Social Welfare in Finland. In spring 1993 the college received official permission from The National Board of Education to implement a new programme and apply its own nursing centred curriculum (Appendix 1.) as an experiment. Before accepting a new curriculum the board had carefully checked that the objectives covering nursing education were comparable with the nationally accepted learning objectives.

In that time the requirements of polytechnic level in nursing education were discussed a lot in Finland and this awareness also led to the development of the international nursing education programme. The length of the studies, the level of nursing research studies and the level of professional studies were comparable to those required for polytechnic level studies. Also, the recommendations of the European Health Committee covering nursing education (published in 1994) were earlier known in Espoo and therefore taken into account when planning a new curriculum. The language of instruction was changed to English which has made it possible also to accept foreign students who represent different cultures, and to develop international cooperation on many different levels.

The modules, as learning entities consist of the central concepts in nursing science metaparadigm and their items are directed by applying selected nursing theories. In the process of the development of the curriculum the modules have been later changed to correspond the phenomena they represent in nursing care. The learning strategies were also changed based on an assumption that a learner has abilities to develop into a self-directive agent in his or her own learning process, and teachers act as facilitators, who share knowledge and who guide and support the students' individual learning processes.

The students of the experimental programme were selected from four hundred applicants by using psychological tests and an English language test. At the end of their first study year they were redivided into two groups of sixteen students, A and B. Group B consisted of the students, who all participated in an exchange programme in Great Britain lasting three months. That is why these students' language skills were reassessed also during their first year of study. Because using learning diaries places great demands on writers' abilities to express themselves verbally this group was asked to participate in this study. These students were willing to write their learning diaries where they describe their own conceptions of clinical learning. They allowed them to be used as study material. Also permission to use their own descriptions as direct quotations was sought. The learning diaries written by the students have been used as material but for the students they have had many other meanings and have facilitated their own studies in a very deep way.

In that group there were 13 female students and three male students aged between 20 - 30. Four of them were foreign students but the Finnish students also had earlier international experiences as exchange students. They all proceeded very well in their studies and graduated as registered nurses after 3.5 year studies. In this study one of the learning diaries was not used in study material because the writing style was quite “ascetic” and interpreting what was meant would have entailed guessing. Thus, the material consists of learning diaries written by fifteen student nurses (twelve female and three male students) covering three different clinical periods from the second study year until the fourth study year. The length of clinical studies varied from three to seven study weeks.

The instructions given to the students were very simple. They were supposed to describe their own clinical learning according to their own conceptions of their clinical shifts. They were allowed to set their own, individual learning goals and assessment was based on their own self-evaluation. Setting goals was discussed with the students’ facilitators only in order to assure their level and comprehensiveness in relation to the requirements of nursing education. During clinical studies the process was followed by nurse educators and clinical tutors and every period ended with a final evaluation where it was assessed whether the goals set had been achieved. A student became aware of his or her own level and was able to plan new goals for the forthcoming clinical period.

Discussions between the students, their clinical tutors and educators were all based on the students’ self-evaluations. Learning was discussed individually supporting a student’s own way to perceive and experience it. The conceptions presented in the learning diaries will be described in the following chapters.

## **7 KNOWLEDGE TO BE FOUND IN LEARNING DIARIES**

### **7.1 DESCRIPTION OF ANALYSIS THE DATA**

This study deals with the conceptions of learning nursing care in clinical settings as described by student nurses. The approach has been inductive. This means discovering out student nurses' different conceptions concerning their own clinical learning, in the way they have done it. The first aim in the analysis phase was to find out what kind of knowledge the described experiences and activities with their meanings involve. Two different questions were used as guiding questions in the beginning: 1) where do student nurses direct their attention to and 2) how do they consider clinical nursing as a learning object when they proceed in their studies? This first analysis phase led to the conclusion that the diaries contain

#### **1) the sources of knowledge in clinical nursing and**

#### **2) acquiring knowledge in clinical placements, as perceived by the students**

It was also found that these issues are related to each other and they change while clinical studies proceed. Thus the second analysis phase, which included a comparison between the descriptions of different clinical periods, led in turn to the conclusion that in analyzing the descriptions there are also to be found

#### **3) the clinical learning strategies students use during their study years**

As mentioned earlier a student nurse is seen in this study as an individual learner who is looking for and acquiring different types of knowledge in various learning environments. Thus after finding the knowledge the students' conceptions include, interest was focused on distinguishing conceptions covering the sources of knowledge in clinical studies and acquiring knowledge in order to discover the clinical learning strategies and the learning paths the student nurses follow as they advance in their clinical studies. It has been mentioned earlier that what and how very much depend on each other so that how gives an explanation of what (see Uljens 1989 also Pramling 1983 and Kroksmark 1986).

Before it was possible to analyze the data in detail, it was necessary to read the learning diaries through a few times carefully and analytically. This in turn made it possible to get an idea of what the student nurses had described and how they had done it. This process (see Figure 4, p. 59) took a lot of time because it also includes analysing the ways the students participated in the constitution of their future profession (c.f. Marton 1995). After this when analysing the data, the students' diaries were read through sentence by sentence and each basis for describing the sources of knowledge and the ways for acquiring knowledge perceived by the students were identified and isolated always remembering to take the whole context into account. So in analysing the material the first step was to divide and reorganize

the content covering the descriptions of clinical learning into two different classes: 1) conceptions covering the sources of knowledge in clinical studies and 2) conceptions covering acquiring knowledge in clinical studies.

The lists concerning the conceptions of the objects and the ways for acquiring knowledge were written separately first using the students' own expressions in order to avoid losing anything meaningful. After that when all the different elements answering to the questions what and how had been isolated from the diaries covering three different clinical periods, called parts I, II and III, they were organized and named according to the similarities and differences they contained. For example the next descriptions, where a student is with a nurse, have been analysed in the following way:

*When discussing with patients I noticed it's quite important that a nurse gives the impression that she has time for just that patient. Especially for the patients with life threatening dysfunctions it is important to know that there is always a nurse available for them."*

**the sources of knowledge**

nurses' behaviours  
nurses' roles  
patients' feelings

**acquiring knowledge**

discussing with patients  
observing nurses  
assessing patients

A student is observing a nurse's behaviour when they are discussing with patients and also assessing its affect on the patients. The sources of knowledge are not only the nurses' behaviours but also nurses' roles because giving an impression that a nurse is available and a patient can trust a nurse belongs to a nurse's professional role.

When a student has noticed that some patients have pressure sores she wants to find more information about them.

*"I read through a file about wound care for pressure sores and leg ulcers on the ward. My mentor had made it. It was very interesting and good. All the staff members near me were ready to explain to me if I didn't understand something."*

**the sources of knowledge**

patients' health problems

**acquiring knowledge**

reading documents  
discussing with the staff

*"Once again I collected the equipment and figured out that it's easier all the time. Then I just chatted with some patients, enjoyed it myself and noticed that they did the same."*

**the sources of knowledge**

equipment needed  
patients' feelings  
students' own feelings

**acquiring knowledge**

repeating by doing  
discussing with patients  
observing and assessing

In parts II and III covering the second and third clinical learning periods the data was also read through sentence by sentence and item by item. The sources of knowledge and acquiring knowledge - classes were now separated using the categories and subcategories already found in part I. All the time the elements were compared to the existing subcategories and when needed some new subcategories were created. Also the relationships between categories and subcategories were taken into account when comparing the findings between different clinical learning periods. The following is an example of this:

*“I gave a bedside report to the new nurses coming to work. There you really have to think about how to say things in a correct and polite way. Anyway I like giving reports but often I seem to forget something or a nurse says it before me even though I’m just coming to it right away. The papers are sometimes so complicated and messy. It’s good to practice always when possible.”*

**the sources of knowledge**

giving a bedside report/ N/II+III  
 documenting/ N/I+II+III  
 student’s role/ S/I+II+III  
  
 nurses’ skills/ Nu/I+II+III

**acquiring knowledge**

participating/ P/I+II+III  
 assessing/ Dk/I+II+III  
 self evaluating/ Dk/I+II+III  
 repeating/ P/I+II+III  
 observing/ Ck/I+II+III

Giving a bedside report has been classified as representing nursing activities which is the subcategory in the category nursing (N). In this study the students mentioned the meaning of giving a bedside report during their second and third period thus it has been coded N/II+III. When the meaning of documenting has already been mentioned during the first period it has been coded P6/I+II+III, the same concerns nurses’ skills Nu/I+II+III, being now present as negative ones, and students’ roles S/I+II+III. In acquiring knowledge participation (P) has been mentioned during all the three periods P/I+II+III as well as assessing and self-evaluating as dealing with knowledge Dk/I-III, repeating as a part of participation P/I-III and observing as a part of collecting knowledge Ck/I - III. The first letter represents the main category with its subcategory and the Roman numbers represent the different periods.

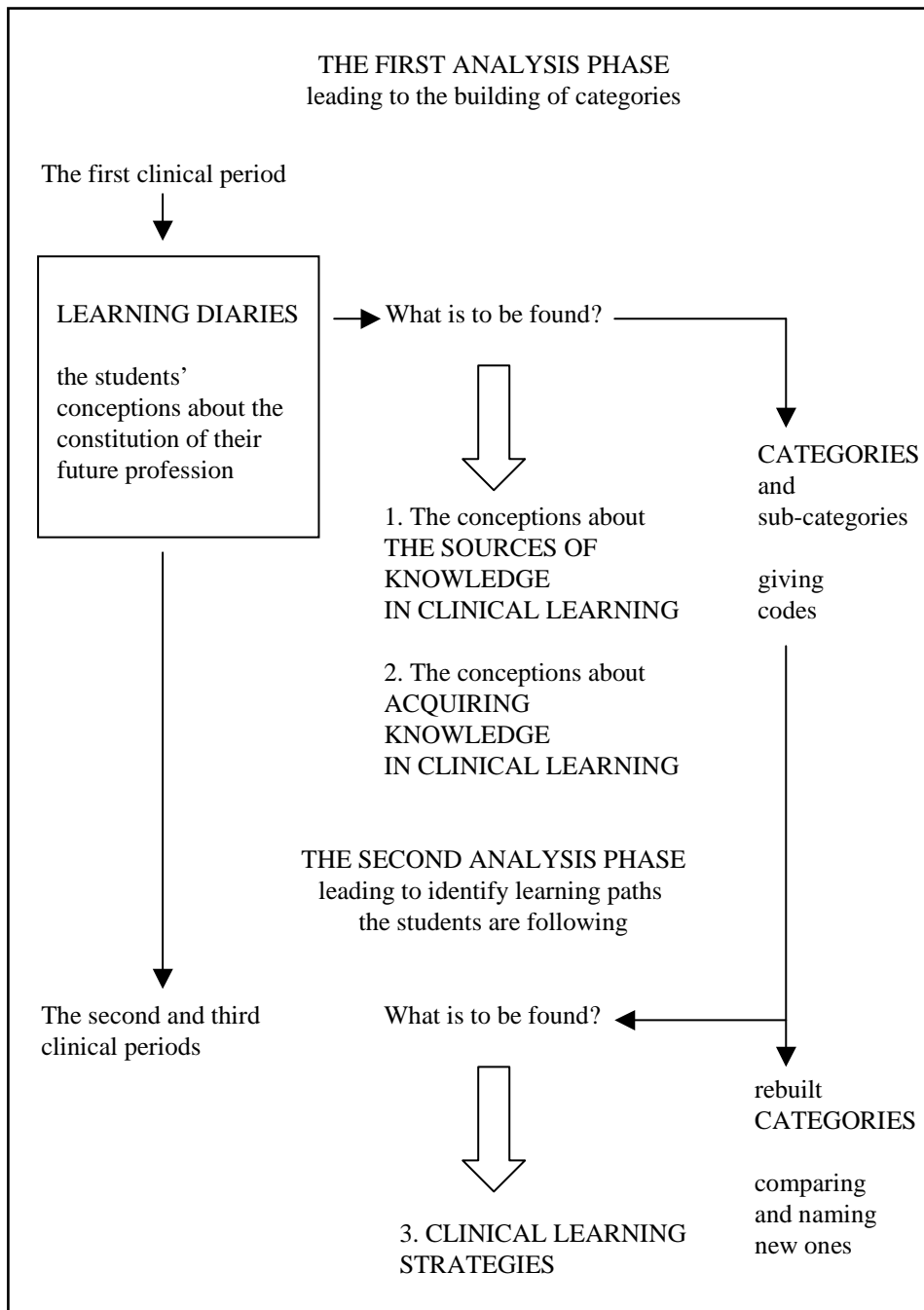


Figure 4. *The researcher's path in analysing the students' learning diaries*



## 7.2 BUILDING THE CATEGORIES

Building the categories in phenomenography is based on 1) the meanings of the statements, 2) the relationships between statements included the whole context or 3) the comparison between the different meanings the interviewees have presented (Uljens 1989, 39 - 43 see also Marton 1986 and Ihde 1977).

In this study in building the categories the meanings of the statements students have presented have been taken into account without forgetting the relationships between them including the whole context. Also, the second analysis phase concerning the comparison between different meanings has been very meaningful and will be presented in this work later on.

In the first phase, when all the elements which answered the questions of what the sources of clinical knowledge are and what is acquiring knowledge as perceived and conceptualized by the students, the elements were reanalysed and reorganized. The purpose was to find out the main concepts they represent by comparing similarities and differences the expressions include in order to build categories. The following is an example:

***"I became aware of why certain measurements are taken by nurses and why certain decisions are made by doctors concerning certain medication or treatment orders for example why the following are done: cardiversion, heart function - ultra sound, why patients are kept fully rested in bed on a monitor in CCU, stress testing and why weight control is necessary before breakfast."***

***"I was able to see how the staff nurse took care of the worst pressure sores I have ever seen. The patient had them on her legs, they were very painful and the patient complained. I could hold her legs while the nurse was cleaning and rewrapping them. From my perspective the nurse wasn't patient oriented. I did not understand why she had to say such hard words to that beautiful fragile lady."***

### the sources of knowledge

nurses' responsibilities (Nu)

doctors' responsibilities (Op)

different procedures (W)

patients' health problems (P)

patients' experiences (P)

patients' feelings (P)

wound dressing (N)

nurses' behaviours (Nu)

### acquiring knowledge

comparing (Dk)

responsibilities

investigating (I)

interpreting (Ip)

solving problems (S)

seeing (Ck)

observing (Ck)

listening (Ck)

assisting a nurse (P)

taking a patient's

position (L)

assessing (Dk)

In this example the student nurses' sources of knowledge as categories are nurses (Nu), other health care professionals (Op), patients (P), procedures on a ward (W) and nursing (N). In acquiring knowledge they are collecting knowledge (Ck), dealing with knowledge (Dk) by comparing and assessing, investigating (I), interpreting (Ip) and "living" with patients (L). Nurses, other health care professionals and patients represent the persons giving different performances on a ward. Wound dressing in turn is a nursing activity. Seeing, listening and observing are the methods the students use when collecting knowledge in a learning environment. Assisting a nurse is a way of participating in nurses' activities. Assessing is dealing with different types of knowledge they already have. Taking a patient's position means that a student is in a way living through different procedures with a patient. Investigating as acquiring knowledge means here a student's systematic way to search for and find out new knowledge. Interpreting leads to a student's own conclusions. The students are also dealing with knowledge by comparing different things in order to construct their own professional behaviour. The following is an example of how the process proceeds when the categories and the corresponding subclasses have been listed.

THE SOURCES OF KNOWLEDGE	Subclasses
<p>PERSONS WITH DIFFERENT PERFORMANCES IN THE ENVIRONMENT</p>	<p>Patients: Patients' feelings experiences health problems</p> <p>Nurses: Nurses' responsibilities behaviours</p> <p>Other health care professionals: Doctors' responsibilities</p>
WARD AS A LEARNING ENVIRONMENT	Procedures on a ward
NURSING CARE AS NURSES' WORK	Nurses' activities: wound dressing

ACQUIRING KNOWLEDGE	Subclasses
COLLECTING KNOWLEDGE	Seeing Listening Observing
DEALING WITH KNOWLEDGE	Assessing Comparing
LIVING TOGETHER	Taking a patient's place
INVESTIGATING	Searching and finding in a systematic way
INTERPRETING	Understanding a real message
SOLVING PROBLEMS	Making conclusions

The subcategories have been selected and according to the similarities or differences they include, the corresponding main categories have been clarified step by step.



## 8 TRUSTWORTHINESS

A phenomenographic study represents an interpretative approach, where the categories and the relations between them give the form for the findings in a study. In phenomenography a phenomenon is demarcated and the purpose is to find out the characteristics, which represent the chosen phenomenon (see e.g. Svensson 1985). According to Uljens (1988), however, it is not so easy to place phenomenography as a method in the existing methodological fields. Uljens' way to compare a phenomenographic analysis process to the traditional factor analysis is interesting. They both focus on similarities and differences, the former using "a human computer programme" (author's expression), so that empiric material can be best described. However, the basic assumptions and methods in phenomenography parallel those of hermeneutics. They are the meanings of different conceptions, which are guiding analyzing material and building categories, not the frequencies of different things. The findings are in turn descriptive and qualitative. (see Uljens 1988 also Svensson 1985.) A researcher is interested in producing knowledge, which has been obtained through understanding, analyzing and interpreting of human beings' conceptual worlds. According to Habermas (1971) it is called an interpretative interest in knowledge.

The question of trustworthiness in phenomenography is connected with the relationships between the categories of description and the expressed conceptions. The competence of interpretation depends on how carefully the built categories represent the conceptions mentioned in the collected materials. Validity, according to coherence theory, means showing a logical and understandable interpretation of the reality. It is essential that the categories of description include more than only an acceptable interpretation of collected information. The category system has to produce also the including relations as the main findings and also the structure of the category system should be taken into account. (Marton 1988.)

If we consider reliability in a qualitative study, it means in phenomenography, how well or accurately the categories built cover the meanings of the stated conceptions. The categories should be identified in the corresponding, different contexts. The question then is how widely the exact individual categories are to be identified. (Johansson, Marton & Svensson 1985.) Uljens (1988) wants to emphasize that if a researcher succeeds in building the categories so that another researcher is able to follow the interpretation and a reader can identify the connection between the interpretation and materials, then the built category system is acceptable. The correspondency criteria means that interpretation corresponds to the materials and the built category system covers the collected materials well. The coherence criteria in turn means establishing a logical relationship between the categories and materials. According to Uljens, instead of considering reliability in qualitative research we should discuss the different types of validity being more congruent with the nature of a qualitative research study.

Uljens (1988) and also Larsson (1986) recommend measuring reliability by comparing the interpretations made by some other persons not involved in the study process. They should also take into account how well the categories cover the collected materials. In this study it would have been too demanding for anyone from outside to go through the collected materials because of its size (sixteen students' learning diaries covering three different periods, altogether about 750 pages, most of which was hand written). On the other hand the ethical issue is also the most important one, permission to interpret and analyse the materials and use it in a study was not given to outsiders. It has to be mentioned also that permission to use direct quotations as examples, was asked for beforehand.

The trustworthiness in this study will be discussed according to the correspondence criteria and the coherence criteria. Knowing clinical nursing and nursing education as a context very well has facilitated interpreting the collected materials.

The statements of the informants have been read through many times focusing on their meanings. The examples, which are purposefully many, have been selected carefully in order to show also the proceeding learning process they include. After building the categories the materials were checked carefully more than once to be sure that the categories cover all the statements. The written findings were then compared to earlier research or existing theories explaining the phenomenon. Similarities have been found and also different perspectives to consider those similarities were found.

The student nurses' clinical learning processes were studied at the same time as they were studying. It was therefore possible to discuss with them if something needed to be checked. Because the learning paths they were following were to be gradually found in diaries, it was important to listen to the students' own assessments in order to ensure accurate interpretation. Also the student nurses' own self-evaluations supported by their clinical tutors' assessments, have been used for this.

Two researchers, who know the context very well, have read the written findings. They have been able to follow the present interpretation and have found a connection between the interpretation and the materials found in the examples. Also, knowing the student nurses well, they could see the connection between the students and their continuing learning processes in the way the learning paths have been described in this study.

All in all, having learning diaries covering three different clinical periods has been very meaningful. If materials had covered only e.g. one period, my conclusions would have been misleading. Before the latest learning diaries were analyzed, the static names of different learning strategies were used in the first descriptions. Analyzing the subsequent diaries showed that it was a question about various, individually expanding learning paths with different learning processes. But in a qualitative analysis process a researcher is always present as a subject. The researcher has to be very careful and try to be as objective as possible. Above all knowing the context is the key.

## **9 FINDINGS**

### **9.1 THE CONCEPTIONS COVERING THE SOURCES OF KNOWLEDGE IN CLINICAL NURSING**

In describing their own learning processes in clinical settings the student nurses have presented what has been the object of their interest during their three different clinical periods. By following these interests it has been possible to identify the conceptions covering the sources of knowledge in clinical nursing. The main categories and their subcategories have been named by finding out the similarities and the differences the described sources of knowledge include. In this chapter clinical learning focused on the following sources of knowledge will be described:

- \* WARD AS A LEARNING ENVIRONMENT
- \* PERSONS WITH DIFFERENT PERFORMANCES IN THE ENVIRONMENT
- \* NURSING CARE AS NURSES' WORK
- \* HOLISTIC CARE AS ALL THE HEALTH CARE PROFESSIONALS' WORK

The main categories in turn have been divided into the subcategories which will be presented with various examples. These sentences have been categorized by interpreting carefully the whole context they represent.

#### **9.1.1 The meaning of the environment in the students' descriptions**

- \* WARD AS A LEARNING ENVIRONMENT

In this category there are the descriptions concerning a ward as a learning environment from different points of view. The students study a ward in order to become oriented with a new environment. They want to become familiar with it, to find the function of a ward and various equipment including different procedures taking place on a ward and also to find out different working methods and daily routines. During the second and third periods a ward as the object of attention will have a different meaning. The students use their earlier experiences with their meanings for distinguishing similarities and differences, if they exist and concentrate on differences. (Table 1. p. 59). A ward as a learning environment has been divided into subcategories as the sources of knowledge and these are described below.

##### **a) Ward as a physical environment**

According to the students it is interesting to find out how everything has been located on the ward, where nurses work and how patients have been placed. Some of them also wonder about the meaning of different arrangements. Later when the students have proceeded in their studies also some esthetic points of view are presented.

*“My mentor showed the ward to me. I got to know the patients and got familiar with the ward.” In patients’ rooms “The curtains play an important role in providing privacy.” “This arrangement (meaning the place of the nurses’ station) allows patients to come easily to talk to nurses. Nurses are always available.”*

After the first period on a ward it is easier for the students to become familiar with their new learning environments as they have earlier experiences as an orientation frame.

*“The first day I spent with the ward sister along with other students. She showed us around the ward and told us about different locations. Later I noticed how important it was for me to have this tour around the ward because then I had no problems to start to work.”*

Later after having more experiences also an esthetic approach is found.

*“I had liked Kirurginen sairaala as a hospital environment from the very first visit there. Beautiful old architecture, large halls meant for even seventeen patients and original furniture fascinated me.*

#### **b) The function of a ward**

The students are interested in knowing the function of a ward to get to know what kind of learning possibilities it offers and to become oriented with the demands it includes.

*“ My mentor explained the function of the ward to me and discussed my objectives afterwards.” “I went to the Ear, Nose and Throat outpatient department to compare different nursing processes in those units.” “Those units can be categorized as rehabilitation, palliative care, terminal care, care of high dependency patients and care of low dependency patients..”*

During the later periods the interest continues.

*“That week ward was mainly for ‘healthy’ patients with minor operations such as orthopedic tonsillectomia etc.” “This ward is for gastroenterology - and vascular patients, men only.”*

#### **c) Daily routines**

Daily routines which vary during three different shifts are the focus of interest. Knowing them gives the students the feeling of safety.

*“They told me about the daily routines ; bed making, feeding, toileting, lifting, turning ..” “Measuring the blood pressure, temperature and in some cases also breathing were also morning routines.” “At 11 o’clock a.m. on Wednesday they always had a multidisciplinary meeting and sometimes I was also allowed to take part in it.”*

Later during the next periods earlier experiences are utilized.

*“It did not take long for me to get used to the ward’s daily routine.”*



#### **d) Atmosphere on a ward**

The students are sensitive to their own feelings in meeting new environments with different people involved. They are interested in the atmosphere they can sense from hints in people's behaviours. It seems to be very meaningful during the whole learning process.

*"The first thing I noticed when entering the ward was the nice and relaxed atmosphere." or also "The ward gave me a bit of a depressive image since it was old and quite crowded."*

When they have a little more experiences the interest increases

*"The atmosphere is here more open, more friendly and warmer." "I came to the conclusion that the atmosphere is better in this unit than it is on the ward." "One thing I have always admired on this ward and I want to take with me is the open atmosphere added to a great sense of humor."*

also later during the second and third periods.

*"This is something totally different from other places. You did not have a clue what happens over there and for the first time I felt I did not know what to do. But the staff was wonderful right from the beginning." "Eventhough the idea of the hospital is familiar to me this ward seems to be from another world. It is because of the presence of death or the fight against it, I do not know." "It's always such a big stress to go to a new ward. But immediately when I entered the nurses' station, the uncertain feeling disappeared and the day could start with a joyful attitude."*

#### **e) Equipment on a ward**

The students are interested in different equipment on a ward and they are eager to learn how to use them. Later they will keep this interest but they already are able to connect the equipment needed to the function of the ward including the procedures and working methods used on a ward.

*"I learned to collect special equipment needed in dressings." "I have learned to use a nebulizer, a peak-flow meter and an electronic machine which counts the IV-drops." "I learned to use a special piece of equipment which is used in lifting a patient into bath."*

Later during the next periods equipment however will be related to the systems taking place on a ward.

*"The ward sister gave us a familiarization lecture on the system and how nursing care is delivered on the ward and how the ward is divided among the nurses in duty." "The first days are always somehow tiring when you have to orient yourself to the new place and everything happening there."*

## **f) Different procedures**

The students want to learn different procedures their patients go through on a ward to be able to cooperate or perform some of them and later also to be able to explain them to their patients.

*“The doctor was doing a lung-scan. He explained the procedure clearly and the patient was quite calm.” “I learned how a bone-marrow sample was taken and how a gastrointestinal tube was inserted.” “I had a chance to attend a ST-scan. It was also nice to get to know the patient better and keep him company.” “I noticed you have to be very careful with asepsis when you are doing some procedures that require a sterile technique, you have to do it in a certain order preparing equipment and things carefully before starting.”*

Later during the next periods patients’ point of view is present as well.

*“I like to visit the X-ray a lot and perhaps can at least tell the clients what happens in angiography and what can be expected.”*

## **g) Working methods**

The students want to learn the working methods used on the ward to become accepted as team members. Later they are able to compare and assess the meanings of different working methods.

*“I wanted to learn how things work and see the work of the nurses in that unit.” “I learned what kind of things they usually put down ( meaning the nurses’ work) and I read through some patients’ records to learn more.”*

Later, when they are able to compare different working methods a critical thinker begins to develop.

*“There was this old-fashioned system on the ward that a head nurse goes on a doctor’s round and then first gives a report to the ‘early’ nurses and then also to the nurses coming to a late shift.” “Since the diagnoses and many treatments and nursing care actions were strange to me it was sometimes difficult to catch all the information during report sessions.”*

Subcategories	Part I	Part II	Part III
A ward as a physical environment	**	*	*
The function of a ward	**	*	*
Daily routines	**	*	*
The atmosphere on a ward	*	*	*
Equipment on a ward	*		
Different procedures	*	*	*
Working methods	**	*	*

\* notes in learning diaries

\*\* notes are more than during the other periods

\*\*\* notes are most comparing to the other periods

Table 1. *A WARD AS A LEARNING ENVIRONMENT as the sources of knowledge in clinical learning*

In the course of time the student nurses will direct their attention to a ward as a learning environment by combining some things that belong functionally together. A ward as a physical environment, the function of a ward, daily routines and working methods will have less interest as such. There are not so many notes during the second and third periods and equipment on a ward will be related to different procedures. The students use their earlier experiences as a tool to focus their interests on. Also, later the fact that the new environments differ a lot from the previous ones is naturally a new challenge to the students, sometimes also frightening at the beginning.

When comparing a ward as a learning environment to the concept environment described in nursing theories (e.g. Patterson & Zderad 1976 and Kim 1987), it is observed that as the source of knowledge in clinical learning the meaning of a physical environment is emphasized at the beginning. The atmosphere on a ward can be seen to correspond to Kim's symbolic environment because the students experience it differently depending on the meaning they give to it. Also, Kim's social environment is seen to be involved because the atmosphere is created by people and their interpersonal relationships. A ward as a learning environment can also be seen as influencing factors, internal and external, demanding different responses and in that way affecting the students' possibilities to learn (c.f. Roy

1984, 1991). When the students become familiar e.g. with the purpose of a piece of equipment, the students are able to combine the influencing factors and their meanings.

### **9.1.2 The meaning of persons in the students' descriptions**

#### **\* PERSONS WITH DIFFERENT PERFORMANCES IN THE ENVIRONMENT**

In this class there are the descriptions concerning persons with different performances on a ward. The students have directed their attention to patients a) with various health problems and dysfunctions caused by different illnesses, b) existing as individuals with their own feelings, experiences and also rights and abilities. They also find c) patients' behaviours and d) patients' documents meaningful and when they have more experience also e) patients' home environments interest them. Nurses are very present as objects of attention. The students are interested in nurses roles and behaviours including nurses as decision makers and as advocates for their patients, skills meaning personal skills, interaction skills and technical skills. They also focus on nurses' feelings, knowledge level, the mistakes nurses make and the relationship between nurses.

Other health care professionals increasingly interest the students. The students focus on their different roles and tasks related to the knowledge level they have. Co-operation and interaction between different professionals and interaction with patients and other health care professionals will be included. Also patients' relatives interest the students more when they advance in their studies. The students are interested in the feelings of patients' relatives and roles they have on a ward.

#### **A. Patients**

##### **a) Patients' health problems and dysfunctions**

Patients' health problems and dysfunctions caused by different illnesses are to be found in the students' conceptions covering all the periods. They expand the content and their own understanding by focusing on "new cases" and by relating health problems to the therapies. The influence of dysfunctions on patients as holistic beings will be found.

*"They have patients with difficulties in breathing and tendencies to panic attacks."  
"I learned the different degrees of pressure sores and the care of them." "Most of the patients come because of chest pain and it is very common to have a couple of heart attacks a day on that ward."*

Health problems will be related to various therapies.

*“... and also by gathering more knowledge on internal medicine I will be more capable of giving holistic nursing care to my patients.”* In the room where a student has been working: *“there have been trombi - patients and the treatment of thrombosis has become familiar.”*

The meaning of health problems for a patient as a holistic being will be found when the students have more experiences.

*“I was a bit scared to face these patients because I understood that it isn't only the physiological part but also the mental part and the significant others of the patient that are concerned*

When the students feel themselves more competent a patient's good will be taken into account.

*“On the other hand patients in private rooms were in poor conditons, they needed a peaceful and quiet environment to recover or get worse.”*

## **b) Patients as individuals**

The students focus their attention on patients as individuals who come from somewhere and have their own feelings and experiences. Patients' behaviours will have their explanations and a patient's role also as a tutor will be discovered. When they advance in their studies the students discover moral issues which are patients' rights and abilities more important. Comforting and supporting will have individual characteristics.

### **\* As individuals with different backgrounds**

*“It helped me to learn how important it is to understand the patient's background and his life situation.” “It was good to see that the patients were called by their names and not by numbers or diagnoses.” “I have learned to help that old man to eat. It has not been easy because he is blind and nearly deaf. I noticed that sense of touch was very important.”*

Patients will be known as individuals with their own home environments and backgrounds when the students have their own patients.

*”Here the patients have problems which influence their lives long after they have left a hospital. It's meaningful to know how they live and what kind of hobbies they have had.”*

### **\* Experiences**

Patients are also individuals with their interesting life experiences.

*“She (a patient) has had a most interesting life filled with experiences and memories. She is a strong personality who never gives up.”*

The respect of patients' experiences is to be seen when the studies continue.

*"The room is full of ladies with fascinating backgrounds. I spent a lot of time sharing the feelings about the death of a close relative and about the phases of their illness" (experienced by the patients).*

### \* Feelings

When a patient could not do something

*"He burst into tears, was very worried and confused." "They (patients) are lonely and bored in the hospital and enjoy having company." "I learned something very valuable; Pain is what a patient says it is."*

Patients are existing as emotional individuals and patients' expressions of feelings are taken into account.

*"Some of the patients were seriously ill and I can not tell how their eyes looked when they realized someone had died; it was like part of them died as well." and when trying to interpret a patient's behaviour "Every time I went to see him he was very mean to me and to the other nurses too. Perhaps it was his way to have some dignity and control over his life."*

### \* Behaviours

Patients' behaviours are found significant.

*"It feels good to know that I can be useful by being present even though I am not very quick and efficient in all practical things." "Every day I gained more self confidence - the major reason for it being the wonderful patients. They seemed to take me into their protection." "The patients helped me a lot. They told me about the daily routines on the ward and gave a hand when I didn't know how to do something."*

Also the relationships between patients will be considered and taken into account. A student is in a situation where one patient is attacking another patient.

*"The new boss-like patient claimed that she can speak whatever she likes and told to the patient next door that she was for nothing and she is not going to make it (meaning rehabilitation). I tried to explain patiently to the new lady that she should watch her words. The patient next door may get more depressed and frustrated than she already is and it will hinder her recovery. Afterwards I noticed that the new lady had wanted to try me and had played with me."*

### \* Patients' rights

*"The patients are actually given many opportunities to choose and to decide during the day." or in a negative way "No one (meaning the staff) was interested in his wish because everyone was waiting to get home." "Are they really the doctors who will decide whether a person has the right to live or not?"*

Patients' rights are to be discovered and their meaning in nursing care will be emphasized.

*“The patient had refused to take any chemotherapy, fluid therapy or blood transfusions only basic nursing care and pain killers were accepted. I felt good when taking care of this patient, sad of course but proud that the patients' wishes were taken seriously and that he could die with dignity and was able to have control over his life until the end.”*

Subcategory	Period I	Period II	Period III
PATIENTS			
Patients' health problems and dysfunctions	*	*	*
Existing as individuals			
* having different backgrounds	*	**	*
* feelings	*	*	*
* experiences	*	*	*
* behaviours	*	*	*
* Rights	*	**	**

Table 2. *Patients in the environment as the sources of knowledge*

According to the students' conceptions patients with their health problems are the important sources of knowledge during all the periods. Patients also exist as individuals to the students having their own feelings, experiences and behaviours. Patients' backgrounds are more present during the second period. In that phase learning to establish an individual nursing care plan is given greater significance, which might explain this shift in emphasis. Patients' rights are more present during the second and third periods. It is understandable because the students have already become oriented to hospital environments and they are searching for wider perspectives to consider the phenomenon.

## **B. Nurses**

### **a) Nurses' roles**

The students discover nurses' tasks, roles and responsibilities in their own ways. They will be compared to the roles other health care professionals have. The importance of a nurse's role and the responsibilities nurses have will be found.

*“Nurses are interpreting physicians' orders to patients.” “Normally only the nurse in charge was with the doctors.” “Only nurses are responsible for delivering medicine.”*

*“Nurses have more responsibilities and are able to be in charge of some patients’ affairs.”*

Nurses’ roles as the students’ tutors can also be discovered in diaries often related to their personal characteristics.

*“ She is a great tutor.” or “ My tutor has been working on the ward for 20 years, studied nursing in England. It’s going to be fun.” “She seemed to like the idea of having a student to guide.”*

Later during the second and third periods after having more experiences moral aspects and responsibilities are included.

*“It is really difficult to decide whether to ask the doctor or not.” “I have quite confusing feelings - can nurses really share needed information in front of the patients.”*

*“I was concentrating on understanding what a nurse is doing in a doctor’s round - what is a nurse’s role, how much is she able to take part in deciding patient’s care - not much I’m afraid which is a shame.”*

*“Now I understand what a huge responsibility a head nurse has when organizing everything.” “I like to work as a nurse in charge even though it means also all kinds of paperwork.”*

## **b) Nurses’ behaviours**

Nurses’ different behaviours will be identified in relation to patients and their relatives, each other and student nurses. Later, after having more experiences the students also focus their interest on nurses’ behaviours as decision makers and as the advocates of their patients.

*“ Most of the nurses are friendly and respect the dignity of the patients.” “The nurse took the patient’s son to the nurses’ room and explained everything very clearly.” or “The nurses talk with their patients only when doing something with them.”*

The more experienced students are able to identify dissimilarities among nurses’ behaviours.

*”There are nurses who want to show their power and who want to avenge something they have experienced. How few are those nurses who encourage and find the possibilities of the students.””On this ward I have noticed that the nurses have their own circles. How easily they say something negative about each other.”*

Good examples are to be found.

*”She is a nurse whose presence saves all the shifts.” or “My tutor (a nurse on a ward) was effective, listened a lot to the patients and no matter how busy she was never said it to the patient. She always had time to explain and teach and had a hidden wise word in every comment she made.”*



During the later periods the interpretation of the meaning of nurses' behaviours deepens the students' attention.

*"I realized what an important person I am (representing a nurse) between a patient and a doctor. At least when that doctor behaved in such a way that the patient would have been horrified if there had been no one with her explaining what was happening so that the patient could understand it."*

*"I have been disappointed in the nurses' behaviours in those meetings (meaning multidisciplinary meetings taking place on a ward). They sit quietly and add their opinions only if they are asked. I think the nurse is or should be the team member who knows the patient best."*

A nurse's behaviour has a great impact to a student.

*"Besides, the assistant head nurse was the greatest pedant - she had always something to correct if she was listening to my report - and not often in the most constructive way. I have to admit that I was scared to report if she was present."*

### **c) Nurses' skills**

The students are eager to learn different skills they assume nurses need. They are interested in nurses' interaction skills and technical skills. Later after meeting many different nurses they are able to identify nurses' personal skills. They are also worried about having possibilities to learn those skills.

*"I really admire the nurses who know that way of interacting with difficult patients."  
"I made a list of the skills I wanted to learn here."*

*"She is a very skillful and good nurse who explained everything so that I could follow."*

When they have more experiences and more self confidence nurses' skills are related to nurses' personalities.

*"The ward sister on this ward is my real role model. I wish I could become as a skillful nurse as she is. Her interaction skills are brilliant."*

But also as a negative experience when a student is giving a report to a nurse, nurses' skills are the focus of learning.

*"She was not listening to me and then said that she was not interested in less important details. To me all the things were important and I felt that she was underestimating me and my patient. I tried to give it (the report) briefly but still she walked away from me before I could finish."*

The student's skills have been underestimated by a nurse and yet she can handle it.

*"First this made me very angry but then I realized that it was her style and just did not want to let her influence my thoughts about this place."*

#### **d) Nurses' feelings**

In the students' conceptions their interest in nurses' own feelings are to be discovered. Nurses meet emotionally difficult situations and they are also present as feeling persons.

A student meets a difficult situation on a ward:

*"I could sense her (a nurse) reluctance to meet that patient."*

*"Everyone was very sad that she (an old female patient) had died without anyone being present and holding her hand." "I did not know what to say to a nurse who was apparently embarrassed and depressed."*

During the later periods the interest continues. A new seriously ill patient was told to come to a ward.

*"I heard others (meaning the nurses present) making comments that they cannot take this any more it is so hard to take care of so many terminal patients and at the same time try to be positive and have a happy face for the patient next door."*

#### **e) Nurses' knowledge level**

The students discover nurses' knowledge level interested. They begin to consider the rationales of nurses' activities. Nurses have gathered different types of knowledge during their working lives. This kind of interest is more intensive if the students notice that they have learned something in a different way.

*"She has worked there such a long time so she knows everything." "Some nurses use gloves others do not. They know that they should but..." "All the various headings of holism are included"*

The interest continues when good experiences or sometimes also less good experiences are to be found.

*"Nurses on that ward were really professional having a lot of experiential knowledge."*

*"Back on a ward I was annoyed. Didn't the nurses realize the lady's situation. Why an earth did they put me, a student, in this difficult situation."*

#### **f) Nurses' mistakes**

The student nurses are very interested in all the nurses' activities. When learning them they also notice soon if nurses are making mistakes. Later they are able to compare nurses' behaviours to the behaviour they should have.

*"The nurses' technique was far from sterile." "...and such a way I could not take them as a good example." "I could not understand that order, it was a big mistake."*

The interest is present also related to negative experiences caused by nurses.

*“The nurses were having a meeting together and thus they just left us alone to answer ringing bells. It isn’t right. I’m so angry.” and “ Some nurses think that by shouting and yelling they can show that qualified nurses always know better and have power. How do they interact with their patients?” “A qualified nurse who does not introduce herself to the new patients because they are on the ward only a few hours. What kind of behaviour!”*

Subcategory	Period I	Period II	Period III
NURSES			
Nurses' roles	*	*	*
Nurses' behaviours	*	*	*
* as decision makers		*	*
* as advocates		*	*
Nurses' skills			
* interaction skills	*	*	**
* technical skills	**	**	*
* personal skills	*	*	*
Nurses' feelings	*	**	**
Nurses' knowledge level	*	*	*
Nurses' mistakes	*	*	*

Table 3. *Nurses in the environment as the sources of knowledge*

Nurses are, as the sources of knowledge, a group representing the students’ future profession but gradually also as individuals with their own feelings. At the beginning, when the students are more interested in technical skills, which are new to them, nurses’ corresponding skills are more important. Later during the last period nurses’ interaction skills are more the focus such as the more demanding nurses’ behaviours i.e., decision makers and advocates. The students are developing as critical thinkers which is seen in their interest in nurses’ knowledge level and nurses’ mistakes.

### **C. Student nurses**

In this class there are the student nurses by themselves the focus of interest according to their own conceptions. The students want to find out what is exactly their position

on a ward and what kind of expectations the members of staff have. They also reflect on their own feelings in different situations on a ward.

### **a) The role of a student nurse**

Every ward and unit in a hospital represents a new learning environment for a student. The role of a student will be clarified in relation to the position the students have on a ward. How to take up their position on a ward? It is not always very easy. A student's position and its meaning on a ward will be analyzed related to their learning.

In the beginning on a new ward a student is unsure but eager to learn.

*"I did not know what the nurse expected me to do."*

*"How can you ever learn if you are not allowed to start once and do it for the first time." "I run when the patients call. I suppose they (nurses) expect me to do it." and "Is it really my duty to try to please the staff nurse."*

It means a lot when student can show her competency.

*"The most challenging thing was the test I was given to establish a nursing care plan."*

Acquired experiences influence a student's role.

*"It was easier to start now. I had already become a staff member."*

The role of a student is also present in a positive way when a student is not separated from the rest of the staff.

*"I was very glad to hear that students can use a computer here."*

The role of a student in relation to a patient is found.

*"My role was simply being close and offering comfort and support."*

The complexity of a role has been found.

*"I have not really figured out what this hospital wants from students; are they counted to work like the others or can they learn new things and decide what they want to do."*

### **b) Students' own feelings**

The students reflect on their own feelings when they experience various situations during changing shifts. At the beginning they seem to have more unhappy and confused feelings than later when they learn to deal with them.

*"I was really mixed up when trying to write and listen to a report at the same time." "I was really afraid to go and talk with the patients because I felt that I don't have anything to say." "I was feeling unhappy and angry - putting me in this kind of situation."*

The feelings are strong when the period is over.

*“I felt sad so sad when I had to leave everything. You just get to know people even make friends with some of them and get used to whatever you do - and then it is time to say good bye and go.”*

They are present when a student enters a new ward with seriously ill patients.

*“Now on this ward the patients are truly sick even dying. It is like a slap in your face at least I felt it so strongly.”*

Later the interest continues and a moral issue is included.

*“ For the first time it made me angry to see people in good shape wasting their life and at the same time really desperate people fighting for their life.”*

The feelings are also the focus of attention in clinical assessments.

*“Well, maybe I’ve learned something about these negative feelings too - how to handle them and solve them - not to let them affect the nursing care.”*

### c) Students’ own mistakes

*“I made one mistake - and I will never forget it.”*

*“It didn’t comfort me much that the nurses were very fair with me, they said that I had got a lesson that I would remember the rest of my life”.*

Subcategory	Period I	Period II	Period III
STUDENT NURSES			
The role of the student	*	*	*
Students' own feelings	*	*	*
Students’ own mistakes	*	*	*

Table 4. *The students in the environment as the sources of knowledge*

The students all the time test their own role in clinical settings and are happy when they feel that they belong to the team. The role, on the other hand, includes also students’ rights as students not as workers. The students’ own feelings are very much involved during all the periods, which is understandable in a human oriented professional growing process.

### D. Other health care professionals

In this class there are other health care professionals as the sources of knowledge in clinical learning according to the students’ conceptions. At the beginning the students only notice them but a little later the students want to learn what the others

do, what kind of roles they have and how those roles are related to each other. They are especially interested in the profession of the others in relation to the profession of the nurse.

### **a) Co-operation between the different professionals**

The students are interested in co-operation between nurses and the other health care professionals taking care of the patients on a ward. They follow enrolled nurses and auxiliaries and they are very soon interested in co-operation between different physicians and nurses and a little later in different therapists and their roles on a ward.

*“I learned something about doctors’ and nurses’ co-operation on the ward.” “The physician said that the patient was dead then the nurse started to prepare the patient.” “The ward was filled with different kinds of surgeons, medical students, social workers - you just couldn’t recognize names and titles.” “I know how important it is to encourage and help patients to move and do some exercises the physiotherapists have taught.”*

Later after having more experiences the perspective expands.

*“Today we students were able to participate in a multidisciplinary meeting. It was great to notice how responsible participants were. I got an impression that they really sacrificed thoughts to the patients. And it was just a pleasure to listen to a speech therapist since her way to speak about patients was so beautiful.”*

*“I also got a picture of what occupational therapists really do which has been a mystery to me.”*

### **b) Interaction with patients and other health care professionals**

The students are interested in the relationships the other health care professionals have with their patients. They want to compare it to the relationships nurses have.

*“The physiotherapists do visit the ward but they don’t have time to concentrate on a particular patient.” “Some doctors really explain everything to patients very carefully but some treat them as objects.”*

On a more advanced level a critical aspect will be included.

*“I have to say that the doctor could improve his manner it’s incorrect to speak things like - we don’t treat a dying patient with antibiotics - in front of the patient even though the patient might be unconscious.”*

The conclusion can also be a positive one.

*“ It was a pleasure to follow how she (a doctor) also handled the psychological care of a cancer patient.”*

Subcategory	Period I	Period II	Period III
OTHER HEALTH CARE PROFESSIONALS			
Co-operation between the different professionals	*	**	*
Interaction with patients	*	**	**

Table 5. *Other health care professionals in the environment as the sources of knowledge*

When the students have more experiences, co-operation between other health care professionals will become a more important focus and then continues as natural team work. Also interaction with patients will become more important while they proceed in their studies.

### **E. Patients' relatives**

Patients' relatives on a ward are quite a big challenge to the student nurses. At the beginning the relatives are there only as strangers. Later the students also focus their attention to the relatives, their feelings and a position on a ward.

#### **a) Relatives' feelings**

The students are, after becoming more experienced and self-confident, interested and able to identify the feelings of their patients' relatives.

*“The ward sister told us also about the typical differences between the husbands and wives of a MI-patient. The husbands are usually totally confused, mixed up with their emotions and really helpless. The wives instead try to look fresh and calm, hiding their overwhelming worries and sorrows inside themselves. The wives are giving the message: Don't you worry, I will take care of everything. Due to these different ways of reacting in the situation the husbands and wives need different kinds of support.”*

*“The patient and his family did not want to talk about the inevitable future or mention the situation the patient was in. How can we help these kind of people?” or as a positive one “The staff handled those situations so kindly and nicely that I could see that it helped the grieving relatives.”*

#### **b) Relatives' position on a ward**

When the students progress in their studies they take also patients' relatives into account when they are on a ward.

*“The most difficult part is to meet the significant others of the patient.” “Nurses take the time to discuss with all the patients and their relatives to make sure that they know what is the situation.”*

*“I had a patient who was in her terminal phase of life. She was a very old woman whose daughter visited almost daily. I talked a lot with the daughter. It felt so beautiful, because she was so prepared for the death of her mother, not so sad any more, and she just wanted to spend time with her mother until the end.”*

Subcategory	Period I	Period II	Period III
PATIENTS' RELATIVES			
Relatives' feelings	*	*	*
Relatives' position on a ward		*	*

Table 6. *Patients' relatives in the environment as the sources of knowledge*

The feelings of patients' relatives can be seen in many situations. Patients are, especially on medical wards, often seriously ill, that is why the feelings are present all the time. The relatives' position is of interest to the students a little later when they are in and when they are constructing a holistic picture of their future working life.

Persons with different performances on a ward are very important as learning objects to the students. They specially focus their attention on patients and nurses on a ward. At first the interest is in persons generally; who they are, what they do and how they do it. When they progress in their studies and acquire more knowledge the students will be more critical and they also wonder how they should react and what they should do. The moral issues come to the fore when the students advance in their studies and are more critical in their observations of different persons with performances on wards. The whole category, persons with different performances on a ward, is presented in Table 7 on page 74.

Persons as the sources of knowledge in clinical nursing care are seen from different perspectives. Patients can be seen to exist as holistic beings (see e.g. Rauhala 1987) now described by the student nurses. According to them patients have their organic functions which in many cases are dysfunctional, patients are aware of themselves, they should have their own rights, they feel and experience and also behave in their own personal way. They have their own backgrounds (c.f. Holden 1996) and what is meaningful, their own courses of life. This entity however will be found out step by step, during the proceeding studies. Knowing the patient as a case, patient and person (c.f. Liaschenko 1997) can also be seen in the students' descriptions. As they have illnesses and dysfunctions they are seen as cases or representing some patient groups but especially during the second and third period with their own backgrounds, feelings and experiences as persons. But the patients have also different meanings for the students, they are recipients of nursing care



(e.g. Meleis 1991) but they are active as their behaviours also play a part in the students' tutoring. The students seem to value the active role of a patient, which was not found among nurses in Leino-Kilpi's study (1990).

Nurses are seen as actors (c.f. Leino-Kilpi 1990) having different role performances and also as individual persons, who have their own feelings. From students' points of view a nurse's competence is being assessed all the time, competence being recognized as skills, knowledge level and the mistakes and also as nurses' above mentioned role performances. They, in turn, include moral issues, what is the best course to follow to take a patient's good into account. This is comparable with Swendsen's (1985) broad competence definition, where also moral knowledge, critical thinking, formulation of attitudes and integration of theoretical knowledge have been mentioned.

Advocacy is related to acting as the guardian of the patient's rights (c.f. Nelson 1988) and decision making to the role of a professional nurse. Nurses' skills are the focus of interest, different during the three periods describing the students' own learning paths. It is significant that nurses' way to meet a patient will be more and more important while the students progress in their studies. Nurses represent their future profession that is why the category of nurses includes more subcategories than the others, nurses are observed from many perspectives. In the student nurses' own descriptions the students are seen as searchers, who are looking for different possibilities in various environments. It is also very important to know who one is in relationship to the others (see e.g. Roy 1991), who am I as a student, what kind of rights do I have and what kind of expectations do the others have. A student is also present as a conscious being which is seen in their ways to deal with emotions and the meanings of different events and as a situational being, coming from somewhere and going to somewhere (c.f. Rauhala 1995). The student nurses' own feelings are very present during all the periods. The mistakes they make influence a lot the students' learning. It is of great importance that they will be handled with clinical tutors and nurse educators as it has also been emphasized by Langleyn and Simon (1981) who also argue that making mistakes is a good way of learning skills.

In the descriptions of other health care professionals, co-operation and interaction especially with patients is the focus. This is also seen, indirectly, as a way to clarify a nurse's role (c.f. Kramer & al 1986). Co-operation between other health care professionals seems to be the focus of interest especially during the second period and the students also make more comparisons of nurses' behaviours in relation to the others. There are more notes about interaction with patients during the second and third period also in a deeper way including a moral issue. Patients' relatives are seen as a separate group of people, as visitors on a ward. The students describe the relatives as having their own emotions but the meaning of their presence on adults' wards is emphasized when a patient is going to die.

Patients' relatives are, during the second and third period, also seen as recipients of nursing care but mainly in the form of comforting and supporting. They are less seen as recipients of planned family care (c.f. Hayes 1997) and they are not seen as care givers on adults' wards, which is typical in some other cultures.

Subcategories	Period I	Period II	Period III
<b>PATIENTS</b>			
Patients' health problems and dysfunctions	*	*	*
Existing as individuals			
* having different backgrounds	*	**	*
* feelings	*	*	*
* experiences	*	*	*
* behaviours	*	*	*
* rights	*	**	**
<b>NURSES</b>			
Nurses' roles	*	*	*
Nurses' behaviours	*	*	*
* as decision makers		*	*
* as advocates		*	*
Nurses' skills			
* interaction skills	*	*	**
* technical skills	**	**	*
* personal skills	*	*	*
Nurses' feelings	*	**	**
Nurses' knowledge level	*	*	*
Nurses' mistakes	*	*	*
<b>STUDENT NURSES</b>			
The role of the student	*	*	*
Students' own feelings	*	*	*
Students' own mistakes	*	*	*
<b>OTHER HEALTH CARE PROFESSIONALS</b>			
Co-operation between the different professionals	*	**	*
Interaction with patients	*	**	**
<b>PATIENTS' RELATIVES</b>			
Relatives' feelings	*	*	*
Relatives' position on a ward		*	*

Table 7. *PERSONS WITH DIFFERENT PERFORMANCES IN THE ENVIRONMENT as the sources of knowledge in clinical learning*

### 9.1.3 The meaning of nurses' work in the students' descriptions

#### \* NURSING CARE AS NURSES' WORK

In this class there are the descriptions concerning nurses' work during different shifts according to the students' conceptions. When explicating the sources of knowledge in clinical learning the students describe nursing care on the special wards they are assigned to. When they advance in their studies the students more and more compare nursing care on a special ward to the conception of good nursing care they are constructing by integrating theoretical and clinical studies.

#### a) The principles in nursing care

The principles on which nursing care is based on different wards will be identified in many nursing therapeutics.

The principles are found when a patient has no privacy

*"I wonder whether confidentiality has been considered or nurses' convenience."*

or privacy has been taken into account.

*"The curtains are used when a patient is washed, turned, needs a commode or when the dressings are changed etc."*

The principles are related to primary nursing care.

*"The primary nursing system did not work very well." "The nursing profession seems to be very hierarchical here and I think this system supports task-oriented attitudes." "Patients should have their own named nurses but it is not so in practice."*

The students search for the principles as critical thinkers.

*"My tutor wanted to be realistic and admitted that nursing here is task-oriented." or "Patients have their own named nurses on this ward." "Patients are respected here as individuals."*

*"It was tried to provide privacy - if there were visitors, they were asked to leave for a while and because of other patients the report was given in a quiet voice. The patients were happy because they could have a ward too."*

#### b) Nursing activities

Nursing care as nurses' work consist of many activities as described by the students.

\* monitoring a patient

*"This place is really good for learning basic care and observations." "I learned to take a blood glucose test. "I tried to take a blood pressure, didn't succeed yet." "Here I learn to monitor a patient's responses during and after a blood transfusion."*

- \* helping a patient in his or her daily activities *“Nurses help the patients with washing, toileting and dressing.”*
- \* helping in vital functions *“She refused the oxygen mask, could not swallow her food and was incontinent. I tried to feed her and encourage her.” “Every patient’s vital signs are monitored daily.” “Then nurses take care of catherizations, ng - tubings etc.”*
- \* medication *“I am waiting for the possibility to prime an i.v. tubing or give an injection.” “...and then take care of medications, i.v.:s*
- \* preparing a patient for different examinations and procedures and participating in them *“One of my patients was having a crista biopsy and I was supposed to help the doctor. I prepared the instrument table. The biopsy went fine even though the patient had very hard bones.”*
- \* wound dressing *“I followed dressing changings.”*
- \* comforting a patient and relatives *“I could mention also one patient, who was a little bit afraid of the hospital - you can see it. He doesn’t feel very comfortable.” or “I gave her (a patient) a big hug.”*
- and as a principle in nursing activities *“I tried to do it as carefully as I could to avoid hurting her.”  
“They (meaning a patients’ relatives) were feeling very sad and I tried to explain everything as well as I knew.”*
- \* encouraging a patient *“They (the patients) just needed company and somebody to motivate them.”*
- \* rehabilitation *“I guided my patient to dress and I have to say that it is really hard just to watch when one struggled with his shoes but finally he was able to do it without any help from me and we were both very pleased.”*

At the very begining patients just are on a ward. Gradually the students focus their interest at first on the admission of a patient to a ward and then later on discharging a patient from a ward including all the different paperwork involved. Dying as the final discharging is touching and raises feelings whenever it happens on a ward.

- \* admitting and discharging a patient
  - “I followed an admission interview where the patient’s son was giving the necessary information. The assessment sheet which is filled during an admission is very thorough and takes everything into account.”*
  - “We still discussed a death which had happened a couple of days ago on the ward. It seemed to be traumatic experience even for the more experienced nurses.” or*
  - “I know what should be done when discharging a patient, that is, whom to contact and how to do it. The major focus has been in informing home care nurses about a patient.”*
- \* using nursing theories
  - “They use the Roper, Logan, Thierny - model here.” “Well it feels good to see Roy’s theory in use. So far it has been like a fairy tale - theory.”*
  - “I think it is good to try other theories as well because you can always get good ideas to develop your own thinking.”*
- \* reporting
  - “Now it (reporting) was easier because I knew the patient from yesterday and I could tell my team members what happened yesterday and what we planned would happen today.”*
- \* documenting
  - “To write down on patients’ files what has happened and what care they have got is now really easy.”*
- \* health education
  - “This is the first time I have come into contact with long-term health education, how to teach patients and families so that they can manage in the best possible way with the condition.”*
- a patient’s good as guiding principle
  - “The purpose of the film was to show to the patients that there is good quality of life after an MI. The men telling about their experiences on the film were really moving. After the film it was easier for the patients to start reflecting what they’ve gone through.”*

When basic skills have been acquired the conceptions covering leading and managing nursing care are to be discovered. The students also study a group leader’s role and a clinical tutor’s role. They will be also more active in developing clinical nursing.

- \* managing and leading *“Managing and leading nursing on a ward consists of monitoring nursing and follow-up, giving and getting feedback, cooperation, coordination and representing a link between the ward and the whole organization.”*  
  
*“Leadership can be divided between different experts, so that nurses have different roles and responsibilities.”*
- \* developing nursing care *“It was interesting to hear how the new project was established. They had started by asking - whom are we serving and for what reason does this ward exist?” “The formulation of the philosophy of the ward is also a process.”*  
  
*“We decided with my tutor that I could get the day off to prepare my presentation about Parse’s Human Becoming Theory and its possible use on the ward. Then I gave my presentation and also the director of nursing wanted to be present. It gave me many new ideas.”*
- \* acting as a representative *“I told them (in a multiprofessional meeting) how of nursing care my patient was because I had been taking care of her.”*
- \* tutoring a student nurse *“I liked to help those new students (new beginners) whenever they needed help. It was funny to notice their level and remember how I was in the same state. It was also easy to see their good and weak points rather soon.” “Only during this autumn I have realized what a huge responsibility a clinical tutor has over her student. Probably I was sometimes even too strict with those poor students just to be sure that no mistakes occurred.”*

### **c) Nursing care plans**

The student nurses have learned to establish a nursing care plan during their theoretical studies of a “paper” patient. They use this knowledge when they form their own conceptions of the plans nurses establish in different clinical settings.

*“The nursing care plans are made according to Rooper’s model and the nurses are supposed to write the development of the patient condition and evaluation. In practice nurses haven’t enough time to update the nursing care plans.”*

*“You cannot find anything concerning patients’ feelings in nursing care plans. So I wrote down the positive nursing diagnoses too.”*

When the students advance in their studies the view is related to the optimum situation.

*“So during the night shift there was time to concentrate on diagnoses and patients’ history.” “The ward does not have a nursing care plan but still I try to think of a person as a whole and write down things like the mood, activity etc., even though the previous entries do not tell about those things - and always sign.”*

#### **d) Nursing care as a process in different units**

When the students have an opportunity to study in different clinical settings they are eager to compare nursing care as a process in those units.

*“Now when I think back I really feel angry because of the poor and disorganized nursing care.” “It was useful to notice that the nursing process is so different in this unit.”*

After three years experiences the interest still remains.

*“I enjoyed almost every single minute on the ward because of the quality of nursing care. How I wished that I could work permanently there. Honestly the ward has been the best one I have ever been.”*

*“Already the first glimpse on the files of the ward showed me that nursing was at a very advanced level on that ward. I saw they had made a quality assurance programme and they had files for each patient group, separate ones for the nurses and the patients.”*

Nursing care as nurses work is naturally a very important source of knowledge in clinical learning. Even at the beginning, when different activities are the most interesting ones, the student nurses also focus on the nursing principles. At first they notice the principles in connection to taking patients into account, later they are able to consider the principles behind nursing therapeutics as a whole and finally as an explanation for the nature of nursing on the ward, where they are. Caring perspective can be seen in these descriptions too. There are some similarities with the categories found by Morse et al. (1990). Caring is seen as an interpersonal relationship, as a therapeutic intervention and as a moral imperative being very essential in holistic nursing care.

Nursing activities are included in the sources of knowledge step by step. The student nurses begin in so called basic nursing care i.e. helping patients in their daily activities and monitoring a patient. Gradually, they are allowed to participate in more complex nursing situations and take more responsibilities. At first nursing activities are focused on separately and when they advance in their studies, they are connected to each other, to the nursing process and also to the nursing principles. This means finding out the patient centered way, how to do things. When they have nurses’ activities as the focus of interest the students are searching for knowledge embedded in nurses’ skills and abilities or practical knowledge (Sarvimäki 1989), which is comparable to Ryle’s (1960) knowing “how”. Moral knowledge will be included in order to find out what is a patient’s good, meaning also that the user’s

(a patient) knowledge is more valuable than the maker's (a nurse) knowledge (see e.g. Hintikka 1974). At the beginning of learning nurses' activities are more the focus of interest as a maker's knowledge and proceeding in studies means also focusing on a creator's knowledge, seeing nurses' activities as entities.

When the student nurses have properly learned one of the nursing theories and have learned to apply it in planning nursing care to their "paper patients", they are searching for some kind of theory base in their clinical units. This also gives them a way of testing the level of their own theory studies. When they proceed in their studies and develop their critical model of thinking the student nurses focus their attention on the nursing process as a whole. They more and more compare various ways in different units also integrating their theoretical studies in order to deepen their own understanding. In their comparisons the students have their own implicit conception of the good nursing care process in their minds. Finally, they are allowed to focus on managing and leading nursing, which includes adopting a group leader's role. Being aware of their own theoretical knowledge base they can also participate in developing nursing. Learning a clinical tutor's role gives a possibility to get out of a student's role during their final clinical studies. This all means that also in nurses' activities, which is providing nursing care, theoretical knowledge is the focus of interest. There are two different approaches in the students' descriptions, how a theory is used in clinical placements and how theoretical knowledge can be used as a tool in clinical placements. The former focuses on a theory itself and the latter on the possibilities theoretical knowledge can offer.

The different role functions (providing nursing care, acting as an expert, teaching and developing nursing care) described in the recommendations set by the European Health Committee (1994), are also to be found in the sources of knowledge in clinical learning. According to Leino-Kilpi (1990) nursing activities can be divided into task-oriented activities, human-oriented activities, caring activities and advocacy activities (Leino-Kilpi 1990.) In this study the perspective is different. Nursing care as nurses' work is seen at first as different activities including a task and its implementation. The moral aspect is found when considering what for nursing activities take place. Later, the whole nursing process will be the focus of interest covering students' conception of nursing care as nurses' work. Nursing care as nurses work will be presented in the following table.



Categories and subcategories	Period I	Period II	Period III
THE PRINCIPLES IN NURSING	*	**	**
NURSING ACTIVITIES			
* monitoring a patient	*	*	*
* medication		*	*
* rehabilitation	*	**	**
* helping a patient in his or her daily activities	**	*	*
* helping in vital functions	*	**	*
* preparing a patient for different examinations and participating in them	*	*	*
* comforting patients	*	*	*
* comforting relatives		*	*
* wound dressing	*	*	*
* using nursing theories	*	*	*
* reporting		*	*
* documenting	*	**	***
* health education		*	**
* managing and leading nursing			*
* developing nursing			*
* acting as a representative of nursing care		*	**
* tutoring a student nurse			*
NURSING CARE PLANS	*	**	**
NURSING CARE AS A PROCESS IN DIFFERENT UNITS		*	*

Table 8. *NURSING CARE AS NURSES' WORK as the sources of knowledge in clinical nursing*

### 9.1.4 The meaning of other health care professionals' work in the students' descriptions

#### \* HOLISTIC CARE AS ALL THE OTHER HEALTH CARE PROFESSIONALS' WORK

During their learning processes in clinical settings the student nurses are interested in all the other health care professionals and their work. Later when they proceed in their studies the students also focus their deepening interest on how all the work done by the health care professionals in taking care of patients can be integrated and coordinated.

#### \* multiprofessional cooperation

*"In that multidisciplinary meeting I learned what holistic care could mean." "By combining all those different plans..."*

#### \* a patient's well being

*"The patient sometimes seemed to be an object which was moved from one place to another - no one really being interested in the patient's holistic care and well being."*

#### \* a patient's integrity

*"Sometimes I followed the doctor's rounds to find out, what were their plans for the patients whom I was taking care of."*

#### \* the continuity of care

*"I decided to have a long day because I wanted to see how the CCU really functions and how the continuity of CCU-care is assured from one shift to another."*

*"I was really happy to get a possibility to play a part in the continuity of care."*

#### \* benefiting expertise

*"I feel this cooperation with different experts is organized and functioning quite well on the ward."*

*"One other positive thing that I took notice of, was the way the multidisciplinary team collaborated."*

#### \* a patient's participation

*"Anyway it was a success. (a patient was called to the multidisciplinary meeting) The patient became more cooperative and less critical about every suggestion. The most important thing was that the team members remembered to start by saying - I have a feeling - or - what do you think. This approach shows respect, leaves space to disagree and doesn't make the patient feel somehow less important."*

The idea of holistic care as all the health care professionals' work is mentioned also during the second period but in a deeper sense it is handled during the last period. Then its meaning has been internalized. Also a nurse's role as a team member, who is responsible for nursing care in a multiprofessional team, is clarified during clinical studies. According to the students holistic care as the sources of knowledge during three clinical periods is to be presented in the following way (see Table 9).

Holistic care	Period I	Period II	Period III
multiprofessional cooperation	*	**	***
a patient's well being	*	*	*
a patient's integrity		*	*
the continuity of care		*	*
benefiting expertise		*	*
a patient's participation		*	*

Table 9. *HOLISTIC CARE AS ALL THE OTHER HEALTH CARE PROFESSIONALS' WORK*

Holistic care is seen at first as a multiprofessional cooperation between different health care professionals. Its meaning increases during the second and third clinical periods. The meaning of holistic care to a patient is seen as well being from the beginning and also as facilitating a person's integrity during the second and third periods. It also means the continuity of care, makes it possible to benefit all the health care professionals' expertise and includes a patient's participation. These notes can be found in diaries during the second and third periods. In Leino-Kilpi's study (1990) about good nursing care the health care system and a caring team are seen as collective actors. In this study holistic care as all the other health care professionals' work is described from a patient's perspective.

## **9.2 ACQUIRING KNOWLEDGE IN CLINICAL LEARNING PERCEIVED BY THE STUDENT NURSES**

When the student nurses have described their own conceptions of clinical learning, they have presented the sources of knowledge in clinical learning as described above and also their own activities with their meanings to achieve the learning objectives as part of their conception of clinical learning. By selecting and analyzing the meanings of these activities the students' ways to acquire knowledge have been

identified. The concept acquiring knowledge is used in this study in relation to ongoing learning and to ongoing professional growth. In every situation, taking place in clinical learning, student nurses and later qualified nurses are present also as learners, they are acquiring new knowledge with changing qualities to develop their professional abilities. In this chapter clinical learning related to knowing, doing, understanding and managing situation will be described.

The learning diaries covering the three different clinical periods show that also in acquiring knowledge there are similarities and differences between the student nurses. Depending on their own perceptions which constitute their conception of holistic nursing care, they construct their own learning based on the given meanings by using various activities during different clinical periods. “How” gives the meaning to “what” also in acquiring knowledge. Acquiring knowledge as identified in this study has been grouped into eight categories. These categories will be described with short examples, which actually can be found also in the examples covering the sources of clinical studies.

1 COLLECTING KNOWLEDGE	]	KNOWING
2 DEALING WITH KNOWLEDGE		
3 PARTICIPATING IN NURSING ACTIVITIES	]	DOING
4 REFLECTING ON ONE’S OWN EXPERIENCES	]	UNDERSTANDING
5 INTERPRETING		
6 LIVING WITH PATIENTS		
7 SOLVING PROBLEMS	]	MANAGING SITUATION
8 INVESTIGATING		
9 DIRECTING ONE’S STUDIES		

## 9.2.1 Acquisition related to knowing

Acquisition knowledge related to knowing includes collecting knowledge and dealing with knowledge in the way the student nurses have described them. Collecting knowledge and dealing with knowledge are interrelated, the former being a condition for the latter and the latter gives an impulse to the former.

### COLLECTING KNOWLEDGE

- |                                  |   |
|----------------------------------|---|
| * seeing, looking and listening  | <i>“We (meaning the students) were taken around the ward by the head nurse, who also told us about the ward and what kind of patients they had. We listened to the report. They have a bed-side report here. I think a patient may sometimes feel awkward to listen and discuss his own illness and problems in a room where there are many other patients too.”</i>  |
| * observing                      | <i>“I was observing a nurse preparing a trolley. I observed a doctor doing a lumbar puncture.”</i><br><br><i>“The patient also showed how she moves in the bed and stands up rolling.”</i>  |
| * reading patients’ documents    | <i>“The night shift was very peaceful, so I had plenty of time to read documents and files patients’ files.”</i>  |
| * reading notes, books           | <i>“If I don’t know some medication, I always check it from Pharmaca and studies Fennica.”</i> <i>“I have familiarized myself more with the urological patient group and the medical care they get in the hospital. I have gone through some of the memos and literature that I have concerning urology.”</i><br><br><i>“I also had a chance to read articles and studies concerning management and leadership in nursing.”</i> |
| * listening to hospital lectures | <i>“In the morning I attended a lecture about the cognitive development of a premature baby. There was so much information in a short lecture that I could only grasp the main ideas.”</i>  |
| * feeling and sensing            | <i>“I could sense her reluctance ...”</i><br><i>“The nurse was very pleased because of my performance and it made me happy.”</i>  |

The student nurses are all the time collecting knowledge by observing the environment, persons with different performances on the ward, nursing care as nurses' work and other health care professional's work. They see, look and listen to the staff, other health care professionals, patients and patients' relatives. The students also use their own notes, they read books, articles and studies available on wards, patients' documents and files including different instructions. If possible they like to attend hospital lectures to gain more knowledge about specialities. Knowledge dealing with emotions is collected by feeling and by sensing. Collecting knowledge becomes more systematic when the students advance in their studies and when they are more aware of the professional goals to be achieved.

When considering acquiring knowledge by collecting, as presented in the learning diaries, different types of knowledge can be found. The students, in clinical learning, are collecting knowledge embedded in skills and abilities when they look around and observe how to use the equipment, how to do different things but they are also looking for theoretical knowledge and moral knowledge. The students "go back" to their notes and books but now in a more selective way. Justification of knowledge and appreciation of knowledge (c.f. Voutilainen et al. 1990) is now defined by its practical connection. Moral knowledge is present by feeling and sensing. When they are more aware of the direction of their own professional growth they are increasing their own experiential knowledge base. According to Pelttari (1997) one of the registered nurses' qualification requirements is constant self-up dating and in future there will be more emphasis on knowledge-seeking abilities.

## DEALING WITH KNOWLEDGE

- \* comparing *"They are not doing it in the way we have learned it (meaning catheterizing a patient)."*
- \* testing the meaning of theoretical studies *"I have to admit that the admission form according to Roy suits this kind of ward really well, where the patients have problems which influence their lives long after they have left the hospital."*
- \* constructing a holistic view *"I have concentrated on the pre- and postoperative care kind of trying to bring the essential things back to my memory."  
"One of my goals was to establish the position of a nurse in the hierarchy and the management & leadership possibilities they have on the ward."*
- \* assessing *"I tried to concentrate on patients' reports - writing down the relevant things." "It is important to learn to give the right kind of report what you can say in front of the patient and what you cannot. I think I did pretty well."*

*“I learned that it’s very important to patients’ relatives that there is someone they can talk to or ask questions.” “The patient needed support and company while waiting for the examination.”*

\* informing

*“I explained to her the nature of the examination and how long she will stay on the ward.”*

\* sharing knowledge

*“Then what to do with those sad cases having an abortion for a third time? How could you emphasize the importance of contraception and make sure they talk to their partners as well.”*

*“But your role is only to help by giving suggestions, the patient then decides in the end if she wants to follow them or not.”*

Dealing with knowledge in the student nurses’ diaries means that they are using the knowledge they have collected in different learning environments. The students compare clinical knowledge, which is knowledge available on a ward, to the theoretical knowledge they already have. Comparing includes acting as critical thinkers. They also test theoretical knowledge in clinical situations in order to find out its practical value. A little later when they have more experiences they also compare clinical knowledge existing on different wards. This comparison will include more and more moral knowledge from the patient’s point of view when the students advance in their studies.

Informing patients according to the students is related to explaining procedures and examinations to patients. Also giving instructions is part of the students’ clinical learning. In these situations they use knowledge they have and collect new knowledge to be applied if needed. Sharing knowledge means conversations with the staff and it is also related to health education. The students seem to respect their patients’ rights to make the final decisions concerning their own life styles. In sharing knowledge the student is also a listener and proceeds in a discussion together with a patient. According to the students’ conceptions health education requires knowledge about healthy living habits with the professional rationales and a health educator’s role will be taken on a more advanced level.

Also assessing is related to providing nursing care as an important part. The student nurses relate assessing to different aspects. They assess patients’ need for nursing care, patients’ and their significant others’ wishes and need for help. In changing situations reacting and problem-solving are based on assessment according to the students perceptions.

Dealing with knowledge in clinical learning, described in this study, parallels internalization, externalization and evaluation in the complete learning process (c.f. Engeström 1982). As it is seen in the students’ descriptions they also consider clinical placements as the places where the meaning of theoretical knowledge could be compared and tested. They integrate old and new knowledge and form a new model. The process leads to construct a holistic view. This new model, in turn, parallels the clinical nursing environment of the student nurse. In informing and

sharing knowledge the students externalize knowledge at the beginning much in the way they have been taught but when they have more experiences they integrate different types of knowledge in their own personal way.

*“Some patients also said that they felt good because they know that I care how they feel and want to be there for them.”*

Assessing means using knowledge in order to make relevant conclusions. It means also testing the level of consciousness they have acquired in different situations. Dealing with knowledge can also be compared to Kolb’s (1984) construction of a theory phase and testing implications of the theory phase. Dealing with knowledge, described in the diaries, shows that different types of knowledge are present but in a critical way. Justification of knowledge covering theoretical knowledge, providing nursing care and moral knowledge will be settled. Acquiring new knowledge will be directed according to an assessment based on the students’ images of good nursing care (Table 10.)

Categories and subcategories	Period I	Period II	Period III
<b>COLLECTING KNOWLEDGE</b>			
seeing, looking and listening	*	*	*
observing	*	*	*
reading patients' documents and files	*	**	**
reading notes, books and studies	*	**	**
listening to hospital lectures	*	**	**
feeling and sensing	*	*	*
<b>DEALING WITH KNOWLEDGE</b>			
comparing	*	**	*
testing theoretical knowledge	*	*	*
constructing a holistic view		*	*
assessing	*	*	*
informing	*	**	**
sharing knowledge	*	**	**

Table 10. *ACQUIRING KNOWLEDGE IN CLINICAL LEARNING RELATED TO KNOWING*



### 9.2.2 Acquisition related to doing

Acquisition knowledge related to doing consists of various nursing activities the students are involved during their clinical study periods. Participating has been described according to the students' conceptions offering also a picture of nursing care as nurses' work perceived by the students.

#### PARTICIPATING IN NURSES' ACTIVITIES

- \* doing together *"Today I was with my tutor and helped her to do some dressings."*
- \* doing under control *"I observed a nurse when she was taking a blood-sugar test and then did some while a nurse observed me."*
- \* following a model *"Then I could practise to make bandages. I was shown how to remove an IV-canyl and after that I could do it by myself."*
- \* doing independently *"My tutor gave me a push to start doing things. I was measuring blood pressure, pulse and temperature."*  
*"The first days I worked with the nurse on the shift and then started on my own."*

Nursing principles will be discovered to be used as a guide when the students have to choose between various alternatives.

- \* following the nursing principles *"It was a bit hard for me to let them (patients) to do things by themselves and not do it for them. It was hard to just stand there and not to help." "I consider a patient's intimacy and privacy as a challenge when preparing, for instance, my patient for an operation."*

When the student nurses have more experience, more responsibilities will be given and they then work as team members.

- \* taking responsibilities *"Today I was able to work in the same room as yesterday and it was really nice. The patients knew me already and it was nice to continue from yesterday."*
- \* having one's own patient *"I had my own patient with whom I spent quite a lot of time participating also in a rehabilitation meeting." and later "I'll make the admission interview for my own patients, prepare them and later one's own patients to the surgery, give reports about them to the rest of the health care"*

*team be responsible for my patients in a doctor's round, take care of them after surgery, give health education and all information needed for my patients."*

\* constructing a holistic view

*"So far I have truly concentrated on regaining my skills concerning the surgical nursing."  
"In these cases support, encouragement and sharing information with the patient is crucial."  
"I did not only learn the basic nursing skills but learned to interact and respect patients of different ages and with different personalities."*

\* adapting a new role on a more advanced level

*"During this week I worked as a group leader. I was the one who had to plan the nursing care for the patients and who will do what was planned (naturally in cooperation with the members of the team). I found it very useful and educational to be the nurse in charge."*

Participating in nursing activities represents the most important way to acquire knowledge in clinical learning. The students according to their own descriptions begin their professional growth by participating in nurses' activities covering at first basic skills in monitoring a patient and facilitating daily activities. When they advance in their studies their participation in a more complicated and demanding situation is allowed. It seems to be very meaningful in clinical learning for the student nurses to have their own patients, at first only one and later a few of them. Having this kind of responsibility improves the students' self confidence and motivation level. It also helps the students to discover their own knowledge base and assess the acquired knowledge. It, in turns, leads to construct a deeper understanding of continuity in clinical nursing care. Nurses as clinical tutors are responsible for everything student nurses do. Thus it is clear that at the beginning, when mistakes and "forgettings" are more common and understandable, nurses monitor their students' performances carefully. When they notice that a student nurse can really do something independently, the students are encouraged to take more responsibility (if the tutors are aware of their own role). Participating includes doing together, doing under control and doing independently. It proceeds from details to a whole, from the disconnected to the holistic according to Voutilainen et al. (1990) including more integration between different types of knowledge related to the context and related to the achieved level in clinical studies.

In participating in nurses' activities professional growth from a beginner to a graduating student nurse can be seen. This process includes the similarities with the continuum from novice to expert and is based on increasing experiential knowledge through one's experiences (c.f. Benner 1984) now from a student's perspective. The students are becoming less dependent, they take more responsibilities and also constructing their own knowledge base where different types of knowledge will be integrated. (Table 11.)

Category and its subcategories	Period I	Period II	Period III
<b>PARTICIPATING IN NURSES' ACTIVITIES</b>			
doing together	**	**	*
doing under control	***	**	*
following a model	***	**	*
doing independently	*	**	***
following the nursing principles	*	**	**
taking responsibilities	*	**	**
having one's own patient/patients	*	**	**
constructing a holistic view		*	*
adapting a new role			*

Table 11. *ACQUIRING KNOWLEDGE IN CLINICAL LEARNING RELATED TO DOING*

### 9.2.3 Acquisition related to understanding

Acquiring knowledge related to understanding consists of reflecting upon a student's own experiences, interpreting and living with patients according to the students' conceptions. They all lead to deeper understanding in a different way. Reflecting on student's own experiences is related to understanding the meaning of various experiences for themselves. Interpreting means finding the real message to be used as a guide. Living with patients as conceptualized by the students seems to lead to understand patients' positions, the meaning of various experiences for patients themselves and their ways of reacting.

#### REFLECTING ON ONE'S OWN EXPERIENCES

- \* widening a perspective      *"We had also interesting discussions about our different curriculum and what is the role of nursing on this ward."*
- \* changing behaviour      *"I made one mistake, I said to my patient before the procedure that it isn't going to hurt. Fortunately the doctor corrected me and explained to the patient the truth - it is going to hurt a bit. Then he (the doctor) also explained to me that it's better to be truthful."*

- \* self-evaluating by reflecting *“So far I have gained so many nursing skills and developed as a nurse that adaptation goes quickly. I am able to see, I find out things that need to be done, which have been difficult for me earlier.”*
- \* sharing experiences *“Every morning the nurses have a meeting where each primary nurse tells about her own patients, the purpose of their stay, the goals and the plan for the day. There is time to consult one’s colleagues, share feelings and information. I feel I can learn a lot by listening to how the nurses take care of their patients, much more than by sitting in a normal report.”*
- \* professional growth *“The discussions (between nurses) really gave a lot to me.” “I did discuss it (the death) with the nurse afterwards and felt good that my first experience with death was as beautiful and peaceful as this.”*

The student nurses acquire knowledge in clinical nursing care by reflecting on their own experiences and the meaning of their experiences. By reflecting the students can go through again all what has happened to them during their shifts and find a deeper meaning for everything. This kind of method also helps to connect different things together and guides in the search for principles behind various behaviours and activities.

Reflection can be defined as a form of response of the learner to experience (Boud et al. 1985). Reflection seems to have different meanings. It facilitates the widening of a perspective and it directs the discovering of a more professional behaviour. Self-evaluation implies reflection and by reflecting a deeper understanding about self can be achieved. This is congruent with Mezirow’s (1990) ideas about the meaning of reflection. According to him achieving deeper understanding includes critical reflection and critical self-reflection facilitating a student’s own behavioral awareness. It in turn leads to changing earlier learned assumptions. Also Jarvis (1992) describes reflective learning related to skills as reacting in a situation, as observing and meaningful changing.

Sharing experiences by reflecting, when it takes place on a ward, is significant. The students like to listen to the nurses’ narratives about their own patients’ nursing care. This kind of discussion offers a wider perspective to the students and makes it possible to construct deeper understanding. It helps to find explanations behind patients’ behaviours and also helps to develop the students’ own constructive reactions in sometimes very demanding interactive situations. It allows learning from each other, having also similarities with the idea of co-operative learning (e.g. Johnson & Johnson 1991).

## INTERPRETING

- \* technical interpretation *“I was also taught some principles about the ECG and I started to learn interpretation.”*
- \* interpreting feelings *“I held her (a patient’s) hand during the procedure, she seemed to be very fearful.”  
“She (the patient) seemed to be glad when talking to her privately in peace. Her dad and mum visited her and they were also glad to talk with a nurse.”*
- \* interpreting a patient’s state *“The condition of the patient or other things may change the plans and then it is important to see their priorities. To see and identify changes in the patient’s state of well-being, so called sensitivity, is important.”*
- \* interpreting a student’s state *“I have moved from the level - tell me what to do so I can do it - to the level - I know what to do - well, of course not completely but going in the right direction.”*
- \* interpreting relevance *“I am practising recording & reporting at the moment. What is important, what is not.”*
- \* professional interpreting *“On this ward, where all the patients are full of leads and lines and tubes, it is especially important not to trust monitors. Monitors cannot think. So if the monitor says ASYSTOLE, check the lead connections, if RR goes down, take it manually. Every time ask the patient how he /she is feeling.”*

Interpreting has also many characteristics according to the students’ conceptions. The students have related interpretation to decision making on different levels in clinical nursing. Technical interpretation in the students’ descriptions means reading the findings of patients’ different examinations or reading the findings when a patient is monitored in the right way. This requires a lot of theoretical (fact knowledge) and experiential knowledge. On the other hand, according to the students’ conceptions, they acquire knowledge about their patients’ real feelings by sensing and reading hidden messages in order to interpret their patients’ feelings, physical and emotional state of health in the right way. Being open and being truly present (c.f. Parse 1995) in communication between them and their patients the students can acquire this valuable knowledge. This is related to the characteristics of interaction in nursing often presented as empathy, as an ability to understand another person and as an ability to share another person’s experiences (c.f. Ketola 1994b and Raatikainen 1994). Interpreting a student’s own state includes self-reflection and is a part of self-evaluation and professional personal growth.

The ability to distinguish what is relevant in complex situations grows during clinical periods facilitating a student nurse to develop as a decision maker. During their first clinical period the students often express how difficult it is to know e.g. what to document or what and how to report. This is easier during the second and especially third period. The notes about professional interpretation shows that when the students advance in their studies they understand the meaning of integrating different types of knowledge.

## LIVING WITH PATIENTS

- \* achieving a patient's confidency      *"Patients seemed to approve of me and trust my way of doing things."*
- \* comforting      *"I was there holding her (a patient's) hand and that was the best thing I could do because she tried to smile at me."*
- \* encouraging      *"I answered to the men (patients with heart problems) that it must feel like getting another chance. You can see the joy and happiness in small things because you were about to lose it all."*
- \* advocating a patient's rights      *"I could sense that she (a patient) didn't understand a word (the doctor's explanation). So I explained everything very slowly and she calmed down and was relaxed during the whole procedure."*
- \* taking a patient's place      *"It is amazing how difficult it is to place oneself in another person's shoes or after all it's not that difficult if you just decide that you want to do that."*  
  
*"After a while I went to take care of him (a dead patient) with another nurse. It didn't feel hard to take care of the patient but the hardest part for me was there to be with the crying wife. I had no idea what to say except - I am sorry - and hold her hand. The whole time I imagined how I would feel if the dead patient had been someone very important to me. I guess that is what made me handle him with care."*
- \* dealing with ethical conflicts      *"How far nursing and medical staff can go in caring when a patient is totally against it. Because the lady (a patient) was demented, she could not understand why we were torturing her with needles and other stuff. But she did understand that we were hurting her and keeping her still forcefully. When a laboratory technician*

*came, there were two of us holding the patient steady when blood was taken. The old lady shouted and tried to get rid of us. I felt bad to use force against her, I felt it couldn't be right, but on the other hand she didn't understand that those samples were important in her case."*

According to the students' descriptions they acquire knowledge also by living with patients. This kind of way includes a caring perspective. Achieving a patient's confidence, comforting and encouraging gives valuable moral knowledge. This includes taking a patient's place in order to be able to understand the patients' real feelings. By living with patients, students develop their skills and abilities to construct a professional relationship, where a nurse is truly present (c.f. Parse 1981, 1995) for a patient. Living with a patient guides a student nurse to become a patient's advocate and decision maker in the situations where patients are not capable to defend their own rights. The students relate to living with patients moral issues which means that a patient's good is based on trustworthiness and respect of the individual dignity. Living with patients also includes the significance of every single interaction between nurses and their patients. Patients' unique personalities are emphasized. Pelttari (1997) presents in her study as the present and future qualification requirements of a nurse e.g. a readiness to develop oneself to meet another person as a holistic being, "human to human" requirements, empathy and caring. Living with a patient as acquiring knowledge can be seen to lead to these qualifications. (Table 12.)

Categories and subcategories	Period I	Period II	Period III
<b>REFLECTING ON ONE'S OWN EXPERIENCES</b>			
widening a perspective	*	**	**
changing behaviour	*	**	*
self-evaluating by reflecting	*	*	*
sharing experiences	*	**	**
professional growth	*	*	*
<b>INTERPRETING</b>			
technical interpretation	*	**	**
interpreting feelings	*	*	*
interpreting a patient's state	*	**	**
interpreting a student's state	*	*	*
interpreting relevance	*	**	**
professional interpreting		*	**
<b>LIVING WITH PATIENTS</b>			
achieving a patient's confidence	*	**	*
comforting	*	*	*
encouraging	*	*	*
advocating a patient's rights		*	*
taking a patient's place	*	**	*
dealing with ethical conflicts	*	**	**

Table12. *ACQUIRING KNOWLEDGE IN CLINICAL LEARNING RELATED TO UNDERSTANDING*

#### **9.2.4 Acquisition related to situation management**

Acquiring knowledge related to situation management means according to the students, discovering solutions in new and sometimes unexpected contexts. They lead the students to control and manage situations but also to benefit available possibilities in the present context. Situation management according to the students' conceptions can be seen to consist of solving problems, investigating and directing one's own studies.

#### **SOLVING PROBLEMS**

\* as an approach in nursing care

*"It was quite difficult to communicate with him. I noticed that sense of touch was very important to communicate with him." "I tried, by different means, to make them (meaning the patients) more comfortable when they were on the ward."*



\* as a facilitator in  
a student's learning

*"Since the diagnoses and many treatments and nursing care actions were strange to me, it was sometimes difficult to catch all the information during report sessions. I marked those things I didn't understand and asked for explanations later on from my tutor or other nurses."*

*"I realized that although I had been on a surgical ward before, I have no experience of taking care of infected wounds. Now I am happy that we have these kind of infected wounds (terrible to say) here because as a nurse I have to know how to handle them."*

Solving problems as acquiring knowledge can be seen as an approach in nursing care and as a facilitator in clinical learning. Problem solving related to a patient's good shows that the students regard caring as a core of nursing care. Solving in the diaries often means discovering what is for a patient's good, the most effective or appropriate way to act.

Problem-solving related to clinical learning is considered when the students compare their present knowledge level to the level they should have in different situations. Sometimes problems are very concrete and easy to solve, by checking a book for example, but they can be related to situations where emotions are very much involved. When the students advance in their studies the problems to be solved will change. Depending on the student nurses' own ways of perceiving clinical nursing care as a learning object, the problems to be solved are related to the persons with their own performances on a ward or to nursing activities as a part of holistic care.

As noticed earlier in many of the nursing theories a nursing process has been described as a problem solving process e.g. King (1971), Yura & Walsh (1975 ) and Roy (1984, 1991). The mentioned theories have been introduced and used as the framework in the present students' theoretical studies and Roy's theory has been applied in establishing a nursing care plan. In the students' descriptions, however, problem solving has been seen as catalyst or as a way of thinking in the situation where the students want to provide good nursing care.

## INVESTIGATING

\* searching for rationales

*"I want to be able to understand and to use all the skills learnt on the ward and the various rationales behind them."*

\* searching for functional  
explanations

*"The result of the ECG machine comes automatically and you do not need an extra name label since it is done by the machine itself when you know how to program it."*

- \* searching for a logical order *“Like on the other wards in the night shifts routine checks are made every second hour. This is to find out how the patients are feeling and it is particularly useful since most patients in some kind of difficulties are given appropriate attention.”*
- \* theoretical framework as a structure *“Roy’s theory was very helpful in making a good nursing care plan. I got good feedback.”*
- \* systematic constructing *“I still try to be selective in my approach to learning. That is grouping and putting into practice what I have learned from individual nursing staff and try to evaluate and re-evaluate rationales behind them before choosing a particular one, which is much more appropriate for me to use.”*  
  
*“I want to be perfect in patients’ report and for this I will continue systematically and improve nursing care by using a quality management programme.”*

Investigating is related to a systematic and logical way to search for and find knowledge in clinical nursing care. It means that the students compare different alternatives based on the rationales behind various performances. Investigating as acquiring knowledge also includes observing the environment in order to find out different learning possibilities. If possible, acquiring knowledge is based on a theoretical framework and theory based knowledge is very much applied. Investigating is goal oriented in order to construct deeper understanding from inside and it always involves why - questions. In Peltari’s study (1997) the researchers as informants have emphasized a researcher’s competency as one of the registered nurses’ future qualification requirements. Investigating presented in the learning diaries, as a way of acquiring knowledge implies that this kind of competency is developed.

## DIRECTING ONE’S OWN STUDIES

- \* taking an initiative *“This period is so short that I thought it would be much more useful for me to take care of ten patients intensively rather than running around the ward.”*  
  
*“I had to take the initiative by myself and ask which of the nurses would be mainly guiding me.”*
- \* making one’s own decision *“My decision (selecting my own patients) was very good. I did catch again the idea of holistic nursing care and primary nursing.”*

- \* goal-oriented planning *“I told the staff that because I now have management and leadership objectives, I have to take a team leader’s role.”*
- \* planning based on self assessment *“Last week I proposed that I could take one room for myself because it would clear my ideas, which were still then quite confused.” “I also changed one module for another one because I realized that in the other modules we have a lot more of surgical patients.”*

According to the students conceptions directing one’s own studies involves being aware of the given ends, which are the student nurses’ own learning objectives approved by the educators. In this sense directing one’s own studies is goal oriented. It is related to internalizing a student nurse’s role as a student, who is allowed to benefit all the learning possibilities in various learning environments. It means being aware of students’ rights to set their own goals and to have clinical tutoring. Directing one’s own studies is also related to a student’s rights to concentrate on different things individually. In this way they can construct their own learning towards holistic nursing care. Directing one’s own studies described in the diaries includes taking an initiative, making one’s own decisions, goal-oriented planning and planning based on self assessment. When compared to the present and future qualification requirements of registered nurses (Peltari 1997) directing one’s own studies parallels the facility to develop oneself in a changing world. (Table 13.)

Categories and subcategories	Period I	Period II	Period III
<b>SOLVING PROBLEMS</b>			
as an approach in nursing	*	**	**
as a facilitator in a student's learning	*	*	*
<b>INVESTIGATING</b>			
searching for rationales	*	**	**
searching for functional explanations	*	**	**
searching for a logical order	*	**	**
theoretical framework as a structure	*	**	**
systematic constructing		*	*
<b>DIRECTING ONE'S OWN STUDIES</b>			
taking an initiative	*	*	**
making one's own decision	*	*	**
goal-oriented planning	*	*	**
planning based on self assessment	*	*	**

Table 13. *ACQUIRING KNOWLEDGE IN CLINICAL LEARNING RELATED TO SITUATIONS MANAGEMENT*

The student nurses' notes which can be seen to describe their conceptions of acquiring knowledge leading them to control and manage various situations are, as expected, more during the last clinical period. The notes show their professional growth as a process from a beginner to a graduating, self-directing student.

In conclusion the student nurses' conceptions of acquiring knowledge in clinical learning can be summarized in the following way:

1) The students acquire knowledge in order to know more by collecting knowledge and dealing with knowledge.

2) They acquire knowledge in order to understand more by reflecting on their own experiences, interpreting and living with their patients.

3) They acquire knowledge in order to be able to do more by participating in nursing activities.

4) They acquire knowledge in order to manage various situations by investigating, solving problems and directing their own studies.

### **9.3 CLINICAL LEARNING STRATEGIES**

While analyzing the student nurses' conceptions of clinical learning and finding the sources of knowledge and acquiring knowledge in clinical learning perceived and conceptualized by the students another interesting field could also be found. It has been mentioned earlier that in phenomenography interest is also focused in "what" related to "how". It was noticed very soon that the students' descriptions covering the sources of knowledge in clinical nursing care and acquiring knowledge were not only different during various periods but also differed from each other. While studying more carefully these differences and also the similarities it was found that the students had different perspectives for looking at clinical nursing care during various periods. "What" related to "how" helped in this process. Thus depending on their own, personal ways to perceive clinical nursing care as the learning object, the students focus their interest on different objects during various periods (depending on how they see what they see). They select different objects for themselves, some consciously, some unconsciously guided by their implicit image about their future profession.

When concentrating more on the similarities and the differences of the meanings in the descriptions, four different groups were found. The student nurses follow different learning paths in clinical learning. When those paths were investigated separately it was found that they all have their own schemes leading to an exam as a registered nurse, which means achieving all the objectives covering holistic nursing care. Only after having all the descriptions of the three different periods, the conceptions covering clinical learning processes could be identified. The learning paths that can be found in the descriptions will be presented as a process in the following more carefully. The four different learning paths found in this study are:

- 1) FROM MODELLING ON NURSES TO HOLISTIC NURSING CARE
- 2) FROM FOCUSING ON INTERVENTIONS TO HOLISTIC NURSING CARE
- 3) FROM FOCUSING ON PATIENTS' EXPERIENCES TO HOLISTIC NURSING CARE
- 4) INVESTIGATING TO HOLISTIC NURSING CARE

### 9.3.1 Modelling on nurses

#### FROM MODELLING ON NURSES TO HOLISTIC NURSING CARE

##### \* focusing on nurses performing different tasks

*"I observed my tutor when she was doing a dressing for a patient with foot ulcers. She explained the procedure to me and the different equipment needed."*

*"I observed the collecting of the equipment needed, helped a nurse and did some dressings with a nurse."*

*"She (a nurse) showed me how to take a blood sugar test." and also "I was observing my tutor when she was filling the patient's records and discussed them with her."*

*"I had a chance to put in a nasogastric tube and catheterize a male patient. Although these went quite well, I felt myself clumsy. It might be due to my tutor, because she was quite strict. I felt myself quite useless."*

These student nurses clearly focus at the beginning on nurses as models and nurses' tasks. When acquiring knowledge by observing they pay attention to what nurses do and what nurses have to do. Thus the learning process begins by focusing their interest on details which are nurses's different tasks. At first the tasks just are as seen learning objects without having any connections.

*"I got a chance to do things. My tutor just checked that I'm doing the things right and gave me tips on how to do different nursing interventions."*

The students want to see at first, then they do it by following a model, at first under control needing feedback and encouragement, then independently.

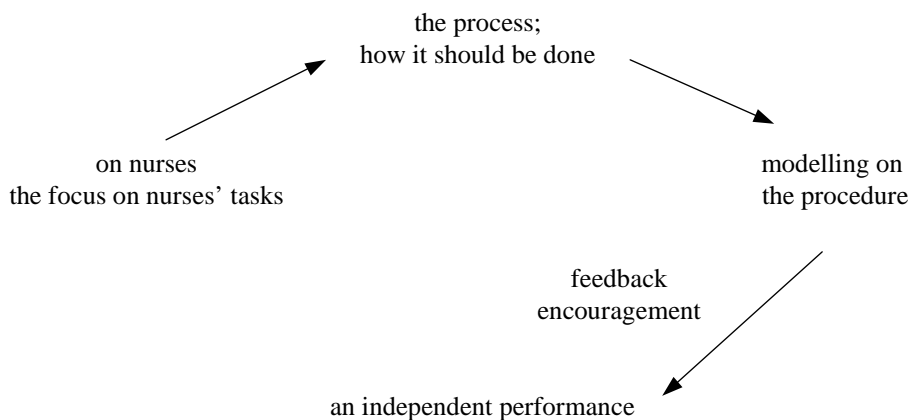


Figure 5. *The student nurses at the beginning of their clinical learning*

Focusing on nurses and their tasks connected to nursing activities means that at the beginning the students model themselves on nurses in different tasks. They need feedback and encouragement to be able to carry out different tasks and to be able to become more independent in different procedures.

*“I helped my patients to do morning washing, but in fact they were quite independent. I felt a bit confused during the day because I wasn’t sure what to do next. My tutor wasn’t working today, I guess that was one reason for feeling the way I did.”*

After carrying out what the nurses have told them to do, student nurses come back in order to ask what to do next. Otherwise, they do not know what to do. Then when the studies continue:

**\* focusing on nurses’ duties**

*“My tutor said that I should think what to do next and just gave me orders what to do. I tried to think all the time and I felt that I knew quite well the things that should be done in the evenings.”*

*“It was quite nice to try to do the morning duties independently. I tried to think what was meaningful for the nurses to know about my patients because it was my duty to give a report.”*

The students’ focus on nurses and their tasks will however be retained and their interest will now be turned to different duties following each other. In the first diaries observing nurses are mentioned very often.

*“I gave a wash to a male patient and I also took care of a wound on his leg. The wound was already quite well healed, so only showering was enough also a special kind of bandage was put on the wound.” “My tutor (a nurse) explained everything to the patient before the doctor came and he (a patient) seemed to be quite calm.”*

The meaning of patients' feedback related to students' skills is present during the second period.

*"Today something funny happened. I said good-bye to an older man who was going home. I knew that he liked me. He said that I'm a kind of 'pirpana' in Finnish from the very beginning. He didn't mean anything bad. I just wondered later that hopefully he thought me of as a professional worker."*

Patients are on the wards because nurses are taking care of them. They are "calm" if nurses' explanations have been good enough or they are in pain in order to get some pain killers from nurses. Feedback given by patients is important for these students because they want to know if they managed to complete their different tasks properly.

*"In the morning I participated in a doctor's round. I learned something about the doctors' and nurses' different roles on the ward and their co-operation."*

*"The doctor in charge was called. I had a chance to see how the patient was treated. Both the doctor and the nurse were calm, because they knew what to do. The patient was not left alone at all. The nurse gave adrenaline intramuscularly very slowly, the doctor measured the RR regularly and observed the patient's reactions."*

The other health care professionals are followed in relation to nurses. How do nurses interact with them and how nurses' duties depend on the others.

*"I felt that I have improved as a nurse. I like my tutor, because she explains well why something should be done. She is strict in a good way."*

When they have more and more successful experiences a student nurse's self-confidence increases and the student constructs a deeper way to look at clinical nursing care as a whole. This can be clearly seen in the way the students reflect on their earlier learning experiences with their meanings:

*"Now I notice that I have been very task-oriented during the last periods."*

*"Although I don't follow my tutor all the time any more, it is important that there is someone with whom I am able to consult."*

*"Then at midday I went with one patient to the occupational therapist. It was interesting to see what they did. Now I understand their point of view about rehabilitating patients."*

#### **\* focusing on nurses' responsibilities and nurses' roles**

*"Brief hospitalizations require so much from the nurse: the huge amount of knowledge about surgery, how to manage after surgery on the ward and especially at home and at work."*

*“I find myself completing just the nursing responsibilities (like iv-antibiotics, injections...) rather than staying a while and chatting.” and “Now managing on the ward has been easier because daily routines and the role of a nurse have become clearer. It has been easier trying to be independent and manage without being just a shadow to my tutor.”*

*“Previously, my whole attention was focusing on the i.v.lines and different bottles but now I’m also able to see my patient and feel comfortable about it.”*

**\* finding one’s own role**

*“It was nice to follow how the nurse clarified the procedure for the patients and I also noticed when something wasn’t quite clear to the patient or when extra explaining and encouraging was needed.”*

*“I was able to independently take care of my patients and organize my work as I wanted to do it. Of course I consulted with other nurses if I wasn’t sure how to do something, I also asked the doctors if the matter required this.”*

*“Many of the staff members said that I wasn’t any more a student nurse rather a fellow-worker. It was very nice to know that I was able to work as a responsible nurse for my patients, do the individual nursing care plans for them and evaluate the nursing care I gave. I also know that I will develop myself as a nurse too.”*

The process goes deeper and the students become interested in the responsibilities nurses have related to their duties. During the third period the students focus more on the different roles nurses have related now to their responsibilities. This, in turn leads them to perceive holistic nursing care, in a patient centered way, as the final goal in clinical learning.

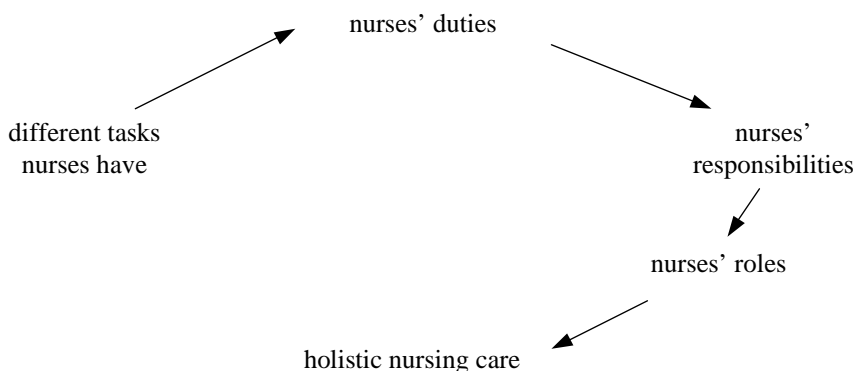


Figure 6. *The process from focusing on nurses and their tasks to holistic nursing care*



The student nurses in this group construct clinical nursing care as the learning object proceeding from details to the whole, or according to Voutilainen et al. (1990) from disconnected to holistic. At first they see clinical nursing as nurses' tasks connected to different nursing activities and focus their own learning on them. A patient seems to be the object of the nurses' work (see also Leino-Kilpi 1990). When they become more self confident they construct nurses' duties from different tasks by finding out how they are following each other and in what kind of order they are carried out.

The construction goes deeper and the student nurses connect nurses' different duties to the responsibilities they include. Especially during the last period the students are then able to connect nurses' responsibilities to the different roles nurses have and they are the focus of their learning. In this way they are supplementing the clinical learning process by constructing holistic nursing care as the final goal.

Being a good nurse to a patient is conditional; I have to know all the tasks nurses have and be good in performing them - then I can be a good nurse and concentrate on my patient. They can be seen filtering the knowledge written in theories and models and also moral knowledge through at first their tutor's and then their own abilities and skills.

The clinical learning process described by these students seems to follow the idea of social learning theory developed by Bandura (1977) more than in the other groups. Clinical learning takes place in the interaction between a student nurse, a nurse, a nurse's behaviour and a ward as a learning environment. Admitting surface personal characteristics are related to nurses' personal characteristics and their ways to perform different tasks, whereas applying model behaviour into practice is related to finding holistic nursing care provided by professional nurses. Also Sandin's (1988) view that all the requirements of a profession are personalized by nurses seems to exist in this group.

When comparing the development of competencies in this group to the adaptive competencies described by Kolb (1984), these students at the beginning focus on concrete tasks but proceed in constructing entities including different types of knowledge. They are at first more sensitive to nurses' feelings but with increasing self-confidence and professional awareness they learn to interpret patients' feelings leading to creating new ideas, setting goals and making decisions and also being personally involved and dealing with people. The assimilative adaptive competencies on the other hand are present less in this group than other groups in connection to directing their own studies.

When taking the perspective of caring into account these students seem to learn to value the supportive relationships nurses have with their patients. In their own behaviour they show concern as they take care of their patients as nurses' responsibilities. This parallels Morse's et al. (1990) caring as the nurse-patient interpersonal relationship perspective.

### 9.3.2 Focusing on interventions

#### FROM FOCUSING ON INTERVENTIONS TO HOLISTIC NURSING CARE

##### \* focusing on interventions

*“I took the pulse of one old lady with my fingers but soon I got used to electrical thermometers + RR-meter - which take the pulse at the same time. I would like to practise these observation skills more.”*

##### \* “picking up” new interventions

*“I saw my first pressure sore. It was bigger than my hand. I guess I will learn to care take of ulcers on this ward, there are many of them.”*

*“One of my favourite patients was an elderly lady, who was in isolation for several months and I often volunteered to go and help her. There with her you really could practise how to put on gloves and change dressings.”*

##### \* critical observations

*“The way they administer drugs is quite careless. Tablets are handled with bare hands.” “They don’t catheterize in the same way we are taught.”*

##### \* nursing care as interventions

*“It was a usual night. A couple of toileting, feeding, lifting & turning.” “This place is really good for practising basic care and observations.”*

*“I had three patients of my own to help in washing, dressing and packing, because two of them were going home. I took all the observations and my tutor said that I had been really helpful. I also took BM, blood glucose test and I gave an insulin injection. Enjoyable morning.”*

These student nurses focus at the beginning on different nursing interventions as learning objects. They consider the new environments as various interventions, which offer new possibilities to learn. Nurses’ shifts are described by listing nursing activities including interventions. Patients with different health problems are interesting because the student can learn new things. The students, representing this group, are not so dependent on nurses, nurses are needed to show what the different pieces of equipment are and how they function and how different procedures should be done. Nurses’ feedback is needed to tell them how useful a student has been during the shift. These students make also critical observations from the beginning. When they focus on the interventions, they are assessing nurses’ skills comparing them to the knowledge they have learned. The students evaluate their own learning progress in relation to the number of different interventions they have learned. They want to become effective and skillful.

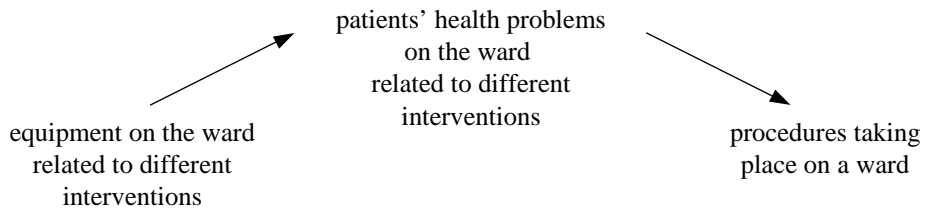


Figure 7. *The student nurses' interests in their learning when constructing nursing as a learning object by focusing on interventions*

Changes when the students proceed in their clinical studies:

**\* admitting more complex interventions**

*“Again I had to go through my notes and some books before I was able to figure out what my goals will be during this placement. And still I cannot get a clear picture of all the things I want to learn just bits and pieces.”*

*“I wanted to have her as my own patient because she was connected to “Bennet” and I wanted to learn more about it.”*

**\* the meaning for a patient**

*“Then one of my patients went to renal angiography and I went with him. It was interesting and I could also help with the preparations and the staff explained to me what was happening and how the machinery worked. I liked this visit to the X-ray a lot and perhaps can at least tell the patients what happens in angiography and what can be expected.”*

**\* effectiveness as a part of good nursing**

*“My tutor was not working today but luckily one of the nurses explained to me what to do when assisting a doctor to take a crista biopsy and even if I say so it went fine and I was able to do it aseptically and with no mistakes. This made my day.”*

*“A lot of blood products and again different ways to document. I have seen as many ways to document blood transfusions as the number of wards I have been practising on. And this one is not the one of the best.”*

*“A pharmacist comes and deals with the medication. That is why it was so hard to figure out which tablet was which when giving the medication to the patients. Right from the start when I saw a name I did not know I looked it up from the Pharmaca Phennica.”*

When the students proceed in their studies entering a new ward is more challenging because their own expectations are higher. These students also all the time criticize their own knowledge bases and their own skills. The effectiveness they want to achieve can be clearly found in their own rationales.

*“From the first day I got a lot of practice of different nursing interventions: dealing out medications, preparing IV-antibiotics and handing those to the patients, washing and clothing patients, reporting to the rest of the staff, recording the daily care plans of the patients, I had been caring, observing the patients’ RR, pulse, weight, mood, feelings and so on. I was given a lot of responsibility by my tutor and the rest of the staff and I really liked it and it made me try my best.”*

The students compare their achieved knowledge level to the situation where they are and pick up certain kinds of patients in order to achieve something new. The proceeding learning process shows however that patients will be more involved. At first, patients, in a way, represent different learning possibilities when needing different interventions but later learning takes place for the patients’ good. These students want to know exactly how, to be able to use the knowledge for their patients’ good. They want to find answers for their patients and they want to win their patients and other health care professionals’ trust.

During the last clinical period when a student is on the ward where also junior student nurses are present the level difference is seen:

*“Also they (meaning junior students) knew exactly that this was a surgical ward and all they wanted to learn were those skills. To me it is now a lot more. I have combined gynegology, obstetrics, surgery, psychiatry etc. I try to use all the information learned earlier and as far as I can see this is a perfect place to do it.”*

*“Fascinating! I am learning to read the monitors and to take care of the patients with monitors. Learned to fill CCU-forms, administrating IV-nitro, giving medications, admitting and discharging with a nurse.”*

When these students are almost finishing their studies as a student nurse and have learned the needed interventions

*“This is the hardest part being yourself a student nurse, you spend most of the time trying to convince that you are capable of carrying out different interventions.”*

they are really adopting a new role as an advocate.

*“The professor of the hospital had a round once a month and can you imagine the faces of the physicians when a student nurse opened her mouth during it. They were talking about my patient, I was in charge of and I wanted to comment and add something.”*

*“I took a patient down to the ultrasound examination. The patient was nervous at first but relaxed after a discussion with me. I stayed there during the US-examination and asked the doctor some questions and that way I gave the patient an opportunity to learn more. I did this because I felt that the doctor wasn’t explaining enough to the patient.”*

**\* constructing holistic nursing care**

*“Today I noticed, how a head nurse really can positively influence both the staff and the patients. How does she do it?”*

*“Really holistic nursing care by taking care of them (a student’s own patients) for the whole day and I enjoyed it. I spent a lot of time in those ladies’ room and talked with them, mainly just started the conversation and let them express themselves.”*

**\* finding a role as “an expert”**

*“I had a patient with a serious leg ulcer. The doctor in charge of the ward (a medical ward) had suggested a wound care that I could not approve of (I had learned so much about wound care). Anyway, a surgeon came to visit the patient and he did not approve of the wound care either. I told him how I would do the wound care and he said that my way would be correct. I knew anyway that because I am still a student, no one would just believe my orders. So I asked the surgeon if he would be so nice and write the wound care down on the patient’s papers for everyone to see. Before I did that I had also asked the doctor in charge of the ward if he could think of any other way which will be possible in that case. He said that if I know any and the surgeon approves, why not! I was so happy because of my patient. I had to tell it to the head nurse straight away and she was positively surprised.”*

*“It was nice to do this shift because I had an opportunity to really be there for the patients.”*

*“I am starting to feel more and more confident working here independently, as a part of nursing team.”*

Thus the circle has been completed. The student nurses, who at the beginning were very intervention - centered and saw the environment, nursing care and patients as possibilities to learn different interventions, have become patients’ advocates and have internalized the meaning of holistic nursing care. These students have realized their own role as student nurses so that they have the right to concentrate on those skills they assume nurses need. They will take their responsibility for the holistic nursing care as soon as they feel that they control different interventions.

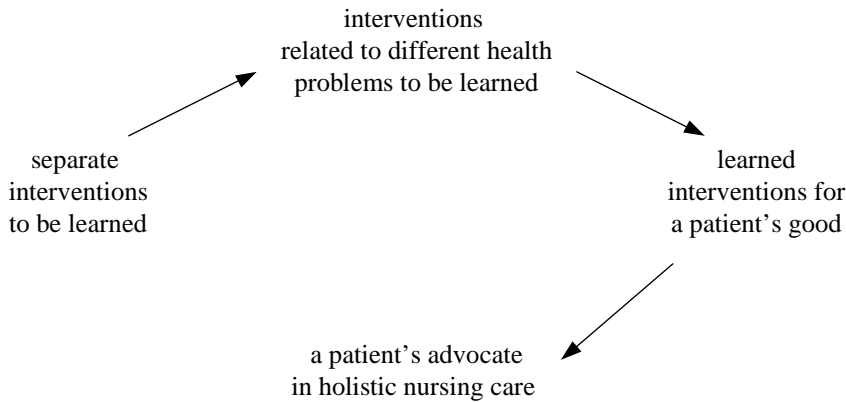


Figure 8. *The student nurses' learning process while they construct nursing care as nursing interventions and after learning them they are used as tools in holistic nursing care*

The students focusing on interventions can be seen as students who are searching for experiential knowledge embedded in the skills and abilities nurses need. They are very much interested in all the activities of nurses. They are happy when they have an opportunity to do different things and become skillful, efficient and fast in doing them. They are all the time interested in new equipment and their functions. They also have a very clear picture of the different things they want to learn. They do not have anything to learn unless they are not able to do something. During their clinical studies they select their patients in relation to various nursing interventions patients need. These students are gathering their experiential knowledge by exercising and doing things. They are filtering knowledge written in theories and moral knowledge through the skills and abilities nurses need in different situations. I am a good nurse if I am able to do things efficiently, rapidly and professionally.

Proceeding in clinical learning from focusing on interventions to holistic nursing care parallels in the beginning Pask's (1976) findings about serialist and holistic learning styles. These students seem to begin as serialist searchers, at first, focusing on parts, on more complex parts, then on the meaning of those parts and finally on the whole. They can be seen to emphasize empirical learning style according to Royce & al. (1983) when looking for knowledge by using their senses or Kolb's (1984) convergent style, when proceeding from the parts in a goal-oriented way and making their own decisions in order to construct a holistic view. On the other hand when comparing the adaptive competencies, presented by Kolb, to the whole clinical learning process, they are all present during the various periods. These students also gather information in a conscious way, they listen to others with open minds, they compare, test and analyze knowledge, they are very much exploiting opportunities, they can be seen to be personally involved and they deal with people. From this perspective there is a convergence of different learning styles.

From a caring perspective it seems that these students regard caring as the therapeutic intervention found by Morse et al. (1990) if referring to the students' descriptions about their last clinical periods. Caring can be seen to be linked to the work of nurses.

### 9.3.3 Focusing on patients

#### FROM FOCUSING ON PATIENTS' EXPERIENCES TO HOLISTIC NURSING CARE

##### \* **considering the new environment**

*"All the information, all the patients' papers are on view, I wonder how they can still be secret?" and "This kind of design allows patients to come easily to talk to the nurses, the nurses are always available."*

##### \* **the meaning of patients**

*"The patients are the best thing about the placement. I feel so happy when I am able to communicate with them."*

*"I heard that on my ward there had been a cardiac arrest in the morning. I missed that. I didn't ask who the patient was and I worried the whole weekend who it was."*

*"It was very rewarding to come back after two weeks and find out that she ( a patient suffering from hemiplegia) was getting better. Now she sits up and can feed herself. She is very talkative and looks much brighter."*

##### \* **emotional involvement**

*"She (a patient on the ward) was going to be discharged. The nurse came to give her a suppository since her bowels hadn't been open for days and I took her to the toilet. After that when everything seemed to be all right, I took her to the bathroom. Just when I and another student were taking her by chair to the bath her bowels were open once again and it continued and continued. The patient was very frustrated and ashamed. I tried to cheer her up and to say that it wasn't her fault. I think this was probably the worst thing what could have happened to her before going home. She must have felt very humiliated and that's not absolutely good when her self-esteem has been low - even though she is such a beautiful and capable lady. I felt so sorry for her that the last day had been so humiliating for her."*

*"The patient burst into tears, once again, was very worried and confused and I felt very sorry for him. When I couldn't help him, I felt that I deceived the patient."*

It hurts when a patient has died on the ward.

*"I felt sorry for the man. I don't know if anybody was there with him when he died. I can still see his pale face and his chest and arms which were full of tattoos."*

These student nurses, when describing their own learning, concentrate a lot on patients. They consider new environments by taking the patients' point of view into account. These learning diaries are full of various descriptions of patients, their feelings and experiences. When taking care of their patients the students seem to forget themselves and they always wonder how a patient is feeling. The students try to understand and interpret their patients' feelings in different and sometimes difficult situations. They deal more with emotional things than the others and they take different patient destinies often very hard suffering from patients' bad treatment or nurses' bad behaviour. They often worry about their patients also at home during their free time but on the other hand they rejoice when a patient is getting better.

**\* nurses' behaviours from a patient's point of view**

*"My tutor handled the situation well. She had been available for the dying patient's sons, who were shocked, and also took care of the dying lady with dignity."*

*"At least most of the nurses are very friendly and respect the dignity of the patients."*

When something is not good for a patient a student is confused.

*"He can answer to the questions with short replies but otherwise his speech is impossible. I really think he is the victim of mistreatment. I don't understand why a demented patient is put into isolation and left alone."*

**\* reflecting and evaluating a student's own behaviour**

*"But I have to admit that later on I suffered from my sensitive conscience; how could I be so selfish. So at home I blamed myself and decided to do better next time."*

*"When I'm in the beginning of my career I fall so easily into a task - centeredness. Especially now when you are responsible for your own room, you have to take time limits and your own limits into consideration and often it happens that you run and hurry all the day and you haven't really had a chance to connect with patients as persons and individuals."*

Nurses and a little later other health care professionals are assessed all the time now from a patient's point of view. They are valued if a student notices that a patient or a patient's significant others are respected in different situations but their behaviours are critically assessed when it is not for a patient's good. Also later the student's own behaviour will be strictly self-evaluated by reflecting.

These student nurses value good relationships with their patients, they want to learn to know their patients as individuals and are not afraid of developing a deeper relationship. They suffer if they do not have enough time for their patients. The students want to develop their communication skills in order to be able to interpret different situations better. They often reflect on their patients' experiences after their shifts and are very demanding in their self-evaluations.



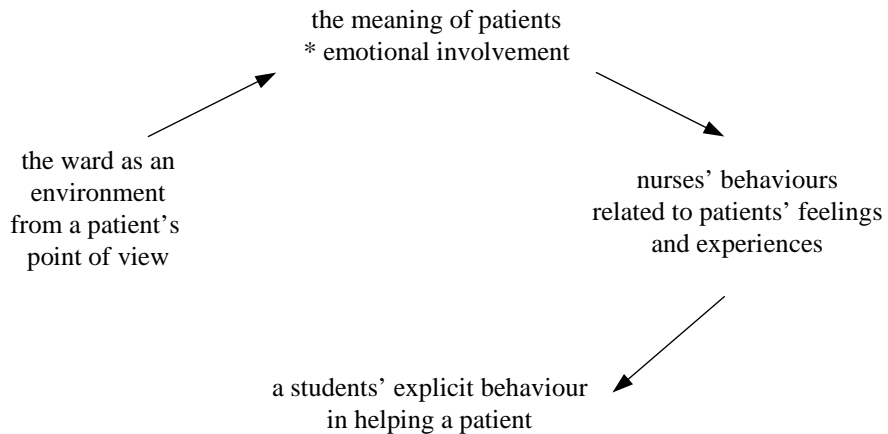


Figure 9. *The student nurse focusing on the learning environment from a patient's point of view*

When the students proceed in their studies they are more aware of the meaning of patient centeredness and it seems to be their clear goal in nursing care. They are aware of its meaning also in the situations where they focus on learning new interventions.

**\* planning and documenting from a patient's point of view**

*"While taking a report I tried to make notes of how to take good care of everyone in the room."*

*"When I write things down I always try to be as patient centered as possible and mark down their current feelings as well. I have learned that you can't make mistakes if you write things down according to the patient's own expressions."*

**\* focusing on nursing interventions**

*"On this day I felt I just couldn't give my whole attention to the patients while doing something, because I needed to concentrate on the clinical skills. On the other hand I felt "the tasks" I do for my patients are the means to get closer to them. The more you show a willingness to help and the attitude - I am here for you - the easier it is for the patients to start a conversation."*

*"He (a patient) is unconscious. When suctioning from the trachea I took care of my sterile technique and tried to work effectively. I couldn't help feeling awkward when explaining what I did for the patient. I just felt there wasn't anybody inside him at that moment."*

### **\* focusing on primary nursing**

*“I would really like to have only a group of patients whom I could learn to know rather than trying to do all sorts of things to 28 patients.”*

*“I felt I was a real primary nurse for my patients and promised to myself to do everything it takes to make them feel better. And at the end of the day I could clearly see the whole picture of the day from my patients’ point of view as well. It was a real privilege to be able to share some thoughts with them.”*

*“Every morning the nurses have a meeting, where each primary nurse tells about her own patients. There is also time to consult colleagues, share feelings and information. I feel I can learn a lot by listening how the nurses take care of their patients, much more than sitting and listening to a normal report.”*

### **\* the meaning of atmosphere for a patient**

*“Variety is the spice of life; early shifts are usually so busy and demanding, during late shifts also the patients sense that nurses have more time (and hopefully will) to listen to them. I could imagine that at that time both - the nurses and the patients - are more sensitive to being open and discussion. The nurses should be prepared for that but I’m afraid that easily we just entrench ourselves in the nurses’ station. Interaction is demanding in the respect that you have to bother yourself; it would be so easy to be lazy and sit in the coffee room ( and curse in your mind when bells ring). So what I try to say is that I enjoy late shifts.”*

### **\* and for a student**

*“I was scared to report, at least, when the assistant sister was around. I didn’t give up but started to fight. I practised and practised and asked for explanations, even though it wasn’t so nice always but that is learning. At least I aimed to be better all the time, for the benefit of patients.”*

When the learning process continues and many various patient destinies have been met on different kind of wards the students can be found to be looking for the mission of nursing.

### **\* looking for the mission of nursing**

*“The patients on a surgical ward were healthy in some respect; they just came because of a fractured leg or appendectomy. Many times they were also young, strong persons. Now, on this ward, the patients are truly sick, even dying. It’s like a slap in the face, at least I felt it so strong.”*

*“Later on I realized by myself the cancer patients’ point of view. How easily everyone just thinks about herself or himself - it’s amazing how difficult it is to place oneself in another person’s shoes. Or after all, it’s not that difficult if you just decide that you want to do that - therefore it’s the question of being bothered to do that. It’s a decision that you have to make every day.”*

*“These patients I took to the shower showed me again how much you can facilitate the patient’s own independence by trying to encourage and motivate them.”*

*“I learned how important it is to assess the patient’s situation well enough beforehand in order to prevent painful situations.”*

When these students advance in their studies they are looking for the idea of nursing, in a way, the mission of nursing. What are nurses for and what are nursing activities for? In all their own estimates they have the patient’s good in their minds. They naturally learn all the time also different nursing skills because they realize that by being skillful you can be a good nurse for your patient. Patient centeredness seems to guide their own behaviour, they are sensitive and interpretative in their observations. The students also reflect on their own experiences and own feelings in many situations and especially when they evaluate themselves.

As graduation comes closer the demands concerning their competencies are increasing. Some kind of panic can be found in the descriptions covering the last study weeks and the students seem to collect everything as much as possible.

#### **\* feeling the pressure of graduating**

*“Before this placement I hadn’t had a possibility to learn properly wound care. But here I finally learned it and I was naturally happy. One of the best things was catheterization. Here, if anywhere you could do it again and again. Some totally new things that came across on the ward were CV- and epidural catheters. I felt so stupid when I didn’t know anything about them and everything had to be taught from hand-to-hand.”*

*“I had time to work with IV-infusions, add drugs to aqua etc. It was really good practice. I could also give Fragmin-injections s.c. The enrolled nurse guided me also in using a Bennet-machine and Peak-flow measurement. Together we transferred the patients, it was useful since I feel that I haven’t had any chances to practise it enough. I also took part in a doctor’s round, delivered drugs and injected IM.”*

Also, during the last period, the notes in the diaries show that while the students proceed in their studies some kind of distance and acceptance become evident in dealing with patients’ destinies.

#### **\* accepting patients’ different life destinies**

*“I also got to know some of the patients better as time passed and I liked to “socialize” with them. However, it was sad to see how poorly some were doing.” “For instance one old gentleman came to the ward in order to get a diagnosis for his walking difficulties. He had finally to go through a thigh amputation. After all that “healthy” man was very poorly, depressed and disoriented. It’s just sometimes so sad how life can so suddenly throw you where ever.”*

When their studies are almost at an end, the learning circle will be supplemented.

## \* adapting a new role

*“As a student I had thought that maybe I can hide my lack of knowledge and uncertainty but probably it radiates everywhere. So perhaps it is just better to admit that you don't know so much then it is easy to do something about it.*

*“Already after this week I noticed a big change that had happened between these weeks I had been out from this ward. My uncertainty had faded away. I was a part of the staff - treated equally - I felt that I could handle the situation, I knew so much, I had learned many things. I was allowed to do things independently. And there was humor on the ward.”*

and finding the deeper meaning of interaction in nursing

*“I liked Parse's thoughts (dealing with interaction) and felt this was just the right theory for me to use in developing my interaction with the patients.”*

*“I found it so useful to listen to the other nurses, how they take care of their own patients. I had a possibility to follow and learn new interaction skills from my tutor when she discussed with my patient. I got some new ideas. The most important goal is to form a trustful relationship with your patient. This is very meaningful because interactive relationships are the enabling factors creating the foundation for all nursing care.”*

*“I have realized that I don't like paperwork, I wanted to become a nurse in order to work with patients - and that interaction is the best in this profession.”*

Different phases follow each other depending on the placements where the student nurses are. They have a lot of descriptions of patients all the time but near to the end these students seem to begin to collect nursing skills as much as they can find in their environments. They put some kind of distance between themselves and the emotional world where they have been and concentrate on practising nursing skills. The change can be seen in their professional growth. They still take their patients' experiences and feelings into account but now in a more accepting, in a more professional way. They accept that life is not fair and it includes many different human destinies. When they now feel that they can trust their own skills and abilities they are in a way coming back realizing now the meaning of the relationship between a nurse and a patient in a more professional way. They are convinced that by concentrating on developing the interaction between a nurse and a patient they are able to develop holistic nursing care where patients and their significant others are respected and taken into account as equal partners.

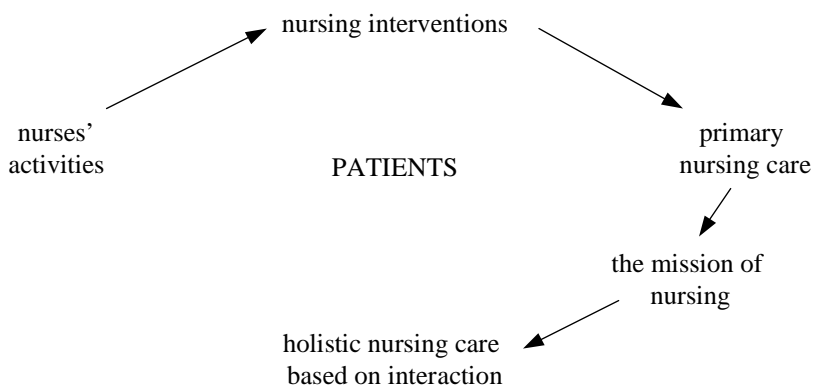


Figure 10. *Constructing nursing as a learning object when the focus is on patients' experiences and proceeds to holistic nursing care based on interaction including a clear understanding of the mission of nursing*

The students, who from the beginning, focus a lot on patients' experiences and proceed in their studies finding the meaning of the professional relationship in a deep way, can be seen also as the students who emphasize moral knowledge in all the situations where they are. They are very much interested in their patients' experiences and feelings. They, in a way, live together with their patients all the procedures and processes patients go through. All the activities nurses have, seem to be always different because for their patients they are new and patients react in various ways. That's why the students also prefer listening to the other nurses' narratives about their own patients and patients' nursing care. They have always much to learn. The students wonder how their patients can maintain their dignity also in all those situations where their intimacy may be threatened. They also reflect on their own feelings very much. These students gather their own experiential knowledge by sharing their patients' feelings and experiences. They seem to filter knowledge written in theories, embedded in skills and abilities through moral issues - what does it mean in my patient's life. For these students maintaining the individual's dignity and integrity is essential from the beginning and caring seem to provide the basis for all nursing actions. The students also emphasize the meaning of interaction between a nurse and a patient. These parallel Morse's et al. (1990) perspective of caring as a moral imperative or ideal and caring as the nurse - patient interpersonal relationship.

These students use reflection and their own intuition more than the others. Following Mezirow's (1990 and Jarvis' (1992) ideas, they achieve a deeper understanding about the meaning of nursing leading to meaningful change, which is professional growth, by reacting and observing in a situation. In their learning process similarities with Kolb' ideas (1984) can be seen if we look at the whole process from a beginner to a graduating nurse. Concrete experiences in interpersonal relationships and sensitive observations are reflected during the clinical periods leading to finding the mission of nursing and after testing their own conceptions to

the construction of holistic nursing care based on interaction. According to Royce & al. (1983) these students seem to emphasize the metaphorical style, where holistic reasoning is derived from a patient's point of view. Referring to Kolb's (1984) adaptive competencies they seem to be people-oriented and sensitive to people's feelings related to divergent competencies but they are also committed to their objectives, dealing with people, creating new ways of thinking and doing. Finally they can be seen to build conceptual models and testing theories and ideas meaning that all the competencies related to different learning styles are present during different periods.

### 9.3.4 Investigating

#### INVESTIGATING TO HOLISTIC NURSING CARE

##### \* **observing the environment**

*“Both wards are orthopaedic wards having 25 beds for patients. Nursing care plans according to Roper, Logan and Tierny are used on both wards. Morning shifts start by listening to the night staff's report then a head nurse divides a ward into two groups, then the medication round, after breakfast patients are washed and their linen is changed every day. Planned nursing care is evaluated every day and written on patients' files by a named nurse.”*

*“Priest and church services are also available for the patients. He (meaning the priest) visits regularly each week but can also make a special visit by request.” “On both wards there are health education leaflets giving information about diseases on display.”*

##### \* **taking an initiative**

*“I didn't have any own tutor so I adopted the self learning method and tried to manage their system. I managed well.”*

*“This ward was not planned for our practice but I went by myself and got permission from the head nurse to look around.”*

##### \* **systematic searching**

*“I have improved my learning by reading and comparing their nursing care plans and booklets about different diseases.”*

*“I have also attended all the hospital lectures which were given during my clinical period. They have been very useful for example: wound care, promotion of continence, first aid resuscitation, discharge planning, palliative care and seminar presentations about diabetes. They have helped me in developing my professional skills.”*

**\* assessing one's own level**

*"I am able to make nursing care plans for different types of clients taking into account their health problems. I also know the roles different health professionals have in this hospital."*

**\* making conclusions**

*"What I have noticed in this hospital is that they do not teach their nursing students properly, they don't take real responsibility for the students." "The hygiene system is extremely poor in this place." "Nurses do not use gloves when they should protect their patients."*

**\* collecting experiences**

*"I was allowed to follow the patient to the theater. Without any previous lectures I tried to understand the whole procedure so that when I will start theater studies it will help me. It was interesting and I asked for permission to see different types of operations during this period."*

These students can be called investigators. Their descriptions covering wards or nursing care are very systematic and full of details. They see much while observing their environments. The students have their own systematic way to "video" everything they see and experience. When they collect new knowledge, the student nurses compare it to the knowledge base they have and if it is not enough they acquire more knowledge by reading or by participating in lectures available in hospitals. They seem to also be able to survive in difficult situations. They are more self-directed than the others and always looking for possibilities to acquire new knowledge. They do not accept the given situation just like that, they are curious and want to have as much as possible by using all the possibilities the environment can offer. When participating in nursing care they still keep a critical observer's role and consider different situations connected to wholeness. When their studies proceed searching for rationales and explanations continue.

**\* looking for rationales**

*"I want to learn all those skills (needed in the unit) and the various rationales behind them."*

*"I did not learn anything new today except that I became aware of why certain measurements are taken by nurses and why certain decisions are made by doctors."*

**\* looking from inside**

*"I managed very well (taking an ECG) and it is especially a matter which is relevant since all the ECG machines are different. This is the most sophisticated I have ever seen ..." and then a long list follows, including many details about that machine*

*“I experienced a stress-test to day. It is a clear medical check but is still very unclear to me. How these monitors wholly work and how to make any sense out of the paper report of cardiac actions? It differs a lot from an ordinary ECG.”*

**\* focusing on a structure**

*“Now I understand better most of the major nursing processes and skills used on medical wards. I have found out how patient care fits in the categories mentioned in Roy’s adaptation theory. The picture is clear and it is basis for all my nursing actions. It helps in a nursing process and helps in noticing the patients’ problems.”*

Learning concentrates also on finding the best way to do something. Observing has shown that there are many alternatives available and you have to know which is the best in a certain situation.

**\* comparing**

*“I have been mostly interested in learning how the different nurses, with whom I have worked, use their kinds of various skills. This offers me a wide range of skills knowing what to perfect and use in different situations - just as needed with patients in different phases.”*

**\* justifying a student’s own behaviour**

*“The patient called several times for help e.g. she needs help in going to the toilet, in walking because she was weak and there is a risk that she could fall and injure herself. If somebody does not go immediately when she rings her bell then she tries to go by herself. Therefore I always consider her first.”*

**\* systematic behaviour**

*“My patient is going to be discharged today. His son is going to pick him up. Discharge papers are ready, a medicine prescription is given to him and information on how to use nitro. I told him that he can call any time here if he feels any chest pains or if he wants to ask something or wants to check if something is not clear to him. I am happy that my patient appreciated my care.” “I have made a programme for myself to become familiar with infusion administration.”*

*“I realized what kind of special education nurses need when they are working in CCU. I have gained a lot of confidence when noticing that I can do a lot of things alone. I have to continue practising patient reports, I want to be perfect in that.”*

**\* self-evaluation**

*“I was quite satisfied with my learning process. I also think that the patients were satisfied with nursing care I provided.”*



During their clinical studies these student nurses investigate new environments, nurses' performances, the roles different health professionals have, patients' health status by comparing their own knowledge level to the new situation. They find similarities and differences and want to know the explanations and rationales. They also explain their own behaviour in a systematic way. These students use a learned theoretical framework as a tool in their clinical studies. Being systematic in their own learning they find a certain kind of theory useful to them.

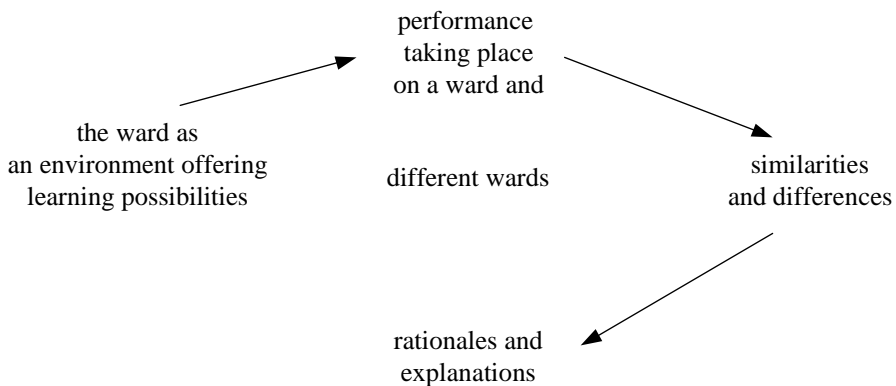


Figure 11. *Constructing nursing care as a learning object as an investigator*

During their last clinical study periods the student nurses construct a holistic picture about nursing care.

**\* taking responsibilities**

*“Today I have a morning shift. I started at 7 o’clock after the report. I requested to take care of the room 9 because I wanted to continue from yesterday.”*

*“After morning report I and another student decided to take the first morning routines. Then during our coffee break we planned how we can give good care to our patients today. We divided the patients so that we both had three patients.”*

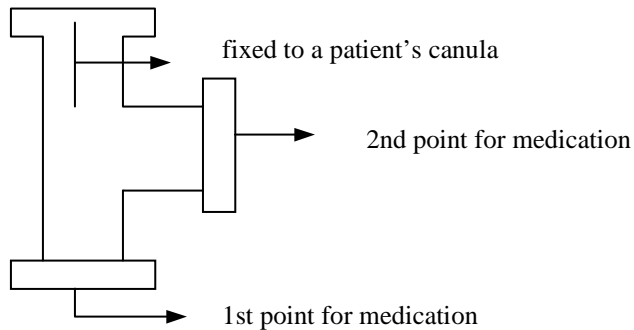
**\* constructing deeper understanding**

*“Seeing a heart bypass operation was one of the best experiences we have had during this education. It is very important for the nurse to know that and get deeper knowledge about a heart to be able to answer the patients’ questions.”*

Then a student nurse explains the whole procedure in detail mentioning also different role performances during the operation. In these diaries there are also drawings, which show that a student nurse wants to clarify how everything functions.

The following as an example

### Two way - infusion at the same time



or this student can also give instructions to himself to be followed:

*“- check urine and blood lab.tests, dental report, X-ray of his knee*

*- ask previous operations, medication taken at home presently and recode it, ask about allergies*

*- check from a patient if he has any special diet, bowel situation*

*- ask if he has any infection, if he smokes*

*- ask family situation and check weight*

*- check the type of anesthesia etc. “*

During the last period the objectives set for nursing education are checked and the final goals are set.

#### **\* adapting a team leader's role**

*“Before I started morning shift I made a plan with the others who belonged to my team how we would start. We had to help some patients to wash before the doctor's round, I took the responsibility of giving IV-antibiotics and medication distribution. We also had to monitor three cardiac patients all the time.”*

*“Today I have planned with my tutor that I will take the responsibility of the whole module and she is only available in case I need help. I did everything. The patients were very cooperative and they were not afraid during my shift.”*

*“I informed the staff in my module that I'm learning nursing management and leadership skills on this ward so I should be given a chance to plan and be a leader during this shift. They accepted my plan.”*

*“I thought earlier that the head nurse is just sitting in her office and making phone calls and trying to show that she is very busy. But spending one week with her my thoughts have totally changed.”*

**\* a student’s final evaluation**

*“I succeed in team working and performing nursing roles to patients in a firmer and more confident manner. I am satisfied because I have learned every day some new aspects in nursing and still accept that there are more things to be learned all the time.”*

*“Doing things and knowing why and how I should do them has been very important during these clinical periods. Also interpreting patient’s situations and the outcomes.”*

Discovering explanations and rationales continues going deeper facilitating a student nurse to perceive the whole. These students are not satisfied before understanding everything also “from inside”. They have their why - questions all the time. They seem to be very aware of their own rights related to the level they have achieved as a student nurse. They are goal oriented and very able to stand up for themselves.

Patients’ well being is important and it is very meaningful that patients can trust them and feel confident with them. The students receive good feedback from patients. Patients’ feelings, in a deeper way, are not present in these diaries neither are the students’ own feelings. Compared to the other groups these students seem to have a professionally caring but a little formative relationship with their patients and patients are seen more as the object of nurses’ work (c.f. also Leino-Kilpi 1990).

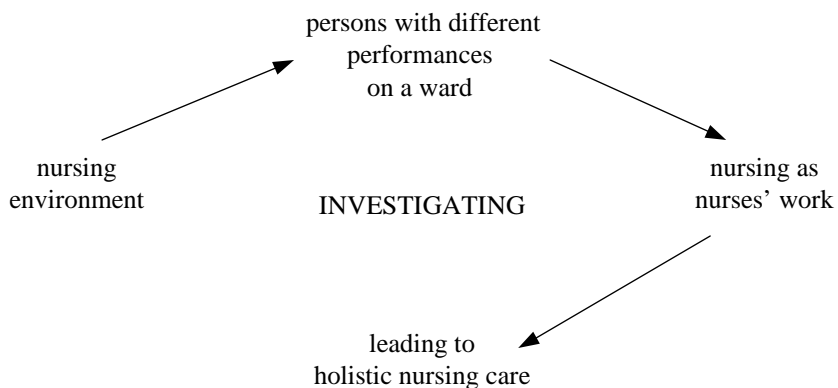


Figure 12. *Constructing nursing care as the learning object by investigating, finding out why nursing care is constructed in the way it is, what are the other alternatives and what is the best one in a certain situation*

The investigating student nurses can also be seen as students who focus on knowledge written in theories and models. They have a very systematic way to learn new things. They observe everything using their theoretical framework and by processing new information they analyze and compare the knowledge they already have. The students like to test and check everything new, they do not accept anything as a given model. They also require rationales. The students are very much interested in patients health problems, medical diseases with symptoms and examinations with findings. They gather their experiential knowledge by using a systematic and logical structure. They are on a ward as investigators. The students filter knowledge embedded in skills and abilities and moral knowledge through the theoretical framework they have chosen.

Applying Royce's & al. (1983) ideas these students seem to be rational emphasising analytical, systematic skills. Referring to Kolb's (1984) adaptive competencies they seem to prefer assimilative competencies more than the others in organizing information, testing and building theoretical frameworks. On the other hand they also set goals, make decisions, gather information, they are sensitive to values, dealing with people, influencing and leading others. This means that the competencies related to the four different learning styles are also present in this group. These students construct a new whole by concentrating in a systematic way on its parts. They seem to succeed in transferring concepts and conceptual interpretations (see e.g. von Wright 1996) to practise, they are not satisfied before they have conceptual interpretations for every nursing action.

When taking a caring perspective into account and referring to Morse's et al. (1990), caring seems to appear for these students more as a human trait motivating nursing actions. Caring is present in all the nursing actions, learning means the development of a nurse's competencies in order to earn a patient's confidence and commitment to nursing care given by these students.

In conclusion, after describing the four different learning strategies, found in this study, the meaning of clinical learning can be summarized in the following way.

Clinical learning, as a process is individual and personal. In the descriptions of the student nurses they can be seen to be searching for different types of knowledge to be manifested in action in order to be able 1) to provide and manage nursing care, 2) to act as an expert in a multidisciplinary team, 3) to teach and 4) to develop nursing care. These four functions cover the idea of holistic nursing care as the objective of nursing education. According to the students' conceptions they perceive clinical learning to be focused on the following sources of knowledge. The main categories in the sources of knowledge in clinical learning are: 1) wards as a learning environment, 2) persons with different performances in the environment, 3) nursing care as nurses' work and 4) holistic care as all the health care professionals' work. Clinical learning is also perceived as acquiring knowledge. Acquiring knowledge is related to knowing, doing, understanding and situation management. In the main categories knowing means: 1) collecting knowledge, 2) dealing with knowledge; doing means 3) participating in nursing activities;

understanding is related to 4) reflecting on one's own experiences, 5) interpreting, 6) living with patients; and situation management is related to 7) solving problems, 8) investigating and 9) directing one's own studies (Figure 13).

Learning in clinical placements is manydimensional. Students are there with many other people who have their own life stories and health problems. They are surrounded by technical equipment participating in various procedures and they are supposed to learn to control all of it. This means learning nursing care as a profession. This kind of learning is not only related to learning by doing, but very much to learning by living. As Sarvimäki (1988) says learning takes place throughout the process of living.

Clinical learning demands a lot of different resources, strength and high motivation. The students' growing processes follow their own rhythms. Four different ways to perceive holistic nursing care as a learning object can be distinguished. The learning paths proceed as processes leading 1) from modelling on nurses, 2) from focusing on nursing interventions, 3) from focusing on patients' experiences to holistic nursing care and 4) investigating to holistic nursing care (Figure 14).

Nursing environments are many. A good nurse is defined in relation to the context where nurses work. Also the students consider their future profession from different perspectives. It can be seen as an enriching quality in nursing. Patients are individuals valuing divergent characteristics in nursing care and in nurses. The present students graduated with very good or good grades and they received very good feedback from their clinical placements. All these stories had a happy end.

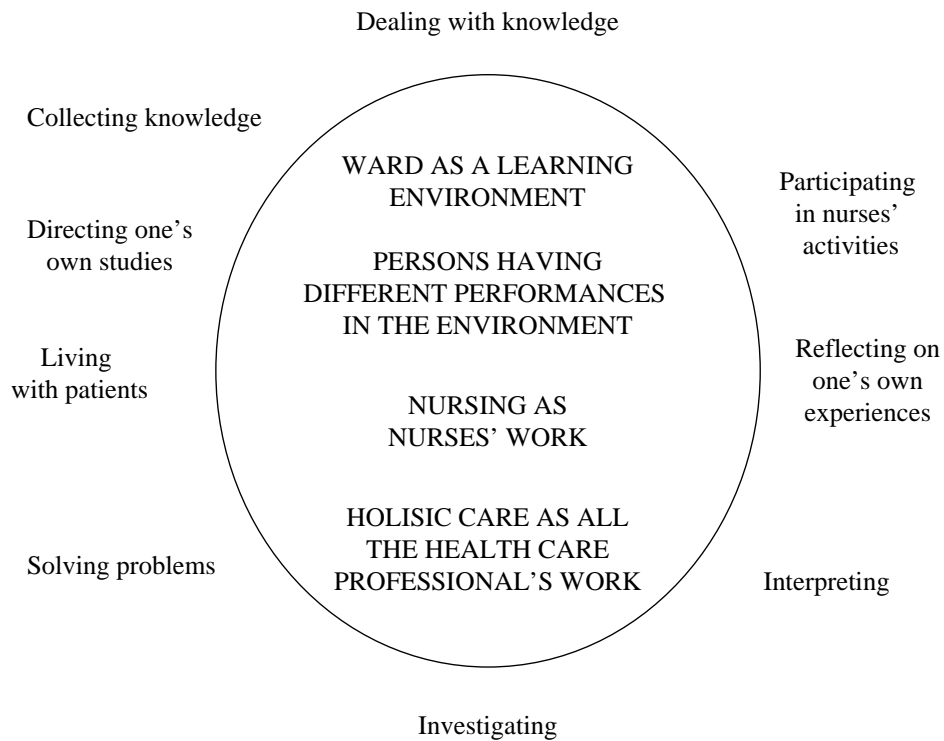


Figure 13. *The sources of knowledge in clinical learning related to acquiring knowledge that is to knowing, doing, understanding and situation management as the main categories*

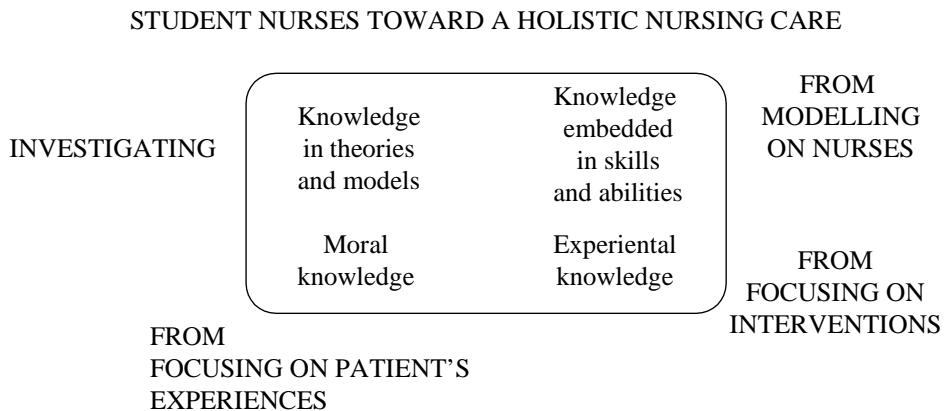


Figure 14. *The student nurses searching for different types of knowledge from various perspectives. They can be seen to “filter” other types of knowledge through the certain type of knowledge depending on how they perceive nursing care as a learning object.*

## 9.4 CONCLUDING COMMENTS LEADING TO DEVELOPING THE TUTORING OF STUDENT NURSES

The student nurses who proceed from modelling on nurses to holistic nursing care enter a new ward at the beginning a little scared and unsure of themselves. Their happiness depends on the nurses' skills to take care of them. As Sandin's (1988) view that all the requirements of the profession are personalized by nurses seems to be actualized in this group, the need for a personal clinical tutor is essential. These students should have their own clinical tutor from the beginning and if this tutor cannot be present all the time there should be another tutor who takes this important place.

*"My tutor gave me some good tips for setting my objectives. I felt that she demands a lot from me. Actually it was easier to set my objectives after her strict words. Hopefully I'll get along with her."*

These students feel safe when they have clear guidance. A clinical tutor's own behaviour is significant and being too demanding can also delay a student's learning. During the first periods students need a lot of encouragement and positive feedback. They are very sensitive when they interpret their tutor's messages.

On the basis of the student nurses' own descriptions, clinical tutors need to 1) be available, 2) demonstrate various nurses' tasks, 3) guide a student to integrate different tasks, 4) encourage a student to take initiatives, 5) give feedback, 6) facilitate a student to find a nurse's responsibilities and different roles and 7) facilitate a student to construct clinical learning proceeding from an unsure student nurse to a self-directing graduating student nurse in a personal way.

The student nurses who proceed from focusing on nursing interventions to holistic nursing care are curious when they enter a new ward. They are looking for different learning possibilities concentrating more on various procedures taking place on a ward with different equipment. They prefer technically skillful nurses who like to share their own awareness. These students also transfer earlier learned models into practice as they act as critical observers all the time. They want to have opportunities to practice their skills and after acquiring those skills they want to be allowed to manifest their own learning in action more and more independently.

*"I was given a lot of responsibility, by my tutor and the rest of the staff, and I really liked it and it made me to try my best."*

These students construct their own clinical learning by concentrating on various nurses' interventions and on the most effective interventions related to patients' different health problems. This kind of procedure can be misunderstood by nurses and nurse educators, who regard patient orientedness as an educational goal but who are not able to understand clinical learning as an individual process which involves different phases.

On the basis of the student nurses' own descriptions clinical tutors in this group are needed for 1) giving space for a personal selection, 2) sharing their own awareness, 3) giving space for independent action 4) trusting a student's acquired

capability, 5) discussing based on a student's own reflection, a student's own goals and plans and 6) giving positive feedback when a student begins to proceed to a new role.

The student nurses, who proceed in their clinical learning from focusing on patients' experiences to holistic nursing care, enter a new ward with an interest in the different patients' life stories it includes. They learn a lot by living with their patients, reflecting on patients' experiences from the beginning. In hospital environments, where suffering, pain and death are also present, this kind of living with patients can be very hard for a student, who is not yet prepared to meet very different life destinies. Without having any possibility to share all the experiences with qualified nurses, a student nurse carries the patients' sufferings in a stressful way. They need a lot of support and understanding. On the other hand their ability to live with patients is valuable bringing the most important view into clinical nursing care, a patient's perspective.

*"The patients got a possibility to ask questions about their condition and care, the new nurses and patients were introduced to each other and the feeling of patient centered care was really strong."*

*"I should have stopped to think more deeply about some situations - and especially from a patient's point of view - not just hurry and perform a task. After all, the essence of nursing is just a benevolent interaction, not performing some tasks. Interaction is the area where you could always improve."*

Living with patients as a qualified nurse means also knowing how to help patients with different problems and difficulties. The students also acquire knowledge related to nursing interventions however they are aware they might get side tracked. They will find a patient's position in a new way. Patients are active partners and are also responsible for their own care.

On the basis of the student nurses' own descriptions clinical tutors are needed for 1) sharing knowledge about patients, 2) going through all the events based on a student's reflection, 3) giving space for a student's reflection, 4) facilitating the perception of the mission of nursing, 5) valuing a student's own view, 6) encouraging students in their self-evaluation and 7) facilitating the construction of a professional view.

The student nurses, who are seen as investigators in this study, enter a new ward as systematic and analytical knowledge searchers. They like to apply a theoretical framework to practice as a structure in their own work. They are aware of their own position and rights as student nurses. The students are responsible learners, follow their own objectives and expect that their clinical tutors also know their responsibilities as tutors as well. These students are called investigators also because they are searching for rationales behind activities and constructing a deeper understanding from inside the phenomena.

They are always asking why questions, comparing and reaching their own conclusions.



*“Accurate information was given, so I ...” “Doing things and knowing why and how I should do them was very important during this practice.”*

On the basis of the student nurses’ own descriptions, clinical tutors are needed for 1) facilitating orientation in a new learning environment, 2) being available to answer a student’s questions, 3) explaining thoroughly all the events with rationales, 4) listening to a student’s own rationales and explanations 5) giving space for self-directing planning, 6) respecting a student’s own plans and 7) facilitating the construction of an inner perspective to nursing care.

In my earlier study (Raij 1990), done from a clinical tutor’s point of view it was emphasized the significance of an own clinical tutor. Continuity in tutoring was discovered important as well. Clinical tutors also saw that it is meaningful for a student to have an own patient. Similar suggestions have been presented also by Munnukka (1997), who in her study emphasizes the meaning of clinical learning experiences of primary nursing care.

It was also suggested (Raij 1990) that student nurses should have time to orient themselves in a new environment to be able to set their own learning objectives for the period and that both the college and clinical placements are aware of the outcomes set for nursing education. Also in the multi-dimensional model presented by Ferguson & Jinks (1994) emphasis is given to the the meaning of joint planning with the staff, determining the role of the nurse teacher and student-centered teaching methodologies in order to bridge the gap between what is taught and what is practised. Munnukka’s (1997) ideas parallels these suggestions too. She focuses on the role of curriculum development and the role of a nurse educator in clinical learning, which was also considered in my earlier study.

It has been established that clinical learning as learning in general, is personal and individual. Learners have their own learning strategies. If we accept this diversity also among student nurses, it leads to the development and planning of tutoring clinical learning from a learner’s point of view. It also means accepting diversity among qualified nurses and their approaches as riches. Patients as nursing clients are different with their own backgrounds and values and that is why they see nursing care from various points of view, what they see depends on how they see it. These perspectives also vary in changeful situations depending a lot on a patient’s condition.

When clinical tutoring is planned and developed on the basis of the student nurses’ descriptions, the following issues are emphasized:

## IN LEARNING

- 1) the role of clinical tutors, being qualified nurses, in the development of a nursing education curriculum
- 2) clinical tutors' awareness of the outcomes of nursing education, learning theories and learning strategies
- 3) the presence of different types of knowledge in clinical learning
- 4) the role of a personal clinical tutor for a student
- 5) continuity in personal tutoring, which also means returning to the same unit
- 6) the effect of student centered tutoring based on respecting a student's own learning strategy, which involves
- 7) continuing discussions with student nurses in cooperation with nurse educators that facilitate students to become aware of their own learning strategies during different periods
- 8) the meaning of self-directiveness in students' learning proceeding from a beginner to a graduating student which involves
- 9) giving space for students' own reflections, planning and self-evaluation

## ON A WARD

- 10) the effect of environments on a student's learning
- 11) the importance of qualified nurses and their behaviours as professionals and persons
- 12) the position of patients in students' clinical learning
- 13) the meaning of other health care professionals' behaviour and their roles in a patient's health care
- 14) the effect of other student nurses

## IN NURSES' WORK

- 15) the effect of having one's own patient
- 16) guidance in nurses' activities based on student's own learning strategies
- 17) the meaning of responsibility and trust for a student nurse
- 18) valuing a student nurse's own view and acquired knowledge base
- 19) integrating different types of knowledge and expliciting the foundations of nurses' activities (why, how and what for)
- 20) the importance of continuing discussion of the mission of nursing

## 10 DISCUSSION

### 10.1 THE BACKGROUND TO THE STUDY

In this study the interest has been in clinical learning perceived and conceptualized by the student nurses. The student nurses have described their own clinical learning in learning diaries covering three different clinical periods during their second, third and fourth study years. The diaries have been analyzed by using the phenomenographic approach for finding the sources of knowledge in clinical learning, acquiring knowledge and different learning processes in clinical learning.

Nursing education consists of theoretical studies and clinical studies. Theoretical studies take place in nursing institutes and clinical studies in clinical settings, where a nursing client is present directly or indirectly. Conflicts have arisen when theoretical studies have been seen as theory and clinical studies as practice. The concepts theory and practice are problematic and could be misleading when student nurses' learning is considered. Theory is associated with a certain type of knowledge whereas practice includes everything covering clinical nursing care where nurses also have their own theories and implicit schemata behind different activities. In the institutes where theoretical instruction takes place "practice" is also present through e.g. various patient examples if they are shared by competent nurse educators. They have been working as registered nurses in various clinical settings before continuing their own education

A more fruitful way of approaching nursing education is to consider the meaning of theoretical and clinical studies as the sources of knowledge they offer to student nurses. The sources of knowledge in theoretical studies are related to the theoretical and philosophical foundations of nursing care, to the main concepts in the nursing science metaparadigm and to the role functions registered nurses have (c.f. Salvage 1993, The Finnish Federation of Nurses 1993, European Health Committee 1994).

In this study students are seen to be searching for different types of knowledge in various learning environments facilitated by nurse educators, who in Finland are responsible for the clinical studies, and clinical tutors. The types of knowledge have been found by integrating the types of knowledge which exist in nursing care as an interactive practice discipline (c.f. Sarvimäki 1988) and experiential knowledge that is essential in a proceeding learning process (c.f. Burnard 1987 and Kolb 1984). Burnard emphasizes the presence of propositional knowledge, experiential knowledge and practical knowledge in a learning situation without taking moral knowledge separately into account. It is however highly significant in nursing care and nursing education, where a person is seen as a value and respecting a person's rights, dignity and integrity are the fundamental principles. Carper's esthetical knowledge is present being related to nursing as an art which includes a nurse's skills and abilities. Personal knowledge, being related to experiential knowledge, comes closer to a nurse as a person and as an actor. Empirical knowledge is present in demands concerning research based nursing care and ethical knowledge as moral knowledge. (Carper 1978.) Because in this study the focus has been on clinical learning it has been considered of importance to construct a continuum between an

institute and clinical placements. The learning environment has been constructed as the types of knowledge in a proceeding learning process. It means the presence of knowledge derived from nursing science and related disciplines, knowledge embedded in skills and abilities, moral knowledge and experiential knowledge.

Cust has dealt with learning as a constructivist process with students who actively construct knowledge on the basis of personal experience. She also emphasizes the role of knowledge in clinical learning, distinguishing the knowledge students bring to the learning situation from the knowledge involved in the learning task. (Cust 1995.) However, the knowledge students bring, depending on their level, can include all the different types of knowledge. Students' experiences are based on applying theoretical and moral knowledge in nursing practice as it has been established in this study.

## **10.2 THE MEANING OF PHENOMENOGRAPHY IN THIS STUDY**

The major interest in this study has been the student nurses' own conceptions. An attempt has been made to describe clinical learning in the way the student nurses conceive it, which is called the second order perspective and is a basic view in phenomenography (e.g. Uljens 1989). Phenomenography as a scientific approach has been developed by Marton and his Gothenburg group and is closely related to the concept of learning. Discussion concerning the roots of phenomemography, the assumptions it includes and the risks in building categories is continuing (e.g. Dall'Alba 1993, Uljens 1993, Säljö 1994 and Marton 1995).

Säljö considers issues related to trustworthiness in phenomenography. When people are asked opinions about things they never have talked about and purely linguistic differences and word choices are interpreted as the indicators of differences, how trustworthy are the categories which are built. Also the presence and the role of an interviewer in a two-sided communication is not unproblematic. Another question is if people, when they talk about something, express their real conceptions. Säljö also looks for the presence of hermeneutic persons, making sense of what they see, hear and read in phenomenography. (Säljö 1994.) Johansson et al. (1985) and Marton (1988), when dealing with trustworthiness, have presented that because the described categories and the expressed conceptions are not identical, trustworthiness is not dependent on the characteristics of the categories to denote the conceptions.

In this study the student nurses have expressed in their learning diaries how they interpret the phenomenon of clinical nursing care around them. When they have described their experiences and various activities with their meanings related to clinical learning the students' conceptions of clinical learning as the sources of knowledge and acquiring knowledge in clinical learning are to be found. The students have made sense of what they have seen and heard in their own ways. Making sense has got deeper meanings when the diaries have continued over different clinical periods and the students have also expressed their changing conceptions related to learning (c.f. Säljö 1994). The categories, found in this study, are not meant to be identical with the students' conceptions. They have been built to cover the found

phenomena the conceptions are related to as identified in the diaries. It was decided to describe clinical learning conceptualized by the student nurses as a learning process without trying to clarify clinical learning as a concept.

When the descriptions of changing conceptions have been analyzed, the way the students construct their clinical learning, can be found. Marton, however, disagrees with Säljö asserting that phenomenography can not explore people's way to construct their worlds. According to him phenomenography is about constitution and experiencing the world is to participate in its constitutions. (Marton 1995.) This study did not focus on the students' way to construct clinical learning rather it compared their various conceptions about the constitutions of different experiences. However, by following students' paths and their changing conceptions also, their ways to construct clinical learning as a process, in a meaningful way, were to be identified.

Using learning diaries is not a traditional way to collect data in phenomenography. Study material has been primarily got by interviewing (c.f. Gröhn 1989). Written material as the forms of essays are also used to complete interviews (c.f. Karttunen 1999). There are, however, some benefits in using learning diaries. In the diaries the conceptions are to be found in the meanings the students have given to their experiences and related activities (making sense of what they see, hear and do). On the other hand they also know what they are considering and their conceptions are expressed not only as "talk" (c.f. Säljö 1994). Learning diaries have also made it possible to follow students' changing conceptions during their study years. This kind of direction has been seen useful in the development of a phenomenographic method by Gröhn (1993).

According to Uljens notions in phenomenography are used to discern analytically between two aspects of forms of thought. The object in analysis consists of expressions of experienced objects. (Uljens 1993.) These two aspects have been present, when the students were in the middle of the phenomenon and they began their clinical learning considering the same environment in different ways. What has directed their thoughts so that the perspectives are different, is an interesting question. The students have all had the same theoretical studies covering clinical nursing care but conceiving clinical learning depends on the students' own ways of thinking. The expressions of experienced objects have been used in analysis in the first phase while examining what the students have expressed and in the second phase while examining the various aspects of the objects and the differences between the conceptions found during three clinical periods. When the changing conceptions were compared by following the process from a beginner to a graduating student, both the differences between the conceptions and the changes taking place in students were identified.

Dall'Alba questions Uljen's (1993) claims that in phenomenography the categories of descriptions are the researcher's way of expressing different ways of functioning. According to her they are the subject's experiences which are investigated and described and expressed as they appear to the researcher (Dall'Alba 1993.) While building the categories in this study, the students' own expressions as such were used as the basis. The second phase was to discover the main categories

and the subcategories they represent. This kind of interpretation requires a researcher's preunderstanding of the phenomenon. The expressions are described as they appear to the researcher but they still are the researcher's way to express the different ways of functioning.

As Simola (1993) points out, phenomenography helps a researcher to conceptualize and qualitatively describe a large amount of material. In this study the phenomenographic approach has been used as a tool in analyzing the material and in qualitatively describing learning clinical nursing care in the way the student nurses have perceived and conceptualized it. It has been shown that reality, meaning clinical nursing care, exists through the way a person conceives it as all our perspectives are different (c.f. Uljens 1993). The students select their own clinical learning paths related to their ways of conceiving clinical nursing care at different levels. Because in this study interest has been "in the essential features of manifestations of experience" taking into account a student's social, developmental and environmental context, it can be seen to represent a hermeneutic approach (c.f. Uljens 1993.) Experiencing clinical learning involves participating in its constitutions.

### **10.3 THE MEANING OF THE SOURCES OF KNOWLEDGE IN CLINICAL LEARNING**

When I had all the learning diaries to be analyzed, the most important question was to find out what kind of knowledge they included. The experienced objects expressed by the students were related to the sources of knowledge in clinical learning, acquiring knowledge and to the various learning strategies in the learning paths the students are following.

In considering the sources of knowledge in clinical learning expressed by the students the phenomena which cover clinical learning are to be identified as: 1) a ward as a learning environment, 2) persons with different performances in the environment, 3) nursing care as nurses' work and 4) holistic care as all the other health care professionals' work. The main concepts of nursing science metaparadigm, person, environment, health, nursing (c.f. Yura et al. 1975, Fawcett 1984) and as an action related to interaction, nursing process, nursing therapeutics and transitions (c.f. Meleis 1991) are present also in the phenomena found by analyzing the students' descriptions. They are, however, present in a more concrete and individual way than they are generalized in different nursing theories. Similarities can be found with some of the theory descriptions.

In the students' diaries a person is present with varying roles and role behaviours related to personal characteristics with beliefs and moral values, which are emphasized in Roy's (e.g. 1991) adaptation theory in the modes of self-concept, role function and interdependence. However, in clinical settings persons are known as patients, their significant others, as nurses and other health care professionals who are there for their patients. In this study patients have more roles than only being a recipient of care (c.f. Leino-Kilpi 1990). They are also seen as independent and active participants and patients can be sometimes experienced as meaningful

tutors in clinical learning, which is comparable with Mogensen's (1994) descriptions. Knowing the patient as a case, as a patient and as a person (Liaschenko 1998) is also to be found in the students' descriptions. Patients have their special health problems, they represent different patients groups and they are individuals with their own meaningful experiences as well. This kind of conception is also close to Rauhala's (e.g. 1995) concept of a holistic human being.

Knowing the nurse as a model with professional skills, as a tutor and a facilitator is significant for all the students but in a different way as it has been shown. When the students advance in their studies they perceive a nurse's role also as an independent decision maker and as the advocate of a patient. This is meaningful, because the traditional view of a nurse as a doer or the follower of orders has prevailed for a long time in the health care system and still can be seen also in student nurses' descriptions (c.f. Laschinger 1992).

Dotan, Krulik, Bergman, Eckerling & Shatzman (1986) have presented the attributes of a nursing role model as professional competence, as a humanistic approach and as power related to an official position, these parallel the findings of Li (1997). Wiseman states in her study that student nurses make judgments about the important and chosen behaviours and also about their own behaviours being rewarded by the clinical faculty. That is why the faculty should be aware of the behaviours they display and the behaviours they wish to promote and encourage. (Wiseman 1994.) On the other hand, students are also able to reverse the meaning of unprofessional, noncaring or uncaring behaviour for their own good as shown by Kosowski (1995) in her study covering learning caring. Campbell, Larrivee, Field, Day and Reuter discovered that the role of the instructor (hired by the faculty to supervise students in clinical settings) and the role of peer support emerged as the most influential factors on students learning. Instructors with positive characteristics were seen meaningful as role models and crucial in shaping students' attitudes. (Campbell et al. 1994.)

This agrees with the findings of the present study. The student nurses with different learning strategies all observed nurses' behaviours and made judgements in various ways. All the time nurses and their behaviours are the important source of knowledge in clinical learning, with positive characteristics, as the nurse I would like to be, but making mistakes or behaving in a negative way, as an avoided role model. However, other students were mentioned mostly as partners in doing something and in reflecting experiences only sometimes as support providers. If there were very many students on the same ward some kind of competition was seen between them in doing things. The students in this study did not experience the role of senior students as peer support as meaningful to themselves (c.f. Campbell et al. 1994) but they found that tutoring a junior student was important in their own learning as the descriptions covering the last clinical period show. In the Finnish system registered nurses are responsible for what the students do, that is why peer tutoring also requires the presence of a registered nurse and is not systematically developed. Also organizing student nurses' clinical studies does not

take the placement of senior and junior students systematically into account. It could be helpful, at many levels, if there were both junior students and senior students on hospital wards at the same time.

According to the students' conceptions they focus on the persons involved with different role performances and positions, personal characteristics and feelings. In their various role performances various skills and knowledge base are needed. This implies that in developing a nursing education curriculum, the concept of person should be taken into account in a more concrete way also in theoretical studies not only as an abstract entity without any personality. Persons should be also taken into account not only as nursing clients, patients and their significant others, but as nurses and other health care professionals as well. They all have their own various places in clinical nursing care. Being aware of the characteristics of persons' various role performances would facilitate students to bridge a gap in meeting different people.

The environment as a main concept is also present in the students' descriptions. They perceive it as a concrete, physical environment but also meaningfully finding the importance of the atmosphere for their own learning, for the patients and all the staff. The atmosphere on a ward is constructed by social relationships related to persons' behaviours and the students perceive its significance in relation to their own progress. Kim's (1983) physical, social and symbolic elements are present now conceived by the students. At first the physical environment is the focus of interest more as the concrete details and when learning proceeds as larger entities. The atmosphere is significant (c.f. also Luukka 1998) and the students also consider the effects underpinning a negative atmosphere. They seem to accept their role as passers-by because they take negative examples as avoiding behaviour in their own development without commenting. A ward is seen more as a learning environment. According to the students' conceptions it offers possibilities to find different types of knowledge to be integrated and to develop different adaptive competencies (c.f. Kolb 1984) in a personal way. Mogesen emphasizes the meaning of a social environment related to a students' possibilities to learn. She also shows that students cope differently with the demands of the environment depending on their personal ways to understand their own roles as learners. (Mogesen 1994.)

Health as a main concept is not present as such. According to the students' conceptions health is related to a person (c.f. Kim 1983) as a patient with different dysfunctions and as a patient who experiences transitions in health - illness events (c. f. Meleis 1991). Some illnesses have been mentioned as sources of knowledge but they are related to patients with their individual experiences. This is congruent with the mission of nursing, in clinical settings the student nurses take care of sick people, they do not distinguish between an illness and a patient.

Interaction is seen to be significant in the students' diaries. It is related to nurses' skills and other health care professionals' behaviours. Interaction as the focus of interest is perceived as an action, reaction and transaction (c.f. King 1981) and also as a lived dialogue (c.f. Paterson & al. 1988). Transitions can be found in the meanings of patients' backgrounds, experiences, various life destinies and above mentioned health - illness events. They are more present during the second and



third clinical periods. Nursing care as nurses' work is now described by the students as nurses' different activities, which parallel nursing therapeutics (c.f. Meleis 1991), based on the principles including moral aspects and using nursing theories. The nursing process is seen as a phenomenon covering a patient's nursing care on a ward. The nursing process appears in the students' descriptions as a continuum and it gets more attention when the students become more experienced and more knowledgeable about various units. It is neither as phases nor as a problem-solving process (e.g. Roy 1991).

The significance of theoretical studies can be seen in critical thinking when the students realize how it should be according to their conceptions and how it actually is. Following these descriptions also human to human requirements which are interaction skills, empathy, friendliness, responsibility, caring, a holistic ability to meet and help people and the ability to act as the patient's advocate as the qualification requirements of nurses found by Peltari (1997) are also valued in the students' descriptions and they also parallel the task-oriented and human oriented activities of nurses (see Leino-Kilpi 1990). The conceptions covering the holistic care as all the other health care professionals' work show that the students have internalized patient - orientedness. They look at the holistic care from a patient's point of view, what kind of possibilities and benefits it offers to a patient. As most of the notes concerning this kind of awareness are to be found during the second and third period it means that to develop it requires an earlier integrated learning phase.

#### **10.4 ACQUIRING KNOWLEDGE RELATED TO CLINICAL LEARNING**

The students' conceptions which cover acquiring knowledge in clinical learning offer a wide description of different functions that take place in their minds. Acquiring knowledge has been studied earlier but more in an attempt to find the certain kind of solutions or testing some methods.

Problem-based learning has been presented as a method to integrate theory and practice (e.g. McMillan et al. 1989) while for example Schön (1983) points out that problem-solving is often too simplistic and reductionist in relation to the complex problems of clinical practice and prefers reflective practice. In this study, problem solving according to the students' conceptions means either an approach in nursing care or is seen as a facilitator in their own learning. It is related to bridging a gap but this gap is between the clinical knowledge a student has at a particular moment and the knowledge a student should have at that moment. A student bridges another gap while finding the most suitable activities among different alternatives in order to help patients in the best way. According to the students this is related to reflective practice. James and Glarkes (1994) argue that the concepts reflection and reflective practice have not been fully understood nor are the prerequisite skills and qualities known. Pedley et al. have applied Jarvi's framework

in an experiential learning context. According to them giving possibilities for the students to reflect, assess and present their learning experiences will enhance their self-direction and self-management. (Pedley et al. 1997.)

In this study the students' descriptions show that by reflecting on their own experiences they can widen their own perspectives, evaluate themselves, share their own experiences which in turn lead them to change their own behaviours or direct their own professional growth. This can be seen to enhance self-direction and self-management and in this point parallels Pedley's et al.(1997) findings. Also the demands concerning the discussion of reflection and reflective practice presented by James and Glarke are supported by the present student nurses. They have shown its significance which should lead nurse educators and clinical tutors to clarify the concepts in order to be able to give space for students' reflections and create reflective practice.

As Green et al. (1997) have established, a tendency to characterize experiential learning in the form of an experiential learning cycle has been popular in nursing education. This cycle with its sequential nature has been criticized by e.g. Jarvis (1987). From students' perspectives experiential learning is described in terms of primary experience, citing role play as a method and reflection as an integral element of experiential learning (Green et al. 1997).

Burnard observed in his study that many of the student nurses saw experiential learning in terms of clinical learning and they learned most about nursing care by working in clinical settings. He also discovered that student nurses consider learning by seeing and they feel that seeing helps them to remember things (Burnard 1992.) In that case clinical learning implies that experiences gathered by participating and reflection of the experiences facilitate the development of personal or experiential knowledge. On the other hand Lowe et al. (1998) have established that learning by reflection did not bring statistically significant learning outcomes compared to the traditionally taught control group. They, however, found reflection meaningful when used alongside more conventional learning methods.

A role for experiential learning can be seen in this study especially in participating in nurses' activities, which is related to searching for experiential knowledge ( c.f. Burnard 1992) in reflecting on their experiences and interpreting related to understanding the meanings of experiences ( c.f. Green et al. 1997) and in living with patients related to applying one's own understanding of life world. The students' descriptions of experiential learning do not also include any kind of sequential nature, this is in line with Jarvis' criticism.

When comparing the conceptions about acquiring knowledge to the conceptions of learning identified by Säljö (1979b), Giorgi (1986), Marton et al. (1993) and Myrskog (1993b) some similarities can be found even in those studies where the focus is on the conception of learning as talk. When the focus is on clinical learning as the process, the conception of learning can be seen to include acquiring knowledge related to knowing, doing, understanding and situation management. Collecting knowledge is meant to increase knowledge and memorizing, however in a deep way. It is present when a student proceeds from a follower to an independent actor. Myrskog's getting insight into something can be seen as a way of dealing with

knowledge; and as a method of interpreting related to understanding; and investigating related to situation management. Also, the increase of competence, found in the above mentioned studies, is particularly present in dealing with knowledge related to knowing, participating in nurses' activities related to doing and in solving problems, which in turn is related to situation management. Understanding can also be found in the personal way the students construct their own clinical learning which leads them to see something in a different way (c.f. Marton et al.) or to a change in perspective (c.f. Myrskog). Finally, when the students advance from a beginner to a graduating student nurse changes in a person (c.f. Marton et al.) or personal development according to Myrskog can be seen in the clinical learning process. In the above mentioned studies the conceptions of learning have been presented as an hierarchical order from evidence of a surface and deep approach in learning. In this study according to the students' conceptions all the above-mentioned conceptions of learning are present all the time supporting and deepening each other with however different meanings in various contexts. A change of perspective is e.g. not possible without increasing knowledge nor becoming a graduating student without an increase of competence. In acquiring knowledge knowing, doing, understanding and situation management are all necessary for each other and lead together to achieving the set learning objectives.

The clinical learning spiral presented by Stockhausen (1994) consists of a preparative phase, a constructive phase, a reflective phase and a reconstructive phase continuing as a spiral. According to Stockhausen the phases provide a framework for the clinical teacher to use students' experiences in enhancing their next learning experiences. According to the findings of this study all the above mentioned phases are present all the time but they do not sequentially follow each other and they can not be separated. The students' conceptions show that they are acquiring clinical knowledge in different ways at the same time as they are achieving some goals. It also means that various levels are present at the same time.

In this study the students' own conceptions which are related to acquiring knowledge in clinical learning establish that there are many ways that can be used. These ways depend on the contexts where the students are and on their own personal ways to perceive clinical nursing care related to their personal learning strategies. The students' descriptions of acquiring knowledge are also in line with the outcomes of nursing education (c.f. Salvage 1992, European Health Committee 1994) and they could be used as a tool when developing clinical nursing education in a more systematic way.

## **10.5 THE MEANING OF LEARNING STRATEGIES**

Identifying student's learning styles have been found to be meaningful to students' learning by e.g. Barbe and Milone (1981), Garcia-Otero et al. (1992), Laschinger (1986) and (1992), Hodges (1988b), Cavanagh, Hogan and Ramgopal (1995), Ridley, Laschinger and Goldenberg (1995). In many studies it has been stated that a concrete learning style is common among all types of student nurses and also students have rated themselves highest on concrete competencies. Ramprogus (1988)

however points to difficulties in assessing student nurses' learning styles. He postulates that students begin their educational careers as "all-rounders" and learning styles are influenced by socialisation and education, which can be clearly seen in this study. It has been also noticed that by using the revised learning style test (Smith and Kolb 1986) student nurses are also classified as abstract learners (e.g. Ridley et al.). Laschinger and MacMaster (1992) and Laschinger and Stutsky (1995) also challenge the findings concerning student nurses with concrete learning styles and recommend the inclusion of a preceptorship programme. Thus the demands of the Finnish nurse educators concerning the increase of resources for clinical tutoring are justified. Laschinger et al. (1984) have also suggested according to their findings that more holistic learning experiences promote the development of all four learning orientations.

This study has not been concerned with testing students' learning styles but the adaptive competencies, related to the learning styles in Kolb's (1984) competence circle, can be identified among the student groups. Somehow, they are all present in every group only the focus is different depending on various situations during the three periods. The differences seem to occur between the investigating students who are more analytical and systematic than the others and the students who focus on nurses and test theories or ideas less than the others. Leino (1987) compared in his study of individual's knowledge accessing modes and preferences e.g. the Finnish nurses's styles to the Canadian nurses' styles. According to his findings the Finnish nurses were more metaphorical and less rational than the Canadian nurses. The explanations might be cultural but also the psychological tests used in Finland might have earlier favoured more metaphorical and less rational and analytical applicants.

On the other hand, when relating the competencies described by Kolb to the outcomes of nursing education, they could also be seen as the achieved behavioural objectives. From that perspective finding these competencies in different forms in all of the student groups establishes that the students have achieved their learning objectives and can continue learning as registered nurses.

Clinical learning is a process where learning styles change and the perspectives vary. Students have divergent sources of knowledge and they acquire knowledge differently in various contexts and times. It is most important to recognize the process a student is following and facilitate the process giving space for achieving the needed competencies.

Finding the different learning strategies the students follow has established that there are many paths which lead to achieve the needed competencies in clinical learning. The students all succeeded very well in their studies but in a different way. The levels they have achieved were not measured by e.g. comparing them to the levels of reflectivity developed by Mezirow (1981) but they can be seen in the students' descriptions. According to Mezirow (1981) the first four levels of reflectivity are viewed as the levels of consciousness and the highest levels as the levels of critical consciousness. They all have been able to reflect on their experiences and give the meanings to their experiences in relation to learning. Affective reflection seems to be more personal than the others, the investigators, who did not deal with

feelings in their descriptions, are neither unemotional nor unempathic but it does not belong to their personal strategy. They were all male students, it might explain their strategy in this sense. The students have all shown that they are able to discriminant reflection when they self-evaluate and assess their own learning and provided nursing care. They can also be seen to achieve judgemental reflectivity in the descriptions where moral knowledge was taken into account and moral issues reflected to the patient's good were present. The highest levels, conceptual and theoretical reflections are present in all the groups however less among the students who modelled themselves on nurses in the beginning.

Baillie has studied the factors affecting student nurses' learning in community placements to find the meaning of prior experiences in the placement setting, the students' own approach showing an interest and taking initiative and students' attitudes to the placement. The students' observation role was more accepted in the beginning but at times observation were felt to be uncomfortable. The researcher points out that students generally preferred being able to participate in order to learn nursing care. (Baillie 1993.) This is congruent with the findings of this study. The earlier experiences mean that clinical learning in a new environment continues from a different level including the ability to distinguish between similarities in a new environment and to focus on differences. The atmosphere of a clinical placement is important for all of the students, especially for the sensitive ones. However, the more analytical students seem to be able to deal with negative experiences and just leave them whilst the more sensitive students suffer more from them. In taking the initiative the students are different. This is something the clinical tutors should be aware of and be ready to encourage and support the students who are more dependent on nurses at the beginning. The clinical tutors have often expectations concerning a group of students as a mass without their own characteristics or even their own names (c.f. Rajj 1991).

Before having all the findings covering the sources of knowledge, acquiring knowledge and the learning strategies in clinical learning a student nurse was presented as a person searching for different types of knowledge in various learning environments. They should be all present in clinical learning. Learning is directed to achieving the competence of a registered nurse.

The findings of this study are meant to present the students' own conceptions of clinical learning with their own views about themselves as learners. When these conceptions are applied a new picture can be presented in Figure 15.

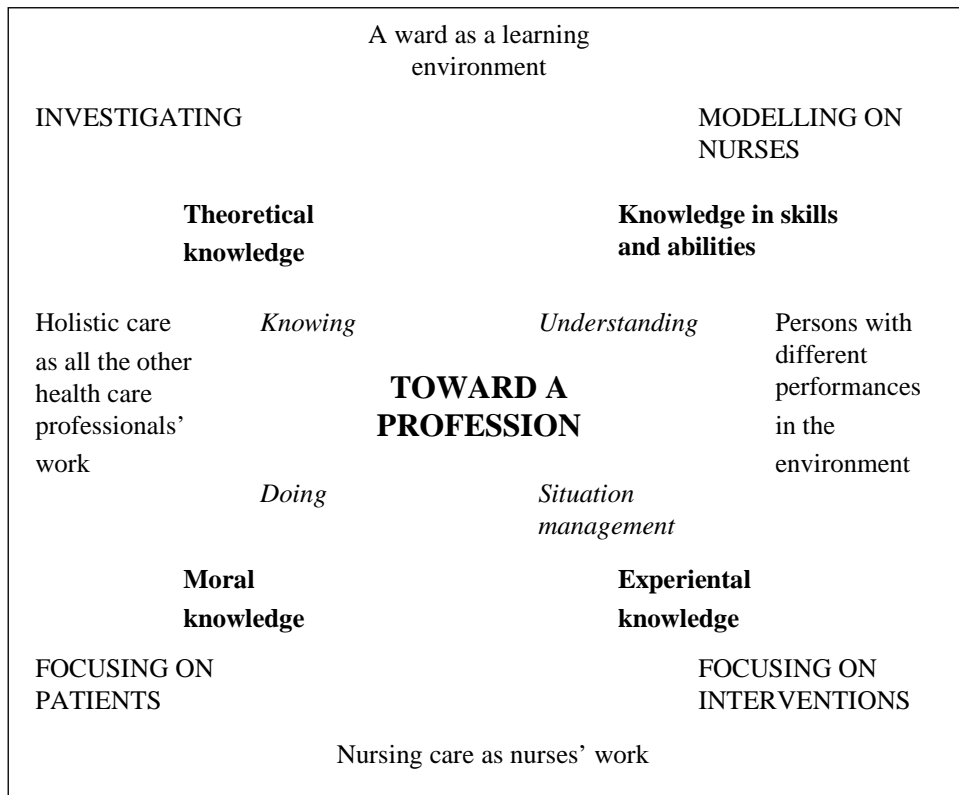


Figure 15. *Toward a profession by acquiring different types of knowledge related to the sources of knowledge covering clinical learning and by following different learning strategies*

When describing clinical learning according to their conceptions the students have connected it to the various sources of knowledge. Clinical learning is also conceptualized as acquiring knowledge related to knowing, doing, understanding and managing situation. Knowing means collecting knowledge and dealing with knowledge. Doing means participating in nurses' activities. Understanding is related to reflecting on the student's own experiences, interpreting and living with patients. Situation management is in turn related to solving problems, investigating and directing their own studies (Figure 13).

The students acquire different types of knowledge which means knowledge derived from nursing science and related disciplines, knowledge embedded in skills and abilities, moral knowledge and their own experiential knowledge. They also consider the hospital environments as the sources of knowledge in clinical learning which are a) a ward as the learning environment, b) persons with different role performances in the environment, c) nursing care as nurses' work and d) the holistic care as all the other health care professionals' work. When the students conceive nursing care as a learning object and advance in their studies they follow different learning paths with various learning strategies. These depend on how they see what

they see in the environment. In the students' learning diaries four learning strategies can be found; leading from modelling on nurses; from focusing on interventions; from focusing on patients to holistic nursing care; and by investigating to holistic nursing care. All the types of knowledge are present in the students' learning processes, only their ways to filter the types of knowledge differ being related to their individual ways of approaching the learning environment. Modelling on nurses can be seen as looking for different types of knowledge through nurses' skills and abilities; focusing on interventions through experiential knowledge related to doing; focusing on patients through moral knowledge; and investigators through theoretical knowledge. The students construct their own clinical learning with context-oriented meanings. What and how, which are the students' learning objects and strategies are dependent on the environments and on their own internal contexts. This is in line with Karttunen's (1999) findings concerning the nursing students' knowledge development. According to her the students' most important reason for developing knowledge is the creation of their own concept of care.

## **10.6 LEADING TO THE DEVELOPMENT OF CLINICAL TUTORING**

In some earlier studies (e.g. Fretwell 1982, Alexander 1983, Clinton 1985, Jacka et al. 1987) it has been observed that student nurses do not always receive enough supervision from their tutors or clinical staff. This parallels some descriptions also presented in this study. According to the findings the students are, on the other hand, able to deal with those situations differently. The investigators take initiatives by themselves whereas the students focusing on nurses feel themselves unhappy and confused. However, clinical instruction is too important to be delegated to the least experienced and least prepared faculty says Karuhije (1986), who also suggests that the clinical teachers and the classroom teachers should always be the same persons. This is in line with the conclusions made in this study. Effective clinical instruction presupposes the presence of different types of knowledge of clinical learning and the deep understanding of various learning strategies. Also applying Bassett's (1993) comments about the role of nurse teachers, clinical tutors need to consider how to guide student nurses by questioning their own beliefs, teaching styles and strategies of learning.

Wong et al. (1987) suggest the following strategies for proceeding towards effective clinical teaching: pairing veteran and novice faculty members in clinical instruction, utilization of senior faculty as role models in clinical settings, faculty development programmes on clinical instruction and careful selection of candidates for clinical faculty appointment. These suggestions which are still important should be considered. However, they should include the demands concerning veteran or senior faculty members as role models. These persons should be competent in integrating different types of knowledge including the latest research findings in the field, and in sharing their own nursing care expertise for a student's good. This

parallels also the observations presented by Severinsson (1998) focusing on the competencies of supervisors when they facilitate student nurses to bridge the gap between theory and practice.

Baillie has also categorized the mentor's characteristics affecting student learning into three groups: a mentor's attitude and knowledge concerning the student and the course, skills in facilitating learning and professional credibility as perceived by the student, particularly communication skills. The findings covering the placement perceived by the students were: the relevance of the placement, the experience available in the placement and the practical implications of community placements. (Baillie 1993.) These are congruent with the present students' conceptions also in hospital environments. However, when clinical placements are planned for the students their own conceptions should be taken more into account. The relevance of the placement and the experiences available during proceeding learning processes are viewed differently by the students. They all are willing to learn clinical nursing care from different perspectives, experience various clinical settings which can offer many sided possibilities in order to achieve their own learning objectives but in an individual way..

McKenna (1995) when considering the meaning of the learning theories i.e. behaviourism, cognitivism and humanism in clinical learning, has reached the conclusion that they all should be present at the same time. There are many learning theories and the direction, the development of the new ones is taking, seems to be in integration and deepening earlier conceptions. This can be seen in the relationship between cognitive psychology, information processing and constructivism. As noted earlier constructivism involves cognitive processes, emotions, values and motivation. It does not reject learning skills but emphasizes the meaning of understanding (c.f. von Wright 1996). This can be found in the students' descriptions. Cognitive processes, emotions, values and motivation are, however, context dependent. The students have shown how they achieve the knowledge which enables them to cope in clinical settings (c.f. Glasersfeld 1989). Clinical learning should be viewed as a holistic process where a facilitator is responsible for organizing and giving possibilities to students to find different types of knowledge related to various learning experiences in changeable learning contexts.

## **10.7 IMPLICATIONS FOR FUTURE DEVELOPMENT**

Clinical learning is a complicated phenomenon, which has been studied from many perspectives. The whole process, from a beginner to a graduating student, according to the student nurses' conceptions has not been described earlier. As the source of study material learning diaries were found successful which parallels the findings of Richardson et al. According to them learning diaries on one plane enhance student learning and on another offer a field of interest to a researcher. They, however, emphasize the instructions of how they should be kept have to be clear and the diaries are not supposed to be used as assessment tools. (Richardson et al. 1995.) The utilization of learning diaries involves a lot of work but without diaries



understanding clinical learning as a whole would not have been possible. Focusing on one situation might be misleading as has been shown when students' learning styles have been tested or the effectiveness of some methods has been measured.

What was found? The description of clinical learning perceived and conceptualized by the students has established the significance of the environment, different persons, nursing care as nurses' work and holistic care in all the other health care professionals' work as the sources of knowledge in clinical learning. It has produced knowledge about the conceptions involved in acquiring knowledge in clinical learning. It has also established the different learning strategies and learning paths the students use and follow while they advance in their studies. These findings require nurse educators and clinical tutors to give more space to their students to follow their own rhythms and to facilitate students' learning processes instead of teaching based on their own learning conceptions. It also implies that the assessment of students' clinical learning should only be based on students' own self-evaluation related to the learning goals they have set for themselves. These goals are individual and based on students' own achieved level.

Clinical learning still offers many perspectives that can be studied. The findings in this study show that the development of clinical tutoring from nurse educators' and clinical tutors' point of view should be based on the students' conceptions. In the development of a nursing education curriculum based on the central concepts of the nursing science metaparadigm, the utilization of the students' descriptions should lead making some abstract issues more concrete and practice oriented. This in turn implies that the modules in a curriculum should be described in terms of the phenomena which cover the domain of nursing as the object of learning a profession. It would be of interest to study registered nurses' conceptions of clinical nursing care by comparing them to each other in order to discover the more experienced nurses' way to perceive clinical nursing care. Karttunen has described the nursing students' conceptions of their knowledge as eight different categories. These are knowing "that" knowledge, procedural knowledge, knowledge of patients, experiential knowledge, ethical knowledge, knowledge about self, natural knowledge and meaningless knowledge. (Karttunen 1999.) All the others but meaningless knowledge are in their own way also present in this study, in the sources of knowledge. It would also be of interest to study student nurses' knowledge development related to their different learning paths with various learning strategies.

It would be of great importance to develop methods in order to distinguish student nurses' different ways to perceive their learning environments in the beginning and develop nurse educators' and clinical tutors' skills and abilities to follow a student nurse as just a facilitator. The biggest challenge would be however, to develop the theory of clinical learning with the concepts and their relationships clinical learning involves.



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