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Irma Mikkonen

CLINICAL LEARNING AS EXPERIENCED BY NURSING STUDENTS IN THEIR CRITICAL INCIDENTS

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Abstract

The goal of this study was to explore clinical learning as experienced by nursing students in their recorded critical incidents. The theoretical framework of the study provides a foundation for understanding and developing learning in professional education, and in clinical learning. The dominant learning perspectives, self-directedness, self-regulation and significance of emotions will be discussed. Clinical learning is perceived as an arena of development towards expertise for nursing students. The empirical part of the study is based on the phenomenological method. The material was collected during two and a half years from eight nursing students in the form of critical incidents (225) that were included in their learning diaries. The critical incidents were analysed by using a phenomenological method of analysis. The method consists of two parts: the individual specific part and the general part. The individual part of the method produces idiographic knowledge and the results of the first part are presented as individual descriptions of students' experiences of clinical learning and in this study they are called *individual experienced clinical learning portrayals.* The second part of the method includes moving on from individual knowledge toward general knowledge. The result of the general part of the method is the final general meaning network or network types as was the case in this study where four *general clinical learning portrayal types* were constructed. An essential part of the study is the dialogue between empirical and theoretical knowledge about clinical learning. This dialogue mirrors the experiences the students had in this study, with the knowledge produced by previous research and previous theoretical knowledge about clinical learning.

The findings show that there were three constituents of situatedness present in the students' experiences in their critical incidents. First, *participation*. This constituent included*: level of participation*, *setting*, *membership of team*, *practising procedures*, and *possibility of mistakes*. Secondly, *self in different roles*. This constituent included: *student role*, *role of professional* and *role of patient advocate*. Thirdly, *relationships***.** This constituent included: *self – mentor / staff, self – patient, self – peer and self – teacher relationships.* These three constituents of situatedness are common for all four general experienced clinical learning portrayals and thus display the main content of the students' clinical learning experiences. The differences between portrayals are displayed through meaning relations, four pairs of concepts, which thus demonstrate differences in the students' learning experiences in clinical settings. These pairs of concepts are: *complacency* vs. *apprehensiveness* about clinical learning; *assertiveness* vs. *vulnerability* in clinical learning; *confidence* vs. *lack of confidence* in own actions; *competence* vs. *inadequacy* in clinical experiences. In addition to these modes of learning, the students differed in respect of their ability to reflect their experiences. The ability to reflect is described through the concepts of *reflection* and *self-regulation*. The ability to reflectivity and self-regulation seems to have affected the students' experiences and modes of learning.

The results of this study are useful in planning and developing students' clinical learning in nursing education. It is important for educators to acknowledge students' unique learning modes in order to be able to support them. It is also necessary to educate and support mentors. Similarly, it is suggested that it is important to develop teaching and learning methods to support the development of students' reflective and self-regulation skills.

Irma Mikkonen
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Tiivistelmä

Tutkimuksen tavoitteena oli kuvata sairaanhoitajaopiskelijoiden kliinisen opiskelun kokemuksia. Tutkimuksen teoreettinen viitekehys käsittelee vallitsevia oppimiskäsityksiä ja tarjoaa täten perustan oppimisen ymmärtämiselle ammatillisessa koulutuksessa ja kliinisessä oppimisessa. Teoreettisessa viitekehyksessä tarkastellaan kliinistä oppimista sairaanhoitajaopiskelijoiden kehittymisenä kohti asiantuntijuutta. Tutkimuksen empiirinen osa perustuu fenomenologiseen metodiin. Tutkimusaineiston muodosti kahdeksan sairaanhoitajaopiskelijan kirjaamat merkitykselliset tapahtumat (225) heidän kliinisen opiskelun harjoittelujaksoiltaan kahden ja puolen vuoden aikana. Merkitykselliset tapahtumat analysoitiin käyttämällä fenomenologista analyysimetodia. Metodi muodostuu yksilökohtaisesta ja yleisestä osasta. Yksilökohtainen metodin osa tuottaa idiografista tietoa ja tulokset esitetään yksilökohtaisina kuvauksina opiskelijoiden kliinisen oppimisen kokemuksista eli kahdeksana *yksilökohtaisesti koettuna kliinisen oppimisen muotokuvana.* Metodin toisessa osassa siirrytään yksilökohtaisesta tiedosta kohti yleistä tietoa. Tuloksena tämän vaiheen analyysista on lopullinen yleinen merkitysverkosto tai merkitysverkostotyyppejä kuten tapahtui tässä tutkimuksessa, jossa merkitysverkostotypologia sisälsi neljä *kliinisen oppimisen muotokuvatyyppiä.*

Opiskelijoiden kokemuksia kliinisestä opiskelusta kuvataan kolmena situaation komponenttina: *osallistuminen*, *minän roolit* ja *suhteet*. Osallistuminen sisältää seuraavat aspektit: *osallistumisen aste*, *puitteet*, *tiimin jäsenyys*, *toimenpiteiden harjoittelu* ja *virheiden mahdollisuus*. Minän roolit sisältävät

opiskelijan roolin, *ammattilaisen roolin* ja *potilaan asianajan roolin*. *Suhteet* sisältää seuraavat suhteet: *minä – ohjaaja / henkilökunta*, *minä – potilas*, *minä – vertainen* sekä *minä – opettaja suhde*. Nämä situaation komponentit olivat yhteisiä kaikille neljälle kliinisen oppimisen muotokuvatyypille ja kuvaavat täten opiskelijoiden kliinisten oppimiskokemusten keskeisen sisällön. Muotokuvien väliset erot kuvataan merkityssuhteina, neljänä käsiteparina, jotka ilmentävät opiskelijoiden välisiä eroja. Nämä käsiteparit ovat: *tyytyväisyys* vs. *huolestuneisuus* kliinisessä oppimisessa; *assertiivisuus* vs. *haavoittuvuus* kliinisessä oppimisessa; *itseluottamus* vs. *itseluottamuksen puute* omassa toiminnassa; sekä *pätevyyden tunne* vs. *riittämättömyyden tunne* kliinisen opiskelun kokemuksissa. Lisäksi opiskelijoiden välillä todettiin eroa *reflektio- ja itsesäätelytaidoissa*. Opiskelijoiden kyky reflektoida kokemuksiaan ja itsesäätelyvalmiudet näyttäisivät vaikuttavan siihen, miten he kokevat kliinisen opiskelun ja oppimisen.

Tutkimuksen tuloksia voidaan hyödyntää suunniteltaessa opiskelijoiden kliinistä opiskelua sairaanhoitajakoulutuksessa. On tärkeä kiinnittää huomiota opiskelijoiden yksilöllisten oppimisvalmiuksien ja – tapojen tunnistamiseen ja tukemiseen, ohjaajien koulutukseen ja tukemiseen sekä reflektiota ja itsesäätelyvalmiuksia edistävien ohjaus- ja oppimismenetelmien kehittämiseen.

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every day life outside the academic world. Aaro, Ooka and Sonja remind me every day to prioritise things in life.

Kuopio, April 2005

Irma Mikkonen

Contents

1 Introduction

1.1 Background of research

The aim of this study is to describe nursing students' experiences in their clinical learning. The perspective of the investigation is the nursing students' professional growth and development through their education. Professional education, and clinical learning as an important part of it, is perceived as a ground for the personal and professional growth and development towards expertise which is a learning process that starts during education and continues throughout the professional career of the individual.

The goal of the Polytechnic Degree in Nursing is to gain command of the basics of professional skills and to acquire an ability to develop oneself. Proficiency in nursing and professional development presumes versatile knowledge and skills. The goal is for students to learn to be self-directive, to have good meta-cognitive and reflective skills and to be ready to grow as experts who are able to make judgements autonomously in their field. (Mäkisalo 1999, 27; see also Chenoweth 1998; Glen 1994, 175; Greenwood 2000; Hildén 1999; 2002; Käytännön opiskelu…1998; Opetussuunnitelma 1998; Sairaanhoitajan…2000; Tossavainen 1999, 12; Tossavainen & Turunen 1999, 8–9; Vesterinen 2002.)

Clinical learning and practice are identified as being key aspects of quality nursing education. There is also evidence that strategies related to practice and to "traditional" learning are separate skills and professional development is to a large extent determined by the strategies used in practice (see Ruohotie & Honka 2003, 101–102). It is suggested that clinical experience is one of the most important aspects of students' preparation for practice in their future work (e.g. Koh 2002a, 2002b; see also Heinonen 2004; Liimatainen 2002). Consequently, it is important to search effective ways of supporting students on clinical placements. Planned clinical experience is without doubt a crucial aspect of learning for nursing students (e.g. Jarvis & Gibson 1997, 153; Quinn 1995, 181; see also Camiah 1998, 378; Hoyles, Pollard, Lees & Glossop 2000; Munnukka 1997; Mäkisalo 1998, 103; Nolan 1998, 623; Sarajärvi 2002, 100; Vesterinen 2002, 12), not only as a site to develop clinical skills and synthesise the theory and practice of nursing (see Luukka 1998; Munnukka 1997; Mölsä 2000; Oinonen 2000), but also to provide with opportunities for socialisation into the culture of discipline and to meet clinical role models (e.g. Jackson & Mannix 2001; Laakkonen 2004, 14). It is also important that clinical settings provide an optimum learning environment

(e.g. Koskinen & Silen-Lipponen 2001; Luukka 1998; Ylipulli-Kairala & Lohiniva 2002, 43).

It is important to consider the goal of professional education. An essential question is the relationship of education and work; whether the goal of professional education is to maintain the continuation of present work or does education strive to reform professional work and influence also the meaningful changes of individuals' life strategies in continuously changing situations in society. (e.g. Rauste-von Wright, von Wright & Soini 2003, 13; see also Eraut 1994, 13-14.) Profession as a concept has widened and become more versatile. Work and tasks at work places are changing and developing continuously and it is not possible to learn all necessary competences during education. Thus, the starting point of education should be the wider investigation of the profession from the perspective of the personal and professional growth and development. (e.g. Luopajärvi 1993, 241.)

Moreover, education should guarantee for each individual the adequate competence to solve problems both in work as well as in general in life. It is important that the individual is able to understand her own actions and is willing to make a continuous analysis of her action in order to develop herself. This presumes that teaching-learning processes are perceived as human being's action processes. In traditional research of education, the learning process as action of human being and the regulation of these action processes has partly been ignored. It is, however, the essential aspect of education and thus an important focus of research. (e.g Eraut 1994, 103-105; Rauste-von Wright et al. 2003, 13, 18–20; see also Salmela 2004, 129; Soini 2001, 51.)

Thus, education also includes personal growth as an essential part of professional development. It is also important to keep in mind that all learning is influenced by the many connections through which the learner's world is constituted. The learner has her own life history, which has made herself a person which she is at a particular moment. (see Eraut 1994, 106-107; Heikkinen 1999, 201.) Professional growth and development may be perceived as a continuous learning process through which the individual acquires, through her career, those qualifications and competences that are necessary in encountering changing requirements in working life. Every person encounters in her everyday work challenges caused by the rapid changes in society. It is not possible to manage with any old routine or traditional way of action in these new situations. Instead, they presume creating new ways of action: in some situations this means using previously learned knowledge and competence in a new way presumed by a situation; in some situations it is necessary to learn new skills and competences in order to be able to respond to challenges. The individual has to be able to acknowledge the situations and

requirements where the old ways of action are not adequate. The individual should also be able to evaluate what new knowledge or skills managing these situations presume and be able to plan adequate means to learn new competences. (Hiltunen & Lehtinen 2002, 157; see also Eraut 1994, 106-107 and 156-157.) Consequently, it is important that a professional has the ability, motivation and will for lifelong learning. Learning is a continuous process of re-creation that have in addition to cognitive also conative and affective dimensions. Learners must develop their personality or 'self' as well as their intellect. They have to take the responsibility for their own learning and be able to change their beliefs, attitudes and values when needed as well as to expand their awareness. (Beairsto 2000, 65; see also Knowles 1989, 132; Ruohotie 2000a.)

When exploring the learning of a profession, it is also necessary to investigate learning theories that structure and guide learning. The significance of learning theories is that they give a foundation for developing professional learning and competence. The basis of the development may be perceived to consist of utilising experiences, self-directed learning and transformative learning. Thus, it is evident that no single perspective provides a comprehensive picture of professional education or clinical learning. The continuous development of professional competence presumes that the learner possesses the skills of reflective thinking and action; the ability to transfer her professional competence to versatile contexts; and the ability to find qualitatively new perspectives at intervals. Ultimately, the learner is responsible for her learning: the meta-cognitive self-regulation is suggested to be a key skill in learning. (see Ruohotie & Honka 2003, 14.) It is important that the learner is aware of her capabilities of understanding the subject area under learning. The interpretation of a certain issue or phenomenon is dependent on the learner's previous knowledge base. If the learner has understood profoundly an issue and is able to reason it, the interpretation is transferred to new situations. Thus, it is important that the learner develops her metacognitive skills as tools of goal-oriented learning. (see Ruohotie 2000d; Ruohotie & Honka 2003, 8–9; see also Ojanen 2003, 12.) From the perspective of clinical learning, it is even more important because the clinical setting is a very challenging learning environment being an authentic work environment.

The most dominant learning approach at the moment is socio-constructive learning perspective. According to this approach, the starting point of teaching should be the learner's way to perceive the world and the concepts used in the interpretation of it, because the learner structures the content under learning based on these conceptions. In the learning situation also the strategies the learner uses affect problem-solving and learning. (e.g. Ruohotie & Honka

2003, 7.) According to the constructivist approach, learning is the result of the learner's own action. It includes following assumptions: learning is the result of the learner's performance; understanding is emphasised; social interaction is important in learning; learning is context-bound, related to substance and learning situation. An important goal of learning is that the learner develops her abilities to acknowledge self, her thoughts and emotions. The mental growth of the individual and the change of performance and behaviour occur through transformation process that presumes reflection that enables higher level of understanding. (e.g. Ojanen 2003, 12.) Social interaction has also an important role in learning; working in teams and networks presumes ability to make good use of other persons' knowledge and skills in order to gain the common goals (see Ruohotie & Honka 2003, 8–9; Tynjälä 1999c, 357-358).

Knowledge and skills are not sufficient condition for professional growth of an expert. Human being's growth, also professional growth, includes questions, reflections and choices where the individual has to make decisions concerning her life in general. Laurila (2003, 77–78) outlines the growth towards the responsibility of a professional involving the skill of being present, encountering oneself and others, accepting one's limited resources, understanding and responsibility of good life, and life respecting striving towards expertise in one's own work. I agree with Laurila (2003, 77–78) that professional growth occurs in the unity of individuality and community when the individual's internal and external world are in dialogue, the emphasis of this talk varying from internal to external world depending on the situation. An experience as a whole represents simultaneously both the internal and the external world. The substance and objects of reflection are both inside us and in the external world. Comprehension and responsibility are properties that come true in an individual's practical work and action. (Laurila 2003, 77–78.)

It is typical for human being to form herself an idea – representation, intrinsic model – about the reality where she lives, and about herself as a part of this reality. This overall impression may be termed a world view, which means the wholeness of the individual's conceptions systems. The world view includes as crystallised all that the individual has perceived, learned, thought and felt during her life. (e.g. Cranton 2000, 181-182; see also Soini 2000, 321.) It functions as the foundation of selective attention and interpretation of information; thus, it has a function of regulating human being's actions. The world view is dependent on the individual's unique life experiences; it influences on the person's idea about the world and herself. The world view is learned and it is shaped through the person's life; on one hand, it is based

on every day life and every day concepts and conceptions; on the other hand it is based on scientific concepts and conceptions conveyed especially through education. The goal of education is to enable an individual to develop the world view that is more versatile and wider than is possible to achieve on the basis of every day life experiences. (Rauste-von Wright, von Wright & Soini 2003, 39 – 40.) Thus, learning involves an ongoing reconstruction of the world view (Soini 1999, 30). The learning process does not concern only the content of the subject area but may cause changes in addition, for example, in the learner's knowledge structures, also in her metacognitive skills, motivation, beliefs, and self-esteem. It is not possible to deepen one's own knowledge and develop oneself only passively following the changes in the work and society. It is important that the individual has abilities to actively influence these changes and her own future. Transformative learning is a process where the learner continuously explores, questions and verifies the perceptions through which she creates meanings of different issues. Similarly, in this process the new knowledge is engendered, which helps the learner to understand and also to change deficits in her learning organisation. (Ruohotie & Honka 2003, 8–9; see also Rauste-von Wright et al. 2003, 39– 43.)

I agree with Puolimatka that in the profound sense the purpose of teaching is to provoke love toward life, understanding life and to offer means to versatile encountering of reality (Puolimatka 2002, 371). It is also suggested that actually learning process is the same as the process of life. Individuals continuously learn, and different environments in their life form ever changing learning environments. People's action and behaviour in these environments lead to the change of their environment and world view.

The individual's world view does not contain only knowledge of the outside world but also emotional and motivational aspects and the person's conceptions of the self. The construction of self - conceptions, expectations and goals related to the self – is the main sub-construction of the world view. It consists, on one hand, of the individual's conception of herself and her relationship to the reality around; and on the other hand, of the hierarchical systems of her values and goals – what kind of relationship to the outer world she is striving to achieve. The concept of the self is structured in social interaction. In the individual's relationship to the environment, it is extremely important to which extent she experiences to be a subject steering her own actions, and to what extent regulated by the external factors that are independent of her actions. (Rauste-von Wright et al. 2003, 43– 44; see also Soini 1999, 32–35.)

Self-regulation skills that enhance the professional competence of the individual emphasise the responsibility of the learner in her learning

process. By utilising metacognitive skills the learner is able to deepen her understanding and observe and regulate her cognitive processes and apply different problem solving strategies. Motivational factors are crucial in applying and developing metacognitive skills as well as professional skills in general. The processes that enhance learning are, for example, planning of the learning process, setting individual learning goals, structuring the content of learning, self-observation, self-beliefs, reconstructing thought structures, continuous practice of action models and skills. The development of a professional is dependent on, in addition to the learner's knowledge, abilities and skills, also her motivation and volition. (see Ruohotie & Honka 2003, 14.) The development towards a professional expertise presumes also emotional commitment, and emotions have a meaningful role in professional learning and emotional reactions are present in all stages in the development towards professional competence (see Isokorpi & Viitanen 2001, 125–129; see also Isokorpi 2003).

In this study, clinical learning is mainly perceived as experiential and reflective action and at the background there is a socio-constructivist learning perspective that will be widened towards a holistic perspective of learning. It is essential to understand that learning is related to the individual's entire activity. Thus, efficient learning demands that the learner is allowed to be active and that she experiences that activities are meaningful from her perspective, this means that it is in accordance with her values and goals. Goal-directed learning presumes that the learner has self-reflective skills and that she is striving to accommodate her own actions to the task under study; for example, to look for appropriate strategies through experiments. (see Rauste- von Wright et al. 2003, 41.)

The focus of this study is to describe nursing students' experiences in their clinical learning. Thus, the perspective of this study is the personal aspects of the nursing students' experiences and thinking. Clinical learning is a key aspect of quality nursing education and an important part of learners' personal and professional growth and the development of their professional proficiency. I perceive an individual's professional development to be a holistic process where the person's action and competence in her work and also in learning a profession is based on the unity of knowledge, skills, volition and emotions (cf. Laurila 2003, 68). Professional growth and development in this study is perceived as the student's growth and development in practise towards professional competence and expertise. The challenges of the growth engender from experiences in practice, and the successful solutions of these tasks and experiences develop both the learner, practice of action and the profession. (cf. Laakkonen 2004, 13.)

Moreover, I perceive professional growth and development as a goal of learning a profession, and clinical learning as an important part of this learning process. Learning a profession is the learner's intentional, process-like action directed towards goals; it is also influenced by social external regulation. In the learner's intrinsic action, for example in her intentions, perceptions and learning strategies, are mediated her previous life- and learning experiences, values, motives, beliefs and expectations that are influencing her learning; for example, in what kind of tasks and goals she sets on herself in new learning situations. (cf. Väisänen & Silkelä 1999, 219.)

1.2 Aim of the study

The purpose of this study was to investigate nursing students' experiences in their practice placements throughout their nursing education programme. The ultimate goal was to achieve knowledge for developing clinical learning in nurse education.

The aim of this study was to describe clinical learning as perceived by eight nursing students in their recorded critical incidents. In addition, the aim was to explore the students' learning process and especially their reflective skills and self-regulation ability and the development of these skills throughout the education programme.

1.3 Methodology of research

The empirical part of this research is primarily based on existential phenomenology. The study aims at describing how the phenomena in clinical learning present themselves in human existence, in lived experience of nursing students (cf. van Manen 1990). Existential phenomenology strives to cover the whole scale of the problem of human meaning and thus, pursues the roots of subjective world view (Lehtovaara 1994a, 11). These conceptions mean a desire to thoroughly understand students' experiences in clinical learning.

In order for a study to achieve a scientific status, it is necessary to carry out an ontological analysis, which in turn makes it possible to choose appropriate methods (Perttula 1998; see also Lehtovaara 1994a, 14–15). In the human sciences, the conception of man is the result of ontological analysis (Rauhala 1989, 14–15; 1990, 32; Varto 1992, 31) and the most important conception that guide the actions of the researcher of the education science (Hirsjärvi 1985, 57).

In this study, I have adopted a holistic conception of man. According to Rauhala (1993; 70), it is associated with the existential-phenomenological approach. The holistic conception of man is based on the idea that the human being has three existential modes, which are consciousness, materiality and situatedness (Rauhala 1989, 27; 1993, 70). Consciousness refers to existence as different qualities of experiencing, materiality to existence as an organic process, and situatedness to existence in relation to one's own life situation (Perttula 1998, 16; Rauhala 1995, 85–86). All of these modes of being have their own way of existence or structure: in materiality this basic structure is life; in consciousness it is noematicity (mielellisyys, noemaattisuus – the English term is adapted from Rauhala 1995, 47); and in situatedness it is being in relationships to the life situation. (Lehtovaara 1994b, 114; Rauhala 1990, 35–36.) The conception of human being, which is evolved in the analysis of the problem of human being conducted by existential phenomenology, is called existence. According to Rauhala, this means real, human existence. (Rauhala 1993, 70.) Though the focus of the research in the existential phenomenology is experiences that construct through consciousness, the assumption about the situatedness of the human being is important. According to this viewpoint, the human being is authentically engaged in her living in her own life situation. (Perttula 2000, 431; Rauhala 1993, 90–91.)

The most important channel of influence in education is consciousness. Thus, although a human being has to be perceived as a unity, consciousness may be given a primacy in considering the existence of learners, because *consciousnes*s is central in the structure of experiencing; it is the unity of the whole human experience. *Experience* means the human being's noematic relationship to the world or herself. (Rauhala 1995, 37, 43–44.) Thus, the fundamental structure of consciousness is noematicity. Noema is with the help of which we understand, know, feel, and believe phenomena and things as something. Noema is always experienced in a state of consciousness, in *experience*. Meaning relations, and the unity of experienced world, are formed in consciousness. (Rauhala 1995, 47–49; 1990, 38; 1989, 29.) Meaning relations and systems of relations that already exist in world view are called horizons or contexts for understanding. Experiences of meanings, however, are not from emptiness. They have, in a human being's situation or life situation or in her body, matter, position or object about which the meaning relations have its content. Thus, life situation is a necessary precondition for the contentual existence of consciousness. (Rauhala 1990, 89.)

Situation is always unique and solitary and existence is intertwined to temporalness. The consideration of the concept of situatedness may be started by exploring what the concept of pre-understanding means. Hermeneutic way

of thought differentiates two levels of understanding: actual understanding and pre-understanding. The former is what was discussed as consciousness. Pre-understanding is not understanding in the sense of consciousness. Instead, pre-understanding means those fundamental preconditions that determine human existence and which are presumed in order to generally enable conscious meaning relations. Thus, pre-understanding means the interpretation given by the way things are organised within the entity world itself. So as to an individual's world view could be organised, the world is to be seen as the primary context for understanding: it is necessary to presume the world as a framework in order we could have meaning relations about objects, things, people and also ourselves. The existence of human being after becoming a part of the world is unique. A human being has an enormous number of existential possibilities to be a human being. Some of these possibilities come true, some do not come ever true, and this is called an existential choice. Part of the existential choices is permanent – such as race, gender and genetics. The existence of human being presumes both psychological actual and continuous existential choices, interpretations (pre-understanding), because the existence of human being is a mere open possibility. The existential interpretation included in our existence is quite too close to us and thus it usually remains unnoticed. However, this is where the starting point of the analysis of the problem of the meaning is. What we experience, what kind of meaning relations we have and what is our world view have received its basic organisation in the interpretation of this level. This authority of the logic of existence, existential choice, interpretation, is emphasised in the level of existential methodology. (Rauhala 1993, 43–44.)

Situatedness is perceived to be everything that a person is in relationship with. The structural constituents include both concrete and ideal components. While a person is born into the world, she is born into history and tradition – into the world of shared meanings. These ideal components of the situatedness are, for example, norms and values. These cultural meanings or social practices cannot be reduced into subjective experiences of the individual. They are collectively created *with* time and no private person is able to change them. (Rauhala 1993, 43–44; 1974, 129–130.)

Situatedness means the individual's entanglement into the reality through and according to her own life situation. Existential choices, described above, mean the fateful determination of structural constituents of situatedness. Psychological choices are those components of the situatedness that the individual is able to choose and thus she is able to modify her situatedness. A human being has, due to her choices based on actual understanding, freedom to direct in certain limits her becoming real. This enables the self-responsible

changes of situatedness. (Lehtovaara 1994b, 132.) Humanistic conception of man emphasises both the meaning of fateful components of the situatedness of human being and the possibility and responsibility of human being to steer the course of her life. A humanistic conception of man shows that the existence of human being may be influenced through different channels. (Rauhala 1993, 48–53.)

To sum, all existential modes of human being, situatedness, materiality and consciousness, participate in producing, exisiting and transforming of meaning relations. However, it is important to notice that each of them is involved in these events in its own specific way. Any of these modes could not be missing and any of them is not able to compensate another. (Rauhala 1990, 90.) Thus, the holistic conception of man means especially that a human being is primarily a whole though she operates through the three different modes of action. This unity is qualitatively more than is able to achieve by combining parts. (Lehtovaara 1994b, 113; Rauhala 1995, 85–89.)

The holistic conception of man and existential phenomenology justifies and explains philosophically an idiographic education and research model based on dialogue (Lehtovaara 1994b, 4). Existential phenomenology perceives the relationship of human being to the world not only as a problem of behaviour and performance but especially as a problem of meaning relation. Existential phenomenology strives to cover the whole scale of the problem of human meaning and thus, pursues the roots of subjective world view. (Lehtovaara 1994b, 11.) Thus, the ultimate aim of phenomenological research could be said to be the fulfilment of our human nature: to become more fully what we are (van Manen 1990, 12).

In total, I perceive a human being to be a holistic individual who has her own experiences and own life history. My conception of learning and teaching, as a teacher, has always included perceiving a student as an individual comprising her unique background and life situation that are always present in her learning experiences. I find it important to understand that all students are individuals, they experience issues differently and uniquely, and this is a challenge in facilitating learning. I perceive that existential human relations include questions of intimacy and respect, and this means encountering a student based on her humanity and personality and respecting her based on her mere existence. (see Mäki-Opas 1999, 44-45.) It is true that every student as a human being possesses many characteristics that are human and thus common for them all. However, it is not possible for an educator – or a researcher of human beings – to manage only by basing her action on common laws; instead, she has to perceive each individual from the subjective existence of her. (see Mäki-Opas 1999, 51–52.) These conceptions

which mean a desire to thoroughly understand students' experiences have led me to choose an existential-phenomenological method for conducting the empirical part of this study.

1.4 Structure of research report

The research report follows the form of a typical research monograph. However, the conceptual framework of this study was mainly conducted only after the empirical part of the study had been completed. Consequently, the empirical study was carried out according to the principles of the phenomenological method. The aim of the broad theoretical framework is to provide a foundation for understanding and developing learning in professional education, and in clinical learning. The chapters two to five form the conceptual framework of this study.

In chapter two, I will discuss the dominant learning perspectives. I chose to deal with many perspectives because no single approach would provide a comprehensive picture of learning. In this section, I will focus on constructivism, social and contextual perspectives, experiential learning, and reflectivity and transformative learning. Thus, it includes the dominant and most important learning approaches related to professional education and clinical learning.

In chapters three and four the significance of self-directedness, self-regulation and emotion in learning will be considered. These chapters address the significance of the learner's active role in learning as well as the importance of the "soft" side of learning, not only cognition and rationality which are emphasised in contemporary learning approaches and in society in general. It is also important to notice that constructing learning concept and perspective about learning in polytechnics requires research and development in polytechnic context (Kotila 2003, 12; see also Karttunen 2003, 43); for example the concept of self-regulation have not been investigated within nursing education.

Chapter five will present clinical learning in nurse education and as the context of this study. The development of the professional is perceived to be a learning process towards professional expertise. In this chapter also previous studies about clinical learning will be briefly presented and summarised. At the end of each chapter of the conceptual framework there is a summary where I present and reason the theoretical definitions to which I am committed in this study.

In chapter six, the methodological background of the study will be dicussed: I will explore phenomenology as an approach and a research method. I will also deal with the critical incident technique and its use as a data gathering method as well as teaching and learning method.

Next, in chapter seven, I will present the setting of this study, and the empirical research process of this study will be displayed. While presenting the research process, I endeavour to reveal in detail how I conducted the analysis in order for the reader to get involved and be able to assess its appropriateness. The results will be portrayed in chapter eight. The results are described, first, as eight individual experienced clinical learning portrayals, which describe how eight nursing students experienced uniquely their clinical learning, in their recorded critical incidents, throughout their nursing education. Secondly, the results are described as general clinical learning portrayal types; four different types are displayed. These types describe how the phenomenon of clinical learning presents itself in four different ways.

An essential part of this study is a dialogue between the empirical knowledge of this study and the theoretical knowledge about the phenomenon of clinical learning. In chapter nine, this dialogue mirrors the experiences the students had in this study with the knowledge produced by previous research and the previous theoretical knowledge about clinical learning. Finally, in chapter ten, I will reflect the research process of my study; credibility and ethical questions of this study and suggestions for further study will be displayed.

I use the female case, regardless of gender, throughout the report in order to protect the identity of the research participants and for the sake of simplicity.

2 Perspectives on learning

2.1 Towards holistic learning perspective

In this chapter, I will focus on the foundational theories of learning. First, I will introduce briefly the idea of more comprehensive understanding of phenomenon of learning that seems to be emerging. This serves as background to different perspectives of learning by pointing out that at the moment there is no single approach that would provide a comprehensive picture of learning. Therefore, I perceive that it is necessary to discuss here the most dominant contemporary learning perspectives, both general learning theories and theories associated with adult learning as well as theories dealing with learning from experience. Each of these theories provides some insight into learning in nursing education and especially in clinical learning. I will start with constructivism because it is a widely accepted learning approach both in research and academic writings, as well as in practice of education, and is considered a beneficial perspective in understanding a unique learner's experiences and learning process. I will continue with exploring social aspects of learning. I will also assess the significance of experience in learning. This chapter closes with the concept of transformative learning which illustrates the meaning of transformation or a change in perspective in learning, which could be perceived as an ultimate goal of learning.

At the background of teaching and learning there are always some assumptions about how learning occurs. These assumptions are not necessarily conscious but even as subconscious they guide both teachers' and learners' behaviour and actions. (e.g. Tynjälä & Nuutinen 1997, 187.) There can be no value-neutral position with regard to learning and teaching or facilitation learning. Thus, a clarification of underlying values and beliefs and of the central concept of learning is important. (e.g. Pratt 1993, 22.) Concepts and perspectives of learning have changed during decades and different aspects of learning have been emphasised in different times, and different researchers focus on different aspects of human learning. It is important to keep in mind that different theories provide us with frameworks which help us to perceive and interpret our own perceptions related to learning. (e.g. Ruohotie 2000b, 107; see also Sfard 1998, 4.)

Consequently, as was mentioned above, it is not able to find a certain method that would be a shortcut to learning, because learning is a hermeneutic process that is based on meanings, interpretations and meaningfulness (Puolimatka 2002, 370; see also Driscoll 1994, xviii). No single perspective provides with

a comprehensive picture of learning or adult learning; each learning theory illustrates a certain side and leaves other sides more or less obscure (e.g. Malinen 2000, 7; Sfard 1998, 12; Wenger 1998, 3–4). It is suggested that the area of learning and adult education research is fragmented. Accordingly, in the current writings of education, the need for a more holistic and comprehensive learning theory is identified (e.g. Fenwick 2000; Illeris 2003; Malinen 2000; Yorks & Kasl 2002; see also Dirkx 2001; Sfard 1998, 11), and it is also suggested that the research of learning should be multidisciplinary (e.g. Lonka & Hakkarainen 2000 139-140; see also Soini H. 2001, 50).

Furthermore, there is critique towards the hegemony of an epistemology that privileges rationality (e.g. Yorks & Kasl 2002, 184) and emphasises the cognitive aspects of learning. In contemporary education discourse there is a growing interest towards multiple ways of knowing, and the significance of emotional components or the affective in learning has been identified (e.g. Boekaerts 1995, 402; Malinen 2000, 7; Yorks & Kasl 2002, 184).

Thus, on one hand it is evident that understanding the complexity of learning presumes parallel usage of different theoretical models although these perspectives may include conflicting assumptions (see Lehtinen & Kuusinen 2001, 136–137; see also Soini 2000, 324); on the other hand, the need to the theoretical synthesis of different research traditions has recently been recognised. It seems that in recent years different perspectives have approached each other. Today, very different types of approaches – activity theory, humanistic psychology, experiential learning, cognitive-constructive, socio-constructive and educational – emphasise the learner's active role as a constructor of knowledge, and the nature of learning as context-bound and situation-related. (see Bruner 1996, 4; see also Lonka & Hakkarainen 2000, 135; Lonka & Lindblom-Ylänne 2001, 42; Soini, T. 2001, 12; 2000, 324.)

Indeed, learning-centred pedagogy and the idea of active learning are perceived to be important in all education in the society (e.g. Niemi 1999, 89–92; Väisänen 2000, 34*)*. Similarly, basic ideas of constructivism are widely accepted and these ideas are included in many trends of learning, such as self-directed learning, transformative learning, experiential learning, situative cognition, and reflective practice (e.g. Merriam 1993, 7).

Learning-centred education emphasises following aspects of learning: self-directedness in learning, including the concepts of metacognitive consciousness and self-regulation; engendering and creating knowledge based on companionship; experiential learning, including the concepts of reflection and transformative learning; holism in learning: emotions, values, motives, self-concept, life situation; contextuality of learning (e.g. situation-based learning); learning based on interaction; life-long learning; and open,

dynamic and learning centred evaluation of learning. (e.g. Väisänen 2000, 42–50.) For the purposes of this research, I will discuss these aspects of learning in my study.

It is important to consider different approaches to learning because today there is also discussion about change of paradigm in education science, which may be still difficult to acknowledge in practice but some tendencies already exists (Lonka & Hakkarainen 2000, 135). Lonka and Hakkarainen discuss these tendencies in their article about education in the year 2020. According to them, the change seems to be related to emphasis of social and cultural aspects of learning, emphasis of dynamic developing nature of intelligent action of human being, and development of learning environments and technological tools that support this kind of action. (Lonka & Hakkarainen 2000, 135.) It is also evident that philosophical and psychological thinking are coming closer each other concerning issues of learning. They deal with the questions of the origin, nature and justification of knowledge that are classic questions in the philosophy of science. (Lonka & Hakkarainen 2000, 138.) Consequently, it seems that the more comprehensive understanding of learning is emerging.

Whereas each of the learning perspectives that I will discuss focuses on different aspects of learning, together they shed light, I believe, on how to reconcile perspectives that emphasise cognition and rationality in learning with the cultural, affective and interpersonal aspects of learning.

Thus, although in this research learning is perceived mainly, according to constructivist approach, as the learner's active structuring of knowledge, meanings and conceptions, in which the learner strives for understanding and competence on the basis of her personal experience - learning is a complex process and understanding of it presumes also synthesis of other perspectives that take into account the situated and social aspects of learning, and also other than cognitive aspects of learning emphasising learning that takes into account beliefs, experiences, emotions and images. Although, I find it important to consider different aspects of learning, this does not lead me to advocate an"anything goes" kind of approach to learning. Instead, I perceive that in order to capture the versatility of learning it is necessary to explore and combine different learning approaches.

2.2 Constructivism

2.2.1 Constructivism as a learning approach

Current pedagogical discussion both in Finland and internationally has been dominated by constructivism in its different forms (e.g. Kalli 2003, 59; Ruohotie 1998, 9; 2000b; Tobin 1993, ix; Tynjälä 1999c). Origins of constructivist view of learning are often traced back to American pragmatists such as William James and John Dewey, and the authors of cognitive and social psychology, Jean Piaget and L. S. Vygotsky.

Constructivism is neither a new epistemology nor a learning theory as such; instead it is an epistemological view about what knowledge is and how a person acquires knowledge (Tobin 1993, ix; Tynjälä 1999a, 22). It is suggested that constructivism should not be regarded as a new truth to replace objectivism; instead it is a way of thinking about knowing, a referent for building models for learning and teaching (Tobin 1993, ix; see also Siljander 2002, 18). Constructivism is not a uniform school of thought, either. It includes many branches with different emphasis. (e.g. Phillips 1995, 5–12; see also Fenwick 2000, 248.)

Common to these perspectives is an epistemology according to which knowledge is not objective reflection from the world which could be transferred as such; instead knowledge is always structured by individuals or social communities. Thus, learning is not passive receiving of knowledge but it is perceived as the learner's active, cognitive and/or social action, where she continually structures the picture about the world and phenomena within it, interpreting new information on the basis of her previous knowledge, conceptions and beliefs and attending to actions of social communities. (von Glaserfeld 1993, 26; Rieber 1993, 197; Taylor 1993, 268–169.)

Constructivists use the metaphor of construction because it appropriately summarises the epistemological view that knowledge is built by individuals (Cobern 1993, 51). Consequently, constructivism emphasises the significance of the active role of the learner and social interaction in learning (e.g. Tynjälä 1999c, 162–163). Constructivist approach perceives the individual as a central actor in personal meaning-making. The learner reflects on lived experience and interprets and generalises this experience to form mental structures. (e.g. Driscoll 1994, 360–361; Fenwick 2000, 248; Merriam 1987, 196.) Thus, from the constructivist viewpoint, learners are knowing beings who construct knowledge that is personally meaningful (Cobern 1993, 52). Since each individual experiences reality slightly differently, knowledge is always somewhat idiosyncratic (Candy 1991, 278). Recently, it is also acknowledged

that learning is always coloured by emotions and motives, and according to constructivism, the change of dimensions of emotional experiences is often even more important than the change of the knowledge contents (Saariluoma 2001, 30). It is suggested that constructivism, as a set of beliefs about knowing and knowledge, can be used as a referent to analyse the learning potential of any situation (Tobin & Tippins 1993, 8).

This constructivist epistemology is based on a relativist philosophy that denies the possibility of obtaining an objective, or depersonalised, account of the world (Taylor 1993, 268–269; see also Candy 1991, 263). Constructivism acknowledges the existence of a reality but perceives that we can only know about it in a personal and subjective way; we continuously interact throughout our lives with a real world but we have no direct access to that world other than through our senses and conceptually laden perspectives - we can never know what that reality is actually like. We can know the world only by constructing interpretive models whose viability depends on their success in enabling us to deal with the world - physically or cognitively. Thus, knowledge constructions do not have to present the world as it really is in order to be useful and viable. (Taylor 1993, 28–23; see also Bettencourt 1993, 46; Driscoll 1994, 360-361; Malinen 2000, 49; Tobin & Tippins 1993, 3–4.) Instead, the truth-status of an individual's knowledge depends on its viability in solving a personally meaningful problem and on its socially determined acceptance by the individual's peer group and mentors. Thus, an individual's knowledge remains inherently temporary and relativistic; it both moderates and is moderated by the process of personal cognitive construction. (Taylor 1993, 268– 269; see also Wildemeersch 2000, 170.)

Another feature of the constructivist epistemology is the concern with the existing conceptual framework that a learner brings to new learning situations and experiences. The wholeness of an individual learner's prior "life-world" experiences constitute a conceptual frame of reference for perceiving and making sense of new phenomena. New concepts are constructed to deal with cognitive disorder arising from novel problematic experiences and are assimilated into an individual's existing conceptual framework. The ultimate viability of a new concept depends on the extent to which it has been integrated in the network of existing concepts and is available for future experiences. When assimilation is unable to confirm cognitive balance, a radical restructuring of the conceptual framework may occur. (Taylor 1993, 269.)

Constructivism is used with slightly different meanings; common to these approaches is the central assumption that all we come to know is our own construction (Bettencourt 1993, 39). Different branches of constructivism differ from each other mainly in the role of the individual or the social

aspects in learning: cognitive constructivism is interested in the individual and her knowledge construction processes and mental models, whereas social constructivism emphasises social and dialogical processes, and thus emphasises language and discourse (Tynjälä 1999b, 364; see also Dana & Davies 1993, 326). It is suggested that cognitive and social constructivist theories have come closer to each other as a result of recent critique and discussion (Tynjälä 1999b, 364), and that the branches of constructivism should be combined to show that an adequate approach to learning and teaching research includes these different perspectives (Cobern 1993, 66).

In the personal constructivist view, conceptual change occurs when the learner finds that conceptions are more appropriate than her own previously held conceptions. However, there was critique that this personal constructivist view does not take into account the context and is very rationalistic. Thus, there emerged discussion about the significance of the context and non-rationalistic components in conceptual change. (Cobern 1993, 54.) Consequently, there was more research emphasising the significance of context and social aspects in learning and the branch that can be called as social or contextual constructivism emerged. It was influenced also by the research of sociology of knowledge (for example Berger & Luckman) and influence from anthropology. These emerged sub-branches of social interactionism (for example Solomon) and branch of cultural studies (for example Millar, Ogawa, and Cobern). (Cobern 1993, 52–53.) According to Cobern (1993, 66), contextual constructivism is a natural outgrowth of personal constructivism. Contextual modifications of constructivism emphasise contextual and social factors in the development of the individual. The individual does not construct her conceptions as an independent individual but her conceptions are dependent on the community. (e.g. Puolimatka 2002, 43, 69.)

Some authors differentiate social constructivism and situative learning theories. In social constructivism the emphasis is on linguistic interaction between people or between people and cultural environment. This interaction engenders knowledge. Thus, knowledge construction is mainly a social process. In situative learning theories the emphasis is on interaction between individual, her action and context. Consequently learning is perceived as developing into a skilful actor in certain environment and participating in the culture of this community. The focus of the investigation is the context of learning; the reciprocality of actor, activity and context. (see Brown, Collins & Duguid 1989, 32.) The social and contextual dimensions of learning are discussed more in detail in chapter 2.3.

Constructivism is in harmony with many adult learning theories or perspectives. Constructivism is congruent with self-direction because it

emphasises active inquiry, independence and individuality in learning tasks (Candy 1991, 278). Constructivism has also connections with transformative learning view which concentrates on the social and individual aspects of meaning construction. Change in perspectives is a cognitive process where the meaning schemes and meaning perspectives of the individual go through radical changes. Another point in common with dominant learning theories is the central role of experience. The role of experience in learning theories is perceived both as a stimulus and as resource for learning. In addition, main part of the perspective of situative cognition in adult learning is constructivist in its nature. Moreover, theoretical understanding of professional growth is very much based on the concepts of constructivism and situative cognition. (e.g. Ruohotie 2000c, 119–120 ; 2000b, 8.)

2.2.2 Summary of constructivism

In contrast to the positive view of constructivism discussed above, it is important to keep in mind as Kauppi (2003) suggests that from the viewpoint of professional education, constructivist learning approach includes aspects that may also be problematic. Firstly, as the result of the emergence of constructivism, learning is perceived as a change in the learners' conceptions and not any more as a practical ability to master learned and taught skills. However, competence includes also the technical command of the work, not only the conceptualisation of it. Kauppi perceives the ability to repeat learned skills as an experienced routine which is a part of daily professional action. Command of routines enables the flexible progress of work. (Kauppi 2003, 15–16; see also Kivinen & Ristelä 2003, 7–8.)

Another point that may be regarded as a shortcoming of constructivism is that constructivism is focused on the declarative knowledge and concepts in considering all learning. Consequently, procedural knowledge, technical command of work and its learning, which is an essential part of professional competence, has not been the focus of investigation. However, in learning a profession the change should occur in professional action, not only in conceptual thinking. (Kauppi 2003, 15–16; see also Kivinen & Ristelä 2003, 7–8.)

It is also argued that constructivism does not provide enough understanding of the role of desire, emotion and subconscious modes in learning (Fenwick 2000, 249). The constructivist view considers the individual as a primary actor in the knowledge construction and learning as largely a conscious and rational process. The emphasis on conscious reflection also ignores or makes

invisible those psychic issues that are not available to the conscious mind. (Fenwick 2000, 249–250; see also Michelson 1996, 439, 444–445.)

To sum, though it is important to take into account the aspects which are regarded to be shortcomings of constructivist perspective in learning, constructivism is however a dominant learning approach at the moment and provides also an appropriate foundation for understanding learning and clinical learning in nursing education; however, it is important to complement and widen this perspective with other learning approaches. In this study, constructivism serves as a broad framework for how learning is understood. From the viewpoint of constructivism, the most important issue in clinical learning is the activity of the learner constructing the picture about the authentic world of nursing and phenomena within it, interpreting new information on the basis of her previous knowledge, conceptions and beliefs and attending to actions of social community of health care.

The adoption of a constructivist view of learner has important implications for self-direction in learning, which will be discussed in chapter three. A self-constructing person would have a tendency toward being autonomous – she is presumed to have both ability and willingness to be self-aware as well as able to self-regulation. (see Candy 1991, 259.)

2.3 Situated nature of learning

2.3.1 Situated cognition and social approaches on learning

In this chapter, I will discuss theoretical frameworks developed for understanding social aspects and situated nature of learning. I will also introduce two models, cognitive apprenticeship and Zone of Proximal Development, related to the situated nature of learning which may be especially useful in offering theoretical frameworks for understanding some aspects of clinical learning.

As was stated while discussing constructivism, the significance of context has recently been emphasised when considering and exploring learning and education. Also when considering learning a profession, the meaning of the context has been the focus of interest lately; learning process has been investigated, for example, as growing as a member of a community of expertise. (e.g. Lave & Wenger 1991; Wenger 1998.)

This approach emphasising the significance of the context in learning, loosely labelled *situated cognition* broadens understanding of situated nature of learning in focusing on certain aspects of learning that has not been fully

understood in cognitive approaches. It is obvious that human minds develop in social situations and that they use the tools and representational media that culture provides to support, extend and reorganise mental functioning. However, as was previously discussed, cognitive theories have to some extent ignored questions of these relationships. (Vosniadou 1996, 96; see also Anderson, Reder and Simon 1996, 10; 1997; Burr 2002, 365; Kirshner & Whitson 1997, 1; Wenger 1998, 3–5.) Lave (1993, 7) even argues that traditional cognitive theory is ”distanced from experience” and divides the learning mind from the world. He argues that traditionally learning researchers of cognitive theory have studied learning as if it were a process contained in the mind of the learner and have ignored the lived-in world. (Lave 1993, 7.)

When speaking about the social aspect of learning in literature, it has meant many different issues, such as support that individual receives from others, joining the membership of a certain knowledge culture, learning through working methods and established practice, learning of the whole social unit and the growth of social capital (Hakkarainen & Järvelä 1999, 156; see also Rauste-von Wright et al. 2003, 60–61). Thus, it is evident that there is a remarkable variety of theoretical positions represented in this field (see Chaiklin 1993, 378; Lave 1993, 28). Moreover, the concepts of situation and context are often inaccurate (e.g. Lehtinen & Palonen 1997, 109). However, together these perspectives suggest that learning is socially situated and socially produced (e.g. Lave 1993, 28; see also Sfard 1998, 6); they mostly address the interactive relations of people with their environment (Wenger 1998, 13). It is important to understand the context as a wide concept including emotional, organisational, physical and cultural traits; in addition each of these includes many sub-aspects (see Novak 2002, 192; 1998).

In general, situated learning approach emphasises the meaning of the environment or context in which learning takes place. This approach emphasises that all human actions, learning included, is tied to the culture, time, place and situation where it occurs. According to this perspective, the community of practice, i.e. the whole community where the action takes place, is the focus of investigation. (Lave & Wenger 1991.) Thus, in situated cognition, the learning process cannot be separated from the situation in which the learning is presented. The physical and social experiences and situations in which learners find themselves and the tools they use in that experience are integral parts of the entire learning process. (Brown et al. 1989, 32; Merriam & Caffarella 1999, 241.) Thus, from the viewpoint of learning, it is important that individual learners are able to revisit and reflect on their own experiences and learn from them but it is also important to assess

learners to recognise the contextual factors and how experiences are defined by those factors. (Merriam and Caffarella 1999, 230; see also Anderson, Reder & Simon 1997, 20.)

As the consequence of situative cognitive approach there is a new tension also in epistemological consideration; according to traditional view, the essence of knowledge could have been perceived as substance situated in the individual's mind. In the situative perspective knowledge is perceived as the relationships between the individual and the physical and social situations. (Lehtinen & Palonen 1997, 109.) Thus, in this perspective, it is suggested that situations co-produce knowledge through activity (Brown et al. 1989, 32).

Consequently, situated learning takes as its focus the relationship between learning and the social situation in which it occurs. Rather than defining it as the acquisition of knowledge, for example, Lave and Wenger situate learning in certain forms of social co-participation. They do not ask what kind of cognitive processes and conceptual structures are involved, instead they ask what kinds of social engagements provide the proper context for learning to take place. (Lave & Wenger 1991; see also Hanks 1991, 14.) According to Lave (1993, 7), it is important to perceive "relations among person, activity and situation, as they are *given* in social practice, itself viewed as a single encompassing theoretical entity." Lave (1988, 1) even argues that "there is reason to suspect that what is called cognition is in fact a complex social phenomenon" and presents the idea of cognition as stretched across mind, body, activity and setting (Lave 1988, 18; see also Wilson 1993, 72; Brown et al. 1989, 32). Theories of situated activity do not separate action, thought, feeling, value and their collective, cultural-historical forms of located, meaningful activity. Situated activity always involves changes in knowledge and action and changes in knowledge and action are central to learning. (Lave 1993, 5–7.)

From the viewpoint of holistic and experiential learning, situated cognition offers an appropriate approach. Experiential learning or knowledge acquisition is inevitably situated because learning takes place in real-life settings, under real performance requirements on actual individuals, and is therefore open to social influences that may arise at any time. Learning in real-life settings seems to be influenced by both personal and setting-related components. Emotions such as social embarrassment and social anxiety seem to be a crucial catalyst in the learning process. Many studies exploring learning activities focus on learners' cognitive requirements and neglect the structures and dynamics of the settings in which learning takes place. (Fuhrer 1993, 179–180, 186; see also Rogoff 1984, 1–3.) Fuhrer (1993, 186) states that when taking into account both the cognitive and the environmental dimension in the study

of situated learning a third dimension, the emotional one, comes naturally into the focus. These emotional aspects of learning will be discussed more in detail in chapter four.

Furthermore, from the viewpoint of the professional education it is important to point out that situated cognition is characterised by a concern for competence. Competence, understood as the ability to act on the basis of understanding, has been a fundamental goal of education. The problem has been that knowledge gained at school does not necessarily transfer to the ability to act competently in practice where the knowledge is needed. Situated cognition may resolve this dilemma by offering a new explanatory structure within which to explain competence. From the viewpoint of situated cognition, competent action is not grounded in individual accumulations of knowledge but is, instead, generated in the web of social relations and human artefacts that define the context of action. Situated cognition broadens the attempt to understand cognition in the direction of social and in the direction of particular experiences of the social. (St. Julien 1997, 261–266.) This viewpoint is discussed more in detail in the section considering cognitive apprenticeship and later when dealing with expertise as the goal of education in chapter five.

Well respected contributors of the field of situative learning are Lave and Wenger who view learning as situated activity and its central defining characteristic legitimate peripheral participation. This concept includes the idea that learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires novices to move toward full participation in the socio-cultural practices of a community. Its focus is on the process by which newcomers become a part of a community of practice. The similar idea is in the model of the cognitive apprenticeship. Situated learning has been used as a rough equivalent for notions of ”learning in situ” or ”learning by doing”. By examining these concepts and theories Lave and Wenger developed their perspective as legitimate peripheral participation which includes the view that learning is an integral and inseparable aspect of social practice. Their perspective includes the idea that there is no activity that is not situated. (Lave & Wenger 1991, 29–31; see also Wenger 1998, 11–13.) Hanks (1991, 16) suggests that the challenge is to reconsider actions in such a way that structure and process, mental representation and skilful execution, interpenetrate one another deeply. Wenger (1998, 11) states that the idea is to broaden the traditional connotations of the concept of apprenticeship – from a mentor / mentee or a master / student relationship to one of changing participation and identity transformation in a community of practice; the primary focus being on learning as social participation.

Participation refers to being active participant in the practices of social communities and constructing identities in relation to these communities. Such participation shapes not only what people do, but also who they are and how they interpret what they do. (Wenger 1998, 4–5, 11.)

2.3.2 Cognitive apprenticeship model

If learning and knowing are to be based on the actual cognitive practices of humans, then they have to be located in authentic activity (Wilson 1993, 77). Brown and others (1989, 33) emphasise that learning is a process of enculturation. Problem solving and cognitive practices are carried out in conjunction with the setting, not simply as internalised mental processes (Wilson 1993, 77). Consequently, it is important that learners attend to authentic situations of the discipline already from the beginning of their education, so that they have opportunities to solve authentic problems and get to know experts' ways of thinking and the culture of practice (Tynjälä 1999c, 168). Cognitive apprenticeship models offer tools for this approach. These methods have been presented, for example, by Brown and others (1989, 37; also Collins, Brown & Newman 1989). Along quite similar lines, Schön (1987) presents the term reflective practicum as a means of reaching the tacit knowledge that is embedded in professional practice. This perspective will be discussed in chapter 2.5 dealing with reflection and transformative learning.

According to cognitive apprenticeship approach, the most ideal way of learning is learning in authentic settings supervised by experienced mentors. This cognitive apprenticeship model is based on the idea that the meta-cognitive processes that experts use are made transparent, explicated, for learners. (Brown et al. 1989, 39; Collins et al. 1989, 457.) Here, the master-apprentice relationship is used as an analogy for a teaching - learning process (see Järvelä 1998, 443). The cognitive nature of the apprenticeship emphasises different thinking models related to the content under studying, as well as learning skills. Collaborative social interaction is perceived as a factor that promotes and structures learning, though it is perceived that knowledge structuring and learning processes are individual. (Brown et al. 1989, 40.)

The cognitive nature of apprenticeship places emphasis on teaching learners different ways of thinking about whatever they are learning, as well as any skills associated with the apprenticeship (Merriam & Caffarella 1999, 243). Three different aspects in learning are emphasised. Firstly, it aims at teaching the mental processes that experts use to handle complex tasks; secondly, the focus of learning is on cognitive and metacognitive, rather than

physical, processes and skills; thirdly, applying the apprenticeship method to largely cognitive skills requires the externalisation of processes that are usually carried out internally. (Järvelä 1996a, 7.) Cognitive apprenticeship is an appropriate means for teaching cognitive skills because it makes the covert thinking (cognitive skills) explicit through modelling and then helps students to acquire them through coaching and scaffolding (Randi & Corno 2000, 654–655).

Consequently, the methods that the master or mentor uses are: modelling, coaching, scaffolding and fading, articulation, reflection and exploration (Collins et al. 1989, 476). Modelling gives a model of expert performance while the learner is observing the mentor and building a conceptual model of the processes that are required in performing a task. This requires the mentor to externalise usually internal processes and activities, also motivational and emotional impulses in problem solving. (Collins et al. 1989, 481; Järvelä 1998, 443.)

Coaching includes observing the learner while she carries out a task and offering hints, scaffolding, modelling and giving feedback. Thus, coaching involves creating a balance between challenge and support. The content of the coaching interaction is related to specific events or problems that arise as the learner attempts to perform a task. (Collins et al. 1989, 481–482; see also Reid 1993, 309.) Learners are expected to take more control of their learning once basic knowledge and skills are developed (Strochschein, Hagler & May 2002, 169).

The metaphor of scaffolding includes the idea of an adjustable and temporary support that is removed when no longer necessary. Thus, scaffolding is adapted to the learner's current state and the amount of scaffolding decreases as the skills of the learner increases. (Brown & Palinscar 1989, 411.) Scaffolding is the core of the helping process in the apprenticeship method, which means that the mentor provides learners with the minimum support necessary to assist learners to operate at the upper limits of their competence (Brown & Palinscar 1989, 411; see also Harland 2003, 268; Rogoff & Gardner 1984, 101–116). Scaffolding includes a kind of cooperative problem-solving effort by mentor and learner. Fading consists of the gradual removal of support until the learner is able to act independently. (Collins et al. 1989, 482.)

Finally, articulation involves any method of getting the learner to articulate her knowledge, problem-solving or decision-making process in a domain. Reflection enables the learner to compare her own problem-solving process with those of the mentor or another student. (Collins et al. 1989, 483; Järvelä 1998, 444; see also Schraw 1998, 102.) Reflection may be enhanced by using different methods, such as, writing or recoding techniques. Finally,

exploration includes that the learner is able to solve problem on her own; the goal is that the learner is exploring interesting tasks and problems and is able to solve them independently. (Collins et al. 1989, 483.)

The metaphor of apprenticeship emphasises the active role of the student has to take as she engages in learning the ways of a culture by being involved in collaboration, shared activity and problem solving (Roth 1993, 163). Thus, cognitive apprenticeship is supposed to create an optimal social interaction for learning (Järvelä 1996b, 33). It also supports learners to use and acquire knowledge in carrying out realistic and complex tasks (Collins et al. 1987, 454–455).

There is also critique towards using apprenticeship model in education. Tynjälä (2004, 188 referring to Bereiter 2002, 417) suggests certain reservations related to the model. It is suggested that it does not emphasise developing conceptual understanding and integration of theory and practice. The model also reproduces prevailing practices instead of development of new practices. These shortcomings and how they may be avoided are discussed more in detail in chapter five dealing with expertise.

2.3.3 Zone of Proximal Development

The concept of Zone of Proximal Development (ZPD) may be used combined with the cognitive apprenticeship model to assist the learner to work on an appropriate level of challenges. Brown and Palinscar (1989; see also Harland 2003, 264–265) refer to Vygotsky's (1978, 8) theory about the Zone of Proximal Development (ZPD): "The zone of proximal development is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers." Thus, this ZPD defines the distance between the learner's current levels of comprehension and levels that can be accomplished in collaboration with other people or powerful artefacts. It embodies a concept of readiness to learn that emphasises upper, rather than lower, levels of competence, boundaries that are not fixed, but rather constantly changing as the learner becomes increasingly independent at successively more advanced levels. (Brown & Campione 1994, 236; Brown and Palinscar 1989.)

Brown and Palinscar (1989, 409–416) suggest that social settings can provide learning zones for novice learners without any explicit instructional goal. They designed the learning environment which provided a ZPD within which novice learners could take on greater responsibility for more expert

roles. (Brown & Palinscar 1989, 411; see also Harland 2003, 268.) Their students were children but the idea may also be applied for adult learners.

Discussion and supervision are significant in the development of expertise: the timing of scaffolding is very important during the mentoring process. It is important that the mentor accompanies the principle of minimal support: the mentor supports the learner in the upper limits of her Zone of Proximal Development, but does not remove the responsibility of learning away from the learner (Järvinen 1999, 252). Hakkarainen and Järvelä (1999, 243) suggest that if the learner is working on the extreme limits of her capacity, it supports her to achieve her ZPD. Thus, it is important for the teacher or mentor to be able to adjust to maximise roles in both support and emancipation – learning when to let go and trust learner judgement. A ZPD can include individuals with varying expertise but it can also include artefacts such as books, scientific equipment, and a computer environment intended to support intentional learning (Brown & Campione 1994, 236).

Harland (2003) used the theory of ZPD combined with Problem Based Learning when teaching university students. At the beginning of learning a new subject, students assessed their zones of current development (ZCDs) and diagnosing one's own ZCD became embedded in students' repertoire of skills. Becoming critically reflective about learning appeared to be the key to both successful diagnoses in the ZCD and progression through the ZPD. Embedded in Vygotsky's social constructivist view of development is the idea that learning is the outcome of collaborative problem-solving, and that it is best facilitated through the set of authentic activities (Harland 2003, 270).

Hakkarainen, Lonka and Lipponen (2004, 208–209) widen the concept of ZPD to include all dimensions of learning, such as intellect, emotions and action. They present the concept of safety zone which refers to the support based on emotions: from the viewpoint of successful learning it is critical how individuals are able to support and encourage each others' learning. Learners who are working in the ultimate limits of their skills and understanding – on ZPD – are especially vulnerable. Thus, the atmosphere that is negative or feeding anxiety may decrease the learner's possibility to learn, whereas the encouragement based on emotions supports the learner (and her mentors) to share their thoughts, give constructive feedback and create a kind of safety zone where individuals may grow both intellectually and as human beings. (Hakkarainen et al. 2004, 208–209.)

2.3.4 Summary of situative learning perspective

In sum, as this chapter points out learning theories that highlight social and situated aspects of learning may be especially useful when considering nursing students' clinical learning where learners are practicing in authentic work situations by the supervision of mentors. Theories that focus on social and situated aspect of learning are helpful in understanding complex interactions included in learning professional competence at workplaces (see also Candy & Crebert 1991, 571; Spouse 2001). However, it is important to take into account the situative learning theories' restrictions. Kauppi (2003, 19) points out that situated learning may include a problem between the relationship of individual learning and community: it easily perceives the learner as subordinate in relation to the community of work. This problem may be decreased by the organised supervision by the school: it is necessary that the educators of school take care of the supervision and cooperation between school and workplace in order to support learners in their goal-directed learning process. Another point to be taken into account is acknowledging the importance of developing conceptual understanding and integration of theory and practice. This could be supported, for example, by teaching and learning methods that emphasise reflection.

2.4 Experiential learning

2.4.1 Approaches of experiential learning

The role of experience is identified to be important in many learning approaches. The significance of experience in learning was already discussed in the chapter dealing with constructivism and will be further discussed in the connection of reflection. Here, I shall briefly discuss both the most influential traditional perspectives and new, more comprehensive approaches on experiential learning in order to capture the essence of these approaches and their effect on the tradition of experiential learning and other learning approaches, and their significance from the viewpoint of clinical learning.

Experiential learning that emphasises the role of self-reflection may be perceived to be anchored within the ideology of humanistic psychology. This paradigm emphasises reflection of experiences and growing to be self-directive. (Usher 1989, 23; see also Edwards 1994, 435–436.) There are also many other approaches to theorising experiential learning. These approaches have been classified in many different ways by different writers. However, among predominant perspectives or theories, in addition to humanism, are

approaches that emphasise reflection or a constructivist perspective, as was previously discussed (e.g.Boud, Keogh & Walker 1994a; Kolb 1984; Mezirow 1991, Schön 1983/1995, 1987; Usher 1989, 23). In many dominant perspectives experiential learning is perceived as reflective construction of meaning, emphasis being in critical reflection and dialogue. Learning is presented as twofold: reflection-action where lived experience is recalled and analysed in order to create mental knowledge structures. (e.g. Fenwick 2000, 244; Jarvis 1987, 168.) These models and theories, which could be termed as traditional experiential models will be discussed in the chapter dealing with reflection and reflective practice (2.5.1).

In recent years, however, there has been critique that experiential learning is often seen in overwhelmingly positive light (e.g. Malinen 2000, 15) and the concept of experiential learning has many different meanings and its theoretical and philosophical foundations are confusing: the term experiential learning has been perceived in many different ways. It is sometimes understood as a large paradigm or framework of adult education, sometimes as one of many methods of teaching adults (Malinen 2000, 15; see also Boud, Cohen & Walker 1993, 8–16; Fenwick 2000, 243–246; Warner Weil & McGill 1989, 3–4; Yorks and Kasl 2002, 179–180) though often it has been perceived to have its foundation in humanistic psychology as was stated above.

Consequently, in the last years of the 1990s and the early years of the 2000s there has been a growing interest in developing more comprehensive theories for adult experiential learning (see e.g. Fenwick 2000; Illeris 2003; Malinen 2000; Usher 1989, 23). According to Fenfick (2000, 244), it is important to widen perspectives to theorising experiential learning.

Indeed, experience and adult experiential learning is a complex phenomenon (Malinen 2000; see also Jarvis 1987; Fenwick 2000, 243; Usher 1989, 23). According to Jarvis (1987, 164) all learning has an experiential basis. ”Learning always commences with experience and the process of transforming that initial experience is the process of learning” - ”life is about experience” (Jarvis 1987, 164).

The role of experience in learning has a long legacy in the writings on adult learning and the focus of this work has been on the individual. However, in recent years there has been a shift to understanding how the context affects learning and how it is an integral part of learning process as was discussed above. The role of experience in learning is a complex process. (see Merriam & Caffarella 1999, 194, 230; see also Malinen 2000, 101; Usher 1989, 23.)

It is also argued that traditional experiential learning traditions marginalise emotions and elevate rationality to a supreme position (e.g. Dirkx 2001, 67; Malinen 2000, 81) and make also little room for other aspects of learning, for

example, imagination (Malinen 2000, 81). Malinen perceives this contradictory because experiential learning emphasises the inner world of the learner (see also Barnett 1996, 72; Boud et al. 1993, 10–11; Nelson 1994; 390 –391, 401). Adults do not learn simply through their intellect, but through their whole being including volitions and emotions. In experiential learning, reflection is in the focus of learning. Reflection is a key into understanding also emotional and social aspects, in addition to cognitive phenomena in learning. Tensions related to emotions and interaction cannot be avoided. Instead, they have to be dealt with when present. (Poikela 2001, 109.) Thus, personal experience is an evident part of holistic learning though experience as such does not guarantee learning. Observation and reflection of the phenomenon is an important part of learning. Reflectivity in experiential learning may be perceived as a critical analysis of one's own actions, as well as its basics and consequences. The goal is the development of action. The duality of reflection includes in-depth consideration of one's own emotions, thoughts, attitudes and actions; on the other hand it means distancing oneself from everyday routines which enables thorough planning of one's own actions. (Kolb 1984; Ruohotie 2000b, 137.)

2.4.2 Role of experience in learning

Next, I will summarise the ideas about experiential learning presented by Malinen (2000) because this serves well in understanding the role of experience in learning also in clinical learning from the perspective of nursing students.

Malinen (2000, 55–100) has explored individual dimensions of adult experiential learning as described in noteworthy theories of Schön, Mezirow and Kolb and concludes that there are at least five basic characteristics in experiences. Experiential learning is a personal process (Malinen 2000, 83) that refer to past, lived experiences or life experience. These experiences have been lived through. Thus, each individual has a "private mixture" of experiences and these collections of experiences belong to learners as individual subjects and "constitute the adult's everyday meaningful world of significance." (Malinen 2000, 55 –60; see also Mair 1980, 126–127; van Manen 1990.)

Secondly, these kinds of experiences are implicit in their character; an individual lives with these experiences and therefore they are difficult to express in words. Malinen (2000, 60) states that this "private mixture" of experiences resembles "the Husserlian life-world, the world of the natural

attitude of everyday life." It is the world the individual finds oneself in without thinking about it. (see also Roberts 1992, 268.)

Thirdly, these experiences are always true, authentic and worthwhile for the individual herself (Malinen 2000, 60; see also Polanyi 1958/1962, 202*).* Fourth, experiences are described as incomplete. However, these collections of experiences are experienced as a holistic unity by the individual herself. (Malinen 2000, 61; Roth 1962, 35–36.) Malinen (2000) terms this kind of experiences "first-order experiences", which for the most part share the same characteristics as personal knowledge, and the total of these first-order experiences form the "boundary structures" for learning because they affect the way an individual understands and acts in the world (Malinen 2000, 61, 134). They are necessary but not sufficient preconditions for experiential learning. These theories include the idea that "for experiential learning the connection between what one has experienced already and what one comes to learn is crucial". (Malinen 2000, 62; see also Boud et al. 1993; Jarvis 1987.)

According to Malinen, these experiential learning theories listed above assume that learning begins with the interplay between the first-order experiences and experiences of different quality. These experiences Malinen terms second-order experiences. The second-order experiences have three properties: they break down the tendency to cling to what is familiar and disturbs the individual's balance. Secondly, the second-order experience generates negative feelings or at least causes confusion. "It may even threat the unity of Self". Malinen suggests that these negative feelings are not only mere cognitive discomfort but a holistic discomfort including emotional discomfort. The third property of the second–order experiences is continuity; it means that the past, the first-order experiences, influences on the experience of second-order experiences. Malinen refers to Dewey's (1951, 17, 27) idea of experiential continuum. Every second-order experience is a possibility for experiential learning, but the final potential for the commitment to learn seems to be within the learner herself. Experiential learning is retrospective; the experience under exploration has already lived through or passed. (Malinen 2000, 63–67, 75–76; see also Dewey 1951, 27.)

The broad definition for experiential learning is "a process of re-construction performed by an individual learner" (Malinen 2000, 85). Experiential learning is experiential at least in three senses. First, experiential refers to being in touch with first-order experiences (memory experiences) through memory and with help of second-order experiences. Secondly, experiential refers to being in touch with the second-order experiences; the role of these is crucial in the learning process. Having a second-order experience causes need for a

better understanding. Thirdly, experiential refers to the idea that experiential learning process includes doing something; it is not only an internal act. (Malinen 2000, 85.)

Experiential learning seems to be an opportunity for holistic personality growth, involving the whole individual: ”Development means individual changes towards autonomy or independence, rationality, relativistic thinking, self-direction, self-actualisation, integrated self-identity, and self-understanding” (Malinen 2000, 93).

Malinen suggests that the relationship between adult educator and adult learner as human beings and knowers means a process of interaction between existential and epistemological perspectives. The epistemological relationship to others is fundamental to knowing and therefore the educational relationship has a clear epistemological basis. However, it is the existential dimension that gives the interaction its basic characters. This existential dimension demands a relationship of equals. It is concerned with the learners' basic being-in-the-world, a world of natural attitude including emotions and feelings. Education of adults is a question of integrating this basic level of existence with the content of knowledge. (Malinen 2000, 122, 127, 132–133.)

Both constructivist and experiential learning theories rest on the assumptions that knowledge is constructed by learners as they attempt to make sense of their experiences (Malinen 2000, 150). First, the learner assigns meaning to her experience. Secondly, the learner brings to her experiences a gathering of past experience and knowledge. Thirdly, meanings are socially constructed and context-dependent. In addition, the need to make meaning of experiences is essentially human. (Merriam & Heuer 1996, 247.) Thus, learning is more construction of meaning through experience than it is discovering an independent, pre-existing world outside. Furthermore, learning is more subjective than objective emphasising the individual's interpretation, integration, and even transformation of knowledge. Thus, knowledge is assumed to be actively constructed by the learner, not passively received from the environment, and learning is an interactive process of interpretation, integration and transformation of one's experiential world. (Pratt 1993, 16–17.)

2.4.3 Summary of experiential learning

To sum, clinical learning may be said to be experiential learning as its best: the learner is in the middle of experiences in authentic work environments. As was previously discussed, experiences may act both as stimulus and resource for learning. However, it is important to support the learner to reflect her

experiences throughout clinical periods in order to help her to utilise her experiences in her personal and professional development.

2.5 Reflectivity in learning and transformative learning

2.5.1 Reflectivity in learning

In this chapter, I will focus on reflection and transformative learning. This chapter starts by detailing different theories of reflection and then explores the meaning of transformation in learning mainly through the work of Mezirow. The perspective of transformative learning is important in education because professional development presumes a learning process where the behaviour of the person changes; moreover her conceptual thinking develops. The professional development of the individual is always shaped through learning experiences and reflection. Reflection of one's own experiences stimulates the individual on continuous structuring of meanings, which may lead to the change of previously held conceptions, transformation and higher self-consciousness. (e.g. Ojanen 2000b, 98, 103–104.)

The concepts related to reflectivity in learning and differences in definitions will be discussed more in detail in chapter dealing with self-directedness and self-regulation in learning. There is confusion in using, for example, concepts of metacognition, self-regulation and reflectivity: there is no clear definition about difference between self-regulation and reflectivity. Authors of reflectivity do not usually refer to the concept of self-regulation and vice versa. However, many theories that deal with self-regulation include also reflection as an evaluative part of self-regulatory process.

Reflection has, during the last decades, been widely discussed in literature of education in general and also in nursing education (e.g. Atkins & Murphy 1993; Jarvis 1992, 1999; Ojanen 2003; Powell 1989; Reid 1993; Richardson & Maltby 1995, 235; Snowball, Ross & Murphy 1994; Wong, Kember, Chung & Yan 1995). Reflection is perceived as a key process in many learning approaches, for example, in experiential learning and constructivism as was discussed above, as well as in transformational learning.

Reflection has been defined by many educationalists (e.g. Boud, Keogh & Walker 1994a; 1994b; Mezirow et al. 1995). The definitions differ from each other. Most authors (e.g. Boud et al. 1994a; 1994b; Mezirow et al. 1995) consider the process of reflection as a multilevel phenomenon. In many definitions, reflection is identified to be a process where the learner

considers and interprets the phenomenon in a unique way and structures the reality through her own learning experiences. Reflection supports analysing the phenomenon, the directions and goals of this analysis, and possibility to question it; the result of this analysis may be a change in thinking, beliefs and action (e.g. Ojanen 1996, 53 –54; 2003, 9).

Atkins and Murphy (1993, 1189–1190) have conducted a literature review of how different authors have defined reflection. They have noticed that the authors use different concepts and that there are different numbers of stages in the reflection processes described by different authors. However, the process of reflection is often described to include three key stages. These stages are common to many authors. (among others Boud et al. 1994a; 1994b; Mezirow 1981; Schön 1987.)

The first stage of reflection is initiated by identification of unpleasant feelings and thoughts. The learner acknowledges that in a situation knowledge is not enough to explain what is taking place in a unique situation. Schön (1987) refers to this by the experience of astonishment.

The second stage includes considering the situation critically. This analysis is constructive and includes reflecting emotions and knowledge. Boud and others (1994b, 29–30) describe this analysis of knowledge and emotions in detail by emphasising the importance of positive feelings and removing of negative, obstructive feelings. They use four terms to describe these thinking processes: association, integration, validation and appropriation. In the stage of association, new thoughts and knowledge are directed to or combined with a structure of previous appropriate knowledge. This process where new concepts are combined with previous knowledge is perceived as a key feature of a learning process. The second stage of Boud and others' (1994b, 30) model is integration where the significance and necessity of new concepts is considered. The third stage is validation whereupon the adaptability of new concepts in relation to previous knowledge is tested. The last stage is appropriation that means that the knowledge is made one's own.

The third stage of reflection displayed by Atkins and Murphy (1993) includes developing a new perspective in the situation. The result of reflection is thus learning. Boud and others (1994b, 34) describe the results of reflection in detail stating that there are both affective and cognitive changes that may lead to changes in behaviour.

When considering the significance of reflection in learning, three assumptions are included. The first assumption is that only learners can learn and only they are able to reflect their own experiences. Teachers may support this process in different ways but they have access to the thoughts and emotions of individuals only through what learners want to disclose

from themselves. At this basic level, the learner has a complete control. Secondly, reflection is an active, goal-oriented action. Thirdly, reflection is a complicated process where both emotions and cognition are closely related and influence each other. (Boud et. al. 1994a, 11.)

Consequently, it is evident that processing and reflecting own experiences are the key factors in enhancing high-level learning. When experiences, through reflection, are integrated as part of a learning process, the learner is continuously able to structure meanings that lead to transformation of previous knowledge and a new kind of self-awareness. A great deal of learning demands making new interpretations through which the learner is able to develop, change or confirm her established frameworks or to create new ones. It may be even more important for the learner to reflect events afterwards. This is a means to sort out if the learning, which has taken place, is still adequate. (Mezirow et al. 1995, 28–29).

Enhancing the relationship of a learning experience and following reflective action, is an important issue in facilitating learning. This can be supported for example by arranging a suitable time for reflection (Boud et al. 1994a; 1994b). There are different methods for developing reflection that can be used in education. Writing, for example in a form of learning journals, portfolios, autobiographies and critical incidents, and self- and peer-assessment, brainstorming and dialogue, are identified as recommendable tools to develop students' reflective skills. (e.g. Boud et al. 1994a; 1994b; Richardson & Maltby 1995; Tossavainen 1996, 32; see also Appendix 1.)

Thus, reflection is identified to be important in all kind of learning. One reason for the success of reflective learning may be the fact that it includes the assumption about continuous human development and process-like learning (Ojanen 1996, 51).

At the level of the conception of learning, enhancing reflectivity means emphasising personal commitment, subjective experiences, previous knowledge and activity in learning. Thus, developing reflectivity and meta-cognition and self-regulation in learning, presumes teacher and mentor being a role model. This means that teachers have to be able to reflect their own actions and through this, teachers and mentors are committed to continuous professional development. (Eteläpelto 1992, 19; Palmer 1994, 8.)

Although, when discussing reflectivity, it is emphasised that learning is individual and learners construct their own experience, learning is not a separate action outside a social environment. Reflective skills can be best developed in relationships with others, for example in cooperative learning (Eteläpelto 1992, 19; Warner Weil & McGill 1989, 15; see also Moilanen 1999, 102–103.)

If learning is considered from the viewpoint of developing reflectivity, it means that a learner can find a new perspective or widen her consciousness. This kind of holistic learning cannot be understood as gathering knowledge, instead it means a new way of perceiving the environment and seeking for one's own place in it. (Eteläpelto 1992, 31.) As was indicated above, these ideas are emphasised in constructivism that proposes that learning environments should support various perspectives or interpretations of reality, knowledge construction and experience-based activities. We all perceive the external world somewhat differently, based on our unique experiences and beliefs. (Jonassen 1991; Tynjälä 1999a; 1999b.)

As was discussed above, traditionally reflection has been perceived as an individual process. Recently, there has been more emphasis in so called decentralised reflection where individuals work together in order to solve a problem. This aspect of reflection will be discussed more within chapters dealing with self-regulation and expertise.

2.5.2 Summary of reflection

In conclusion, I perceive reflection to be an essential part of all learning and thus it is important part of clinical learning as well. Reflection is the process of the learner where she is critically assessing the content, process, or premises of her efforts to interpret and give meaning to an experience (Mezirow 1991, 104). I perceive that the key idea of critical reflection is that its focus is on making explicit and analysing that which was previously implicit and uncritically accepted (see Brookfield 2000, 131). In clinical settings, the ability to reflect one's experiences is especially important because clinical placements are often hectic environments where learners participate in authentic nursing situations: learners are involved in challenging situations that arouse emotions and questions that need to be dealt with. It is important that mentors and educators are able to encourage learners to critically reflect on their feelings, beliefs, interpretations and ways of thinking (see Mezirow 2000, 26; 1994, 226, 229). Thus, especially from the viewpoint of professional education, important in reflection is also a moral and ethical aspect. Reflective learning is not only accumulation of new knowledge or skills but also re-evaluation of past experiences and change of one's interpretations. Learning from experience not only enhances the learner's knowledge but also questions the learner's thoughts, emotions, beliefs, attitudes and values that have been the basis of her experiences. A continuous reflection is a means to evaluate who I am as a learner and how my experience changes my interpretation

of the reality. (see also Väisänen & Silkelä 1999, 222; Isokorpi & Viitanen 2001, 118–119.)

2.5.3 Transformative learning as the goal of adult learning

Closely related to reflection is the concept of transformational or transformative learning. As was stated above, reflective learning is not only accumulation of new knowledge but also re-evaluation of past experiences and change of one's interpretations. Consequently, "transformative learning refers to the process by which we transform our taken-for-granted frames of reference" which are meaning structures that we have previously learned become transformed through reflection (Mezirow 2000, 7; 1994, 223). Thus, transformative learning may be identified as an ultimate goal of adult learning. Meziow suggests that fostering critical reflection belongs to every adult educator. A broadened worldview is dependent upon critical reflection. (Mezirow 1991, 111.) Next, I will consider the key aspects of transformational learning including the critique of it. In this chapter, I will rely heavily on the work of Mezirow because his work of reflection and transformative learning is widely quoted and appreciated.

Transformative learning theory is about the change in the way people see themselves and the world. The change is implicit in the concept of transformation, which is about change. Thus, transformative learning is often seen as a conscious and rational process emphasising experience, rationality and critical reflection in the process aiming at the change of perspective. The changes in transformational learning are far-reaching changes; they are changes that have a significant impact on the learner's subsequent experiences. (Clark 1993, 47; Merriam & Caffarella 1999, 318; see also Cranton 2000, 182.) Clark (1993, 47-48) describes this by stating that "transformational learning *shapes* people" – they are different afterward. Transformations, whether dramatic of developmental, involve change.

Thus, transformative learning is a process where individuals become critically reflective of their own assumptions or others' assumptions, achieve a deep understanding, and justify a new perspective through discourse. Imagination plays a role in the examination of alternative. (Mezirow 2000, 6, 20, 31; see also Cranton 2000, 190.) Cranton (2000, 190) suggests that people's psychological preferences are a habit of mind and they filter how people see the world, make meaning out of their experiences, and determine how they reconstruct their interpretations. She continues that as long as individuals believe that their way of being in the world is the best or the only way, it is very difficult for them to see alternative perspectives or to

engage in reflection. It would be important for the learners to examine and reconstruct their psychological predispositions that are their frames of reference. (Cranton 2000, 196.)

Consequently, transformative learning centres on the cognitive processes of learning. The mental construction of experience, inner meaning, and reflection are main components of this approach. The critical components are: experience, critical reflection and development. (e.g. Merriam & Caffarella 1999, 318). Indeed, the process of transformative learning is firmly anchored in life experiences. All human beings have a need to understand their experiences, to make sense of what is happening in their lives. In trying to understand our experiences we first use all of the usual ways of thinking or making meaning and if they do not work, we can either postpone or deny thinking the problem or we can deal with it. It is through engaging with the life experience to make meaning that there is an opportunity for a change in perspective. (Merriam & Caffarella 1999, 320; Mezirow 2000, 3; see also Ruohotie 2000b, 185; Knowles 1989, 84.)

Another essential part of Mezirow's theory is reflection. Mezirow (1991, 104) defines reflection to be "the process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience." Earlier Mezirow (1981, 12) divided reflective thinking into seven levels: affective reflectivity (acknowledgement of emotional reactions), discriminant reflectivity (recognising cause- consequence relationships), judgemental reflectivity (acknowledging value judgements), conceptual reflectivity (evaluating used concepts), psychic reflection (awareness related to decision making), and theoretical reflectivity (recognising conceptual inadequacy).

It is known from his extensive literature that later on Mezirow (1991; 2000) has developed his theory where he separates reflective action from non-reflective action. Three types of non-reflective action are distinguished: habitual action, thoughtful action and introspection. Reflective thinking is divided into three categories of content, process (the lower, less critical level) and premise reflection. (Mezirow 1991, 104; 2000, 20–21.) Only one of these may lead to transformational learning. Firstly, reflection of the content is thinking about the actual experience itself. Secondly, reflection of the process is thinking about the strategies of the problem solving: how the experience should be thought about. Thirdly, reflection of premises (prerequisite) includes reflection and exploration of prolonged, socially structured assumptions, beliefs and values related to the experience or the problem: "our becoming aware of *why* we perceive, think, feel, or act as we do…" (Mezirow 1991, 108.) Mezirow (1991, 111) suggests that the significance of differentiation

of content, process, and premise reflection comes understandable when perceived that content and process reflection are the dynamics by which a learner's beliefs – meaning schemes – are changed (e.g become reinforced, elaborated, identified problems) and transformed. Premise reflection is the dynamic by which a learner's belief systems – meaning perspectives – become transformed. Thus, premise reflection leads to more fully developed meaning perspectives. (Mezirow 1991, 111.)

The changes in consciousness evident in transformational learning cannot be understood in behavioural terms but instead it has to be taken into account versatile psychological factors. It is suggested that reflection is central to all learning but its importance is emphasised in the transformational learning since the focus is on a change in consciousness. (Clark 1993, 52–54.)

There is also critique towards the transformative theory of Mezirow. The critique focuses on following aspects: it is suggested that the theory is too rationalistic ignoring other forms of knowing; the theory does not take sufficiently into account the context; what is the position of social action in the theory; and what is the role of the educator in supporting the transformative learning. (Merriam & Caffarella 1999, 333–338; see also Clark 1993, 52; Taylor 2001.)

Indeed, transformative learning is often seen as a conscious and rational process, emphasising experience, rationality and critical reflection in the process aiming the change of perspective. The theory has been criticised as a process that is overly dependent on critical reflection in a way that overlooks the role of feelings and transformation through the unconscious development of thoughts and actions. (Taylor 2001, 218; see also Merriam & Caffarella 1999, 334.) It is widely agreed that critical reflection is important to transformative learning. However, there is research evidence that critical reflection is perceived too rationally driven overlooking the role of feelings and emotions and intuition (Taylor 2001, 220). Taylor (2001, 221) suggests that there are studies that show that rationality is too much emphasised, and more attention also needs to be given to extra-rational and non-conscious ways of knowing for revising meaning structures. He proposes that recent research in the field of neurobiology and psychology explains the interdependent relationship that exists between reason and emotions and how decision making can occur outside one's conscious awareness. Taylor (2001, 233) perceives important that emotions and rationality be placed on equal importance and recognised their interdependent relationship.

According to Taylor (2001, 225) there is evidence that transformative learning may also take place without critical reflection through a nonconscious development of thoughts and actions. However, the present research designs

are inadequate at explaining this process that takes place on an implicit level (Taylor 2001, 225). Thus, it is important to consider other equally if not more powerful ways of knowing than pure rationality (Merriam & Caffarella 1999, 338).

Secondly, Mezirow's theory is criticised to be acontextual. (Merriam & Caffarella 1999, 333; Clark & Wilson 1991, 76). Recently Mezirow (2000, 7-8) has attempted to explain the context in his theory by stating that transformative learning may be only understood as situated in a specific cultural context and it has both individual and social dimensions and implications (Mezirow 2000, 7–8; see also Merriam & Caffarella 1999, 333). However, it is argued that the place of social action in transformational learning theory remains controversial. Mezirow has been especially criticised for focusing too much on individual transformation at the expense of social change. (see e.g. Merriam & Caffarella 1999, 336.)

Furthermore, the ethical issues involved have been little addressed; for example, have educators' right to affect adults' worldview. Also a practical question: how to support and facilitate transformative learning should be investigated. (Merriam & Caffarella 1999, 337; see also Taylor 1997.)

2.5.4 Summary of transformative learning

The concept of transformative learning is also important in nursing education because transformation is suggested to be an ultimate goal of adult learning (see Mezirow 1991, 111). From the perspective of clinical learning it is useful because clinical learning is learning in environments which are students' future work places and essential settings for their professional growth and development. These environments provide with a lot of meaningful experiences and through engaging with these experiences there are opportunities for a change in perspective. (cf. Merriam & Caffarella 1999, 320; Mezirow 2000, 3; see also Knowles 1989, 84.)

3 Self-directedness and self-regulation in learning

As discussed in the previous chapters, a modern perception of learning puts the learner at the centre of the learning process. For example, constructivism is closely related to self-direction though few authors seem to have explicitly acknowledged this (Candy 1991, xv). Consequently, in recent research, different aspects of autonomy, self-directedness, and self-regulation are emphasised as the key factors of learning process as well as necessary determinants of professional learning and life-long learning. As was pointed out in the introductory chapter, the rapid change of the society presumes that professionals have ability to be self-directed in their learning and development and have self-regulation skills to enable this development.

Indeed, the rapid changes of the society has created the need of theoretical models about how a human being is able to manage the change and is able to act in an appropriate manner in changing circumstances. During the past two decades there have been two research perspectives or traditions that have been attempted to provide theoretical frameworks for understanding this issue. Firstly, especially andragogy or adult learning approach has developed an idea of the adult learner as a self-directed actor. These theories of self-directedness are based on the ideas of humanistic psychology and the ideals of andragogy developed from philosophical basis. (see Hiltunen & Lehtinen 2002, 157–158.)

Another perspective stems from the research of behaviour, cognition and motivation. These studies strive to describe how an individual regulates her own action by taking into account the requirements of environment, her own goals and her perceptions about her possibilities to act. Though the roots of this phenomenon, called self-regulation, are in very different traditions of psychology, it has formed a quite common focus of research during the past years. (see Hiltunen & Lehtinen 2002, 157–158; see also Boekaerts, Pintrich & Zeidner 2000.)

Though these two traditions – self-directedness and self-regulation – deal at least to some extent with the same phenomena, it seems that there is no theoretical discussion between them. The writings that deal with self-directedness do not refer to self-regulation research and vice versa. (see Hiltunen & Lehtinen 2002, 157–158.) However, both traditions provide understanding of the active role of the learner in learning process and professional development.

In this chapter, I will first consider self-directedness in learning. However, it is beyond this study to address this field in detail; the emphasis here is in introducing the concept of self-directedness and discussing some theoretical frameworks that contribute to understanding the significance of self-directedness in learning process and in clinical learning. Secondly, in the discussion to follow self-directedness, I would like to clarify the concept of self-regulation more in detail, and go on at some length about different theories and models of self-regulation in order to highlight the significance of self-regulation in learning and especially in clinical learning where self-regulative abilities are of great importance. In addressing the issue of self-regulation, I will consider also the role of motivation in learning. These perspectives and theories strive to highlight the recent conceptions about the meaning of self-regulation and motivation in learning and performance situations.

3.1 Self-directedness in learning and professional development

There are many different definitions for self-directedness. Different perspectives emphasise different aspects. (e.g. Ahteenmäki-Pelkonen 1994, 169.) However, self-direction is closely related to the concept of autonomy; and the concepts of autonomous learner and autonomous learning are often used as synonyms with self-directive learning and self-directed learner, though autonomy as a philosophical phenomenon is a wider concept (Koro 1993, 24). There are also other terms that are used as synonyms for self-directedness. Bereiter and Scardamalia (1989, 363) use the term intentional learning, because they think that autonomous suggests freedom from external direction. Intentional learning refers to cognitive processes that have learning as a goal rather than an incidental outcome. Intentional learning is dependent both on situational and intrinsic factors. (Bereiter and Scardamalia 1989, 363.) Here I use the term self-directedness.

As was stated above, humanistic philosophy has been the primary guide for much of the work on self-directed learning. Humanistic perspective emphasises the individual's need of self-determination and strong learning potential as well as the responsibility of the environment to response to these needs. Humanistic view also emphasises the learner's intentionality, goal-orientation, curiosity and possessing natural learning potential. (e.g. Ruohotie 2000b, 157–158; see also Koro 1993.) Self-directedness may naturally be combined with humanistic perception of human being, which includes an idea of free and self-directive adult who trusts on herself and her possibilities to develop

and who has responsible and trustful relationship with her environment (Koro 1993, 27). The individual who is self-directive possesses also the ability to question and explore (Ahteenmäki-Pelkonen 1994, 168).

Varila (1990, 14) presents four different ways to conceptualise the concept of self-directedness in adult education. In the philosophy of adult education self-directedness has referred, normatively, to the goal of adult education: to the free human being fulfilling herself. In the psychological meaning it has been combined to personality, more or less permanent characteristic of it. In the didactic sense it has been used in relation to learning methods and strategies in considering their self-directedness. In the sociological practice, the perspective has been that of consequences to the society if education system is developed towards self-directedness. (Varila 1990, 14.) In general, the ability of self-directedness is conceived both as a specific skill and as a set of personal attributes (Merriam & Caffarella 1999, 290).

Moreover, self-directed learning seems to have at least three different aims: to enhance the learners' ability to be self-directed in her learning; to foster transformational learning; and to promote emancipatory learning and social action (Merriam & Caffarella 1999, 290). The first goal is grounded mostly in the assumption of humanistic philosophy – personal growth as a goal. The second goal – enhancing transformational learning – is based mostly on the ideas of Mezirow and Brookfield (Merriam & Caffarella 1999, 291; see also Ahteenmäki-Pelkonen 1997) where the goal of learning is change in beliefs, assumptions or behaviour. This approach was discussed above. The third goal emphasises that the learners should investigate the socio-political assumptions under which they learn and function. It also emphasises the integration of collective action as an outcome. (Merriam & Caffarella 1999, 291.)

The characteristics that are often discussed in relation to the concept of self-directedness are goal awareness, ability to plan, implement and evaluate one's own learning process, and a certain kind of mental openness for new, even mentally challenging learning (Varila 1990, 11). Readiness for self-directive learning is a wider concept than just readiness for a certain learning task. In addition to the basic readiness for a certain task, the learner must have certain mental qualifications to master her learning process; its initiative, planning, implementation and evaluation. (Varila 1990, 34.)

Autonomy and self-directness in learning has been discussed primarily at the conceptual level (see Merriam & Caffarella 1999, 309). Self-directed learning as a process of learning, in which individuals take the primary initiative for planning, implementing, and evaluation their own learning experiences has received a great deal of attention in literature (Merriam &

Caffarella 1999, 293; see also Varila 1990). Here I present, as an example of models of self-directedness, very briefly one model that perceives self-directed learning as a process. The model is developed by Grow (1991).

Grow's (1991) Staged Self-Directed Learning (SSDL) model outlines how teachers can assist learners to become more self-directed in their learning (e.g. Merriam & Caffarella 1999, 302). His model includes the idea of a progression from dependency to self-direction. He suggests that self-directed learning is a useful concept of education at all levels. The idea of his model is to show how teachers may empower students toward autonomy in their learning. He presents the four stages SSDL model that differentiates four different types of learner categories and the model suggests that the learner develops through four stages from dependence to self-directedness as the teacher encounters her on the level where the learner is on her learning process. Dependent learners need the teacher as authority and coach, interested learners need the teacher as a motivator and a guide, involved learners need the facilitator, and finally, for self-directed learners the teacher is a consultant or delegator. According to Grow, problems in teaching and learning arise if the teaching style is not matched to the learner's degree of self-direction. (Grow 1991, 127–136.)

A second major focus, in addition to a process approach, in the research literature on self-directed learning has been self-directedness as a personal attribute or characteristic of the learner. Readiness, which implies an internal state of psychological readiness to undertake self-directed learning, has received the most attention in the study of self-directed learning in terms of data-based studies. Guglielmino has provided the most-used operational definition for self-directed learning. She states that it consists of a complex of attitudes, values and abilities that create the likelihood that an individual is capable of self-directed learning. (Guglielmino 1997 according to Merriam & Caffarella 1999, 305; see also Varila 1990.)

Merriam and Caffarella (1999, 310) suggest that there are four major variables influencing on whether adult learners exhibit autonomous behaviour in learning situations: their technical skills related to the learning process, their familiarity with the subject matter, their sense of personal competence as learners and their commitment to learning at certain point in time.

The models and approaches briefly described above are just examples of studies exploring the issue of self-directedness.

3.2 Self-regulation and professional development

Maybe the individual's most important quality as human being is her capability to self-regulate (Zimmerman 2000, 13) or to exercise control over one's own thinking, motivation and action. Because judgements and actions are partly self-determined, learners can effect change in themselves and their situations through their own efforts. (Bandura 1989, 1175.) Thus, another concept, related to the learner's activity in learning, is the concept of self-regulation (e.g. Ruohotie 2000b, 160). Always when the individual encounters situations in which she is not able to manage with old routines, it is essential to have skills to consciously regulate one's own actions according to new challenges. Accordingly, the lack of self-regulation skills limits the individuals' coping both in studying and professional situations. Thus, self-regulation refers to partly similar phenomena as self-directedness, but the focus is, instead of general ideals and goals, in the specific psychological processes through which self-regulation occurs. (see Hiltunen & Lehtinen 2002, 166.)

There are a number of different terms in different research traditions about learning as becoming aware of one's own conceptions and transforming them: researchers of adult education and learning in work use, for example, concept reflective practice (e.g. Järvinen 1990: Schön 1987) or transformative learning (Mezirow 1981, 2000) whereas researchers of school instruction use the concept of metacognition, meta-cognitive skills or metaknowledge (eg. Bereiter & Scardamalia 1989). The principle is the same in these traditions: becoming aware of one's own beliefs, conceptions, thinking and actions, critical reflection of these and transforming or emancipating one's thinking if necessary (see Tynjälä 1999c, 166). Sometimes the above mentioned concepts are used as synonymous, but there may be perceived also differences between their usage. Some authors also perceive that they are based on different research traditions.

Often metacognition is defined to be the awareness that the learner has about her general academic strengths and weaknesses, cognitive resources she has to meet the demands of tasks, and her knowledge about how to regulate effort and engagement in tasks to optimise learning processes and outcomes. Intrinsic motivation consists of the learner's belief in efficient learning, a high value placed on personal progress and deep understanding and attributions that link outcomes to aspects under her control. Strategic refers to the choice and appropriate use of different strategies in different situations. (Winne & Perry 2000, 533–534; see also Schraw 1998, 89–92.) *Strategies* or *learning strategies* is understood as a wide concept including thoughts, beliefs, emotions, behaviours that facilitate the acquisition,

understanding or later transfer of new knowledge and skills (Weinstein, Husman & Dierking 2000, 727).

The distinction between self-regulation and metacognition is unclear in the literature; there is ambiguity and overlapping of definitions (e.g. Zeidner, Boekaerts, Pintrich 2000, 752; see also Brown 1987, 67). The term metacognition entered the psychological literature in the late 1970s, although it has a long and distinguished heritage in philosophy and psychology (Schoenfeld 1989, 94). Often self-regulation is perceived to be a more comprehensive term including metacognitive skills and knowledge, as well as emotional, motivational, behavioural monitoring and control processes (e.g. Zeidner et al. 2000, 752; Demetriou 2000, 209–211). Winne and Perry (2000, 533–534) sum up the definition of self-regulated learning: it includes metacognitive guidance, intrinsic motivation and is strategic.

Likewise, there is no clear definition about difference between self-regulation and reflectivity. Authors of reflectivity do not refer to the concept of self-regulation and vice versa. However, many theories that deal with self-regulation include also reflection as an evaluative part of self-regulatory process. In similar vein as difference between metacognition and self-regulation mentioned above, for example, Tynjälä perceives the concept of reflectivity to be wider than metacognition comprising also other than cognitive exploration and self-assessment (Tynjälä 1999c, 171–172). But there is no consensus about these terms in literature (e.g. Zeidner et al. 2000, 752; Demetriou 2000, 209–211).

However, traditionally self-regulation has referred to the learner's ability to regulate her cognitions and efforts, but currently the concept has broadened and it is suggested that the learner is able to regulate also her emotions and apply motivational strategies (Ruohotie & Nieminen 2000, 136; see also Hiltunen & Lehtinen 2002, 166–167). Thus, she has a free will to control also these at least to certain extent. Self-regulation ability develops and changes when the individual develops and learns but it does not mean that the individual becomes totally autonomous. Autonomy may vary from one situation to another. (Ruohotie & Nieminen 2000, 136.) In this study, I perceive that self-regulation is a broader concept including meta-cognitive skills. Metacognition and reflection are perceived to be prerequisites for self-regulation. Here, I will discuss self-regulation focusing on the common features of the theories of self-regulation.

The concept of self-regulation has been explored from different perspectives. According to McKeachie (2000, xxiii) it integrates the cognitive, motivational, social and behavioural fields of theory; it takes into account also cultural, organisational and contextual factors that influence self-regulation. Thus,

different authors in different fields use different terminology and there are large bodies of domain-specific knowledge concentrating on a certain aspect of self-regulation; consequently, there is no one common theory about self-regulation, instead the concept of self-regulation is difficult to define, and there is confusion in the literature about the criterial attributes of self regulation and related concepts. (Boekaerts et al. 2000, 1–5; see also Demetriou 2000, 210; Pintrich 2000a, 451; Zeidner et al. 2000, 750.)

However, the self-regulation theories share the view of the learner as an active, constructive participant in the learning process (see Pintrich 2000a, 452–453; 2000d, 89–90). Moreover, it seems that the perception that is widely accepted is that self-regulation is a systematic process of human behaviour that involves setting personal goals, monitoring and regulating certain aspects of their cognition, motivation, behaviour and environment, and steering behaviour toward the achievement of established goals (e.g. Butler & Winne 1995, 245; Carver & Scheier 2000, 42–50; Endler & Kocovski 2000, 569; Matthews, Schwean, Cambell, Saklofske & Mohamed 2000, 172; Zeidner et al. 2000, 751). Thus, the models also assume that there is some type of criterion against which comparisons are made in order to assess whether the process should continue as it is or if some type of change is needed (Pintrich 2000d, 90). Furthermore, many authors perceive self-regulation as a holistic concept that includes cognitive, affective, motivational and behavioural components that provide the learner with the capacity to adjust her performance and goals to achieve desired results in taking into consideration the environment (e.g. Boekaerts & Niemivirta 2000, 445; Zeidner et al. 2000, 751; see also Butler & Winne 1995, 245; Pintrich 2000a, 452–453).

It is also widely accepted that self-regulatory behaviour involves a feedback loop or feedback systems that serve to decrease the inconsistency between ideal and desired behaviour (e.g. Carver & Scheier 2000, 42–47; Zeidner et al. 2000, 751; Zimmerman 2000, 14–15; see also Boekaerts & Niemivirta 2000, 445–446; Pintrich 2000a, 452–453). Most of the models of self regulated learning also assume that self-regulatory activities are mediators between personal and contextual characteristics and actual performance or achievement. This means that it is not just the learner's personality or cultural characteristics that influence learning directly, nor just the contextual characteristics of the learning environment that shape achievement, but the learner's self-regulation of her cognition, motivation and behaviour that mediate the relations between the individual, context and ultimate achievement. (Pintrich 2000d, 90.)

There are models or theories of self-regulation that aim to synthesise or integrate personality theories and social cognitive theories and which aim to

explain in detail self-regulation processes (e.g. Matthews et al. 2000; Demetriou 2000). For example, Demetriou (2000, 244–245) suggests that each individual can construct her own profile of abilities and skills for interrelating and interacting with the world. In this profile both cognitive (the meaning-making and processing), personality (the motivational and emotional) and behaviour (the action) processes, although distinct, are dynamically intertwined. Styles of and needs for self-regulation vary, depending on developmental stage, temperamental and personality characteristics.

One of these attempts to integrate and synthesise different approaches or theories of self-regulation is made by Pintrich (2000a; 2000d) who has attempted to provide some clarity to the different and overlapping meanings of the concepts in the terrain of self-regulation and consequently he has explored the common features of the models of self-regulated learning. Table 1 displays a framework of self-regulated learning and the different phases and areas for regulation. (Pintrich 2000a, 454; 2000b, 54.) I have complemented this presentation by the ideas of other self-regulation researchers, mainly Zimmerman (2000).

Pintrich suggests that his model provides with a general framework for conceptualising self-regulated learning in the academic domain, and his framework provides a taxonomy of different processes and factors that can be included in self-regulated learning. (Pintrich 2000a, 472; 2000b, 51; 2000d, 92). This approach differs markedly from theoretical traditions that seek to define self-regulation as a singular internal trait or state that is genetically endowed or personally discovered (see Zimmermann 2000, 34). Learning based on self-regulation is described as a cyclic process that is context-specific. Self-regulation refers to self-generated thought, feelings and actions that are planned and cyclically adapted to the attainment of personal goals. Although meta-cognition plays an important role in self-regulation, it also depends on self-beliefs and affective reactions about specific contexts. Self-regulation is described as cyclical because the feedback from prior performance is used to make adjustments during current efforts. (Zimmermann 2000, 34.)

Many models of self-regulation share the four phases of the self-regulation presented in this framework. Phase one includes planning, goal-setting and activation of perceptions and knowledge of the task and context, as well as the self in relationship to the task. (Pintrich 2000a, 452–456; 2000b, 51.) The second phase consists of various monitoring processes. The third phase includes effort to regulate and control different aspects of the self, task and context. The final stage consists of different kinds of reactions and reflections. (Pintrich 2000a, 452–456; 2000b, 51.) Pintrich (2000a, 455; 2000b, 51–52) suggests that monitoring, control and reaction may be

TABLE 1. Phases and Areas for Self-Regulated Learning (adapted and modified from Pintrich 2000a, 454; 2000b, 54; Zimmerman 2000, 16-24, 34).

	Areas for regulation			
Phases	Cognition	Motivation/affect	Behaviour	Context
1. Forethought, planning and activation	Target goal setting Prior content knowledge activation Metacognitive activation	Goal orientation adoption Efficacy judgements Ease of learning judgements; perceptions of task difficulty Task value activation Interest activation	[Time and effort planning] [Planning for self-observations of behaviour]	[Perceptions of task] [Perceptions of context]
2. Monitoring	Metacognitive awareness and monitoring of cognition	Awareness and monitoring of motivation and affect	Awareness and monitoring of effort, time use, need for help Self-observation of behaviour	Monitoring changing task and context conditions
3. Control	Selection and adaptation of cognitive strategies for learning, thinking	Selection and adaptation of strategies for managing motivation and affect	Increase/decrease effort Persist, give up Help-seeking behaviour	Change or leave context
4. Reaction and reflection	Cognitive judgements Attributions	Affective reactions Attributions	Choice behaviour	Evaluation of task Evaluation of context

ongoing simultaneously and dynamically as the learner progresses through the task. The four columns represent different areas for regulation that the learner can attempt to monitor, control and regulate. Task and contextual factors can facilitate or constrain the learner's attempts to self-regulate her learning. (Pintrich 2000a, 455; 2000b, 51–52.)

The *cognitive column* includes the different cognitive strategies the learner may use to learn and perform a task. It involves also content knowledge and strategic knowledge. It includes also the metacognitive strategies the learner may use to control and regulate her cognition. The *motivation and affect column* involves the various beliefs that the learner has about herself in relation to the task such as self-efficacy beliefs and values for the task, as well as positive and negative affective reactions to the self or the task. This column also includes all the strategies that the learner may use to control and regulate her affect and motivation. The *behaviour column* refers to the performance of the learner in implementing the task as well as help seeking, persistence and choice behaviours. The fourth column consists of *environmental and contextual* aspects. In some models this area is excluded from self-regulation because the context is not assumed to be part of the individual. However, in Pintrich's model it is assumed that the learner attempts to monitor and control the environment, and it is an important part of self-regulation. (Pintrich 2000a, 452–456; 2000b, 52–53.)

To conclude, a key feature of a social cognitive model of self regulation is the interdependent roles of social, environmental and self influences. Self-initiated processes change one's social and physical environment, and are in turn influenced by those changes. From this triadic perspective, learners who neglect to use social and environmental resources or who experience them as hinders to personal development will be less effective in regulating their learning and lives in general. (Zimmerman 2000, 24–25.)

Zimmerman (2000, 29–32) suggests that though it is possible to develop self-regulatory competence by personal discovery, this competence emerges in a series of regulatory skill levels from observational level, through emulation and self-control to self-regulation. An observational level of strategy occurs when the learner can adapt the key features of the strategy from watching a model perform. An emulation level is attained when the learner is able to show an imitative performance of the general pattern of a model's skill with social assistance. Usually the learner does no copy the exact actions of the model but rather she emulates the general pattern of performance. The social support of the model is systematically reduced as the learner's skills develop. The third level, self-controlled level, is achieved when the learner masters the use of a skill in structured settings without the attendance of the

model. A self-regulated level is attained when the learner is able to adapt systematically her action to changing personal and contextual conditions. In this stage, the learner is able to use different strategies and make adjustments based on outcomes. The motivation to sustain this level depends on perceptions of self-efficacy. (Zimmerman 2000, 28–31.) This model of the development of self-regulatory skill includes many similar features with the cognitive apprenticeship model that was previously discussed.

3.2.1 Shared nature of self-regulation

I have endeavoured to put together an array of ideas concerning self-directedness and self-regulation of learning. From above, it is evident that the research of metacognition and self-regulation is mainly focused on the individual (see also Engeström 2001, 25; see also Hiltunen & Lehtinen 2002, 172–173; Kivistö 2003, 156). However, recently the need to investigate also metacognition and self-regulation by taking into account the co-operative and shared or distributed nature of cognition is acknowledged (e.g. Engeström 2001, 25; see also Hiltunen & Lehtinen 2002, 173; Kivistö 2003, 156).

In conclusion, I will present Engeström's (2001) ideas about metacognition and the direction towards which the research of metacognition is suggested to be moved. Engeström outlines metacognition by using a model developed by Raeithel (1983). In this model, the types of reflection are divided into three categories: 1) original centration *(Urzentrierung - alkuperäinen sentraatio)* which means concentrating on oneself or performance of oneself in a given task or social situation; 2) decentration *(Dezentrierung - desentraatio)* which means directing outwards, to a common task or problem; and 3) recentration *(Rezentrierung - resentraatio)* which means that attention is directed to a common task or action in order to solve it; thus 'I' is perceived as a part of a collective and attention is focused both outwards – to the task and context – and inwards – to the internal dynamics of the collective. Kivistö (2003, 156) suggests that concepts *(sentraatio, desentraatio, resentraatio)* could tentatively be termed as self-reflection (*itsereflektio*), problem reflection (*ongelmareflektio*) and decentralised reflection (*hajautettu reflektio*). She suggests that concepts should be keep open because of the lively contemporary research of metacognition.

When research of metacognition is explored from the viewpoint of this framework, it is evident that most part of the research of metacognition is focused on original centration: how 'I' perform in a given task (Engeström 2001, 25–26; see also Kivistö 2003, 156).

Typical metacognitive questions that the learner could ask herself in different areas:

1) original centration: how do I act in this task; is my course of action right/efficient, could I act better/more efficiently, what did I actually learned
2) decentration: what actually this task is and why is it like this; what is the goal of the task; what kind of approaches could be used in this kind of task; could the task be defined/set differently
3) recentration: what actually is this common action of ours; what in it causes problems; what are we going to achieve; how and to what direction do we want to change/develop our action; how could we organise our co-operation in the most reasonable way. (Engeström 2001, 26.)

Questions that represent recentration are not easy. However, these kinds of questions may be in the key position in learning. (see Engeström 2001, 26.) This classification of reflection, especially recentration, would be useful when developing clinical learning in nurse education. I agree with Engeström (2001, 26) that recentration - negotiation between the student, the school and the placement where clinical learning takes place – is a key process in professional learning.

3.2.2 Self-efficacy as the source of self-regulation

Among the variety of motivational beliefs involved in self-regulation, self-efficacy has been emphasised. Consequently, I will consider the concept of self-efficacy more in detail. According to Bandura (1989, 1175–1180; 1997, 1–5), human behaviour is determined by self-efficacy – this is the individual's belief about her capabilities to exercise control over events in her life. The perceptions of one's own capacity determine what people do, how much they put effort on different tasks and how persistently they continue performing a task which they seem to fail. Individuals have also outcome expectations, beliefs about probable consequences and results of the task. The learner may be convinced about the issue that a certain kind of action leads to the goal, but in spite of this she may doubt her ability to perform the task. The consequence may be giving up the task. (Bandura 1989, 1175–1180; 1997, 1–5.)

Individuals use both processes of feedback and anticipation to motivate themselves: they learn from their experiences and strive for anticipating the results or outcomes of their behaviour. If the learner has a minor belief on her abilities, she easily gives up the task when encountering adversities and

limits thus her abilities to receive positive feedback. Correspondingly, the experiences of success enhance the feelings of competence and efficacy. (Bandura 1989, 1176; 1997, 3–5; see also Ruohotie 2000b, 168; Nurmi, Aunola & Onatsu-Arvilommi 2001, 69–70.)

Self-efficacy guides also the self-regulation system. It influences how the individual observes and processes her performance and the outcomes of her performance. In addition to this, it affects the interpretation of causes of failure and success: the individuals who have a strong faith on their own abilities perceive a low effort as a reason for failure, whereas the individuals who do not trust on their own abilities perceive that the lack of ability or readiness is the cause of failure. Moreover, the more competent individuals perceive themselves, the higher are the goals they set for themselves and the stronger is their commitment to them. (Bandura 1989, 1178–1180; see also Nurmi et al. 2001, 69–70; Peterson & Seligman 1987, 185, 190–191; Ruohotie 2000b, 169.)

Bandura (1989, 1177–1178; see also Ruohotie 2000b, 169) takes also into account affective processes: learners' beliefs in their capabilities influence how much stress or other emotions they experience in threatening or difficult situations. Such emotional reactions may influence performance both directly and indirectly. For example, depressive emotions may interfere cognitive actions. Self-regulation mechanism mainly operates through three mechanisms which are self-observation of the action; observation of own performance in relation to personal standards and environmental circumstances; and affective self-regulation reactions. (Bandura 1989, 1177–1178; Ruohotie 2000b, 169.)

Bandura has developed a conceptual social-cognitive model of self regulation. He perceives that persons are neither autonomous agents nor mechanical conveyers of animating environmental influences. Rather, they make causal contribution to their own motivation and action within a system of triadic reciprocal causation. (Bandura 1989, 1175; 1997, vii.) Perceived self-efficacy is constructed and changed in different ways and from different sources of information: by direct mastery experiences; by social-comparative information conveyed through explicit modes of influence (vicarious experience); by verbal social persuasion, and physiological and affective states. (Bandura 1989, 359; 1997, 79). Thus, sense of personal efficacy is constructed through a complex process of self-persuasion, and self efficacy beliefs are the product of cognitive processing of diverse sources of efficacy information conveyed enactively, vicariously, socially and physiologically (Bandura 1997, 115). It is suggested that among the mechanisms of personal agency, none is more central than the individual's

beliefs about her capabilities to exercise control over events that affect her life. Self-efficacy beliefs function as an important collection of proximal determinants of human motivation, affect and action. These beliefs operate on action through motivational, cognitive and affective intervening processes. (Bandura 1997, 3–4.)

Bandura's theory helps explain why similar types of people act in very different ways in the same situation. Cognitive processes, outcomes of which involve expectations, self-evaluation standards and causal attributions, explain learning and adaptation of behaviour. (see Ruohotie & Nokelainen 2000, 152.) Individuals who have a high sense of coping efficacy adopt strategies and courses of action designed to change risky environments into more benign ones. In this mode of affective control, efficacy beliefs regulate stress and anxiety through their impact on coping behaviour. The stronger the sense of efficacy, the bolder individuals are in taking to the problematic situations that raise stress. (Bandura 1997, 141.)

Though Bandura's theory focuses on an individual, he acknowledges also the collective efficacy: people's shared belief in their capabilities to generate effects collectively is a vital element of collective agency. This collective agency is not a sum of the efficacy beliefs of individuals; instead, it is an emergent of group-level attribute as a result of coordinative and interactive dynamics in a situation. (see Bandura 1997, 7.)

3.3 Summary of self-directedness and self-regulation in learning

In addition to the emphasis of individuality, which was discussed above, self-regulation research has been criticised from its overvaluation of self-awareness and self-regulation in learning. Although there is evidence in literature and research about the usefulness of growing self-awareness, this emphasis may also include problems: too strong or inappropriate focusing on self and one's own performance may also be inappropriate and lead to problematic motivation interpretations, such as ego-defensive orientations. Concentration on one's own performance may sometimes disturb the performance. (see Hiltunen & Lehtinen 2002, 172: Lepola & Vauras 2002, 24–25.) These are important aspects to be taken into account when supporting learners in clinical learning.

To conclude, both self-directedness and self-regulation are important concepts in developing learning in professional education and in life-long learning. Self-directedness and self-regulation are very important qualities

in clinical learning where learners are studying in authentic work settings. This means that they have to be able to work also independently because their mentors are responsible for patient care and are not always available to supervise learners. Learning approaches that emphasise self-directedness, including critical evaluation of one's own personality and development goals, may be useful in professional education where an important goal is to develop personal growth in addition to professional growth, whereas self-regulation learning tradition provide incentives to consider appropriate learning motivation, support learners to develop self-regulation and metacognitive skills in order to regulate their own learning and performance. These skills are especially important when learners encounter challenging situations; this occurs often in clinical learning. (cf. Hiltunen & Lehtinen 2002, 171.)

It is important to take into account that most of the research of self-regulation has been conducted in classroom situations and in comprehensive schools, high schools among children or adolescents, and within university students. Consequently, it is important to consider them critically and to widen approaches of self-directedness and self-regulation in learning and professional development. (cf. Hiltunen & Lehtinen 2002, 173.) It is also important to study these concepts in health care education and polytechnic education in general, because this kind of research is nearly lacking in professional education of this kind.

4 Emotions and learning

In previous chapters it became evident that the meaning of emotion in learning has recently been acknowledged though cognition has been emphasised in learning approaches as well as in research. To explore the issue of emotion in learning more thoroughly, I will examine here some theoretical perspectives of emotion. There is considerable ambiguity in terms; both emotion and affect are widely used; these terms are overlapping and there is no clear distinction between them (e.g Plutchik 2003, 62–63); therefore also I use them interchangeably. There is also overlap in the literature between concepts of emotion, affect and mood. Often mood has a broader meaning referring to a longer lasting emotional state. The term feeling is used to represent subjective state, such as joy, sadness or anger, whereas the term emotion is used in a much broader sense to refer to the entire sequence of events that include feelings, but also for example cognitions and impulses to action; the learner may not be consciously aware of some of these aspects. (Plutchik 2003, 62–63, 107.)

Learning is often more than just learning to perform. A growing body of research suggests that emotions and feelings are more significant than merely a motivational or hindering issue in learning (Dirkx 2001, 68). If learning is extended to include learning to understand own and other people's feelings, values, ideals, and moral solutions, it means that emotions and experiences have to be taken as a part of studying and reflection. The meanings of the learner's life-world have become an essential part of rational and reflective professional thinking. (Mäkelä & Laine 1998, 136.) Macaulay (2000, 6) suggests that when learning is perceived from the learner-centred perspective, learning is facilitated by creating a positive climate of learning and acknowledging that the feelings and attitudes of learners are as important as their cognitive strategies in dealing with the learning task, enhancing their capacity for self-direction.

4.1 Significance of emotions in learning

Emotions have often been perceived as blind forces, secondary for cognitive factors, and which disturb effective action. It is evident that cognitive factors have an important role in arousal of emotion, which often presumes certain cognitive interpretation about the meaning structure of the situation (Näätänen et al. 1995, 54–55) or attribution of the causes that lead to a certain situation

(Weiner 1980, 10; Näätänen et al. 1995, 55). However, the role of emotions as disturbing and interrupting action is not arbitrary. Instead, the central role of emotions is to organise action and this has basically an adaptive goal. Many emotion theories perceive emotions as systems, one goal of which is to secure the needs and goals that are important for personal well-being. (Näätänen et al. 1995, 55: see also Izard 1986, 26; Lazarus 1991, 357.) These include both concrete factors that are related to safety; and main goals in life; as well as more complicated psychological meaning relations, such as protecting beliefs that are important from the viewpoint of self-esteem (Näätänen et al. 1995, 55).

Emotions are important in setting priorities for actions but they are important also as immediate motivating factor of the action. Emotions concentrate and synchronise resources at a person's disposal to serve important goals of well-being simultaneously at all sectors. This occurs by creating readiness to begin, maintain, change or finish a certain way to be in relationship to the environment or self. (Näätänen et al. 1995, 55; see also Frijda, Kuipers & ter Schure 1989.) Thus emotions are one of the main factors in choosing a goal and engaging in it and also in the action striving towards this goal, which may include maintaining, changing or abandoning the goal. Consequently, emotions complement intentional, goal-directed action. (Näätänen et al. 1995, 55; Karoly 1993, 43–45.)

Positive emotions, such as joy, may create initiative and promote reflectivity (Isen, Johnson, Merz & Robinson 1985, 1413; Moskowitz 2001, 314–319; see also Näätänen et al. 1995, 55). Positive emotions have also an important function in maintaining direction of action; performance is easy and fluent and individual is in direct functional relationship with the world (Näätänen et al. 1995, 55–56). Recent experimental work indicates that positive emotions may facilitate the processing of important information and protect self-esteem even if that information is negative. Contrary to the traditionally held view that positive emotions hinder, or at least do not help, cognitive processing, recent studies indicate that positive emotions actually facilitate attention to and processing of important information. In summary, theoretical and empirical work indicates that positive emotions support greater creativity, more efficient cognitive processing and decision making, and elicit social support. (Moskowitz 2001, 314–319.)

In contrary, negative emotions communicate that the present state has to be re-evaluated, for example anger may create readiness to remove obstacles. Thus, also negative emotions may have an important, adaptive role in shaping and reshaping action. (Näätänen et al. 1995, 55–56.) On the other hand, any human experience that produces strong negative emotions may cause

the dissolution of the normal interaction of emotions, thinking and action. Emotions or affect are always related to learning event and they can progress or hinder learning. (Novak 2002, 35–37, 141; see also Boud et al. 1993, 15.) Negative emotions may motivate the individual to focus on the stressful situation itself instead of learning (Moskowitz 2001, 314–319). It is known relatively little about the memory organisations concerning emotions (Novak 2002, 35–37, 141; see also Boud et al. 1993, 15). However, Boud and others state that "denial of feelings is denial of learning" (Boud et al. 1993, 15). If the negative feelings are not addressed, what commonly happens is that learning becomes blocked (Merriam & Caffarella 1999, 226).

Emotion is a *multilevel phenomenon*; as a psychological phenomenon emotions may be roughly divided into three factors: experiential, physiological and expressive (Näätänen et al. 1995, 56). In addition to these, emotions have important organising functions in social systems. Thus, emotions mobilise physiological processes; direct and organise different cognitive actions, such as perceiving and interpretation; direct experiential readiness to certain actions and at the same time participate social communication by communicating these intentions to others. (Näätänen et al. 1995, 56; see also Ihanainen 1995, 40–41.) Next, I will discuss briefly experiential and expressive levels of emotion because they are in a meaningful role in learning.

Emotional experience is the main component from the psychological view point. It mediates the important information related to emotion within reach of psychic functions and thus creates foundation for self-regulation. Emotion may be understood as a received message about a meaningful issue. Emotional experience has been considered to be based at least on the following factors: cognitive meaning structure, immediate motivating impact and feelings of physiological origin. (Frijda et al. 1989, 212; Näätänen et al. 1995, 58.) In addition, individuals have an ability to consider and evaluate emotional experience. This is a metalevel of experiential experience. Cognitively oriented emotion theories have explored assessment dimensions of situations that arouse emotions, such as assessed favourableness vs. negativity, expectedness vs. unexpectedness, or controllability vs. uncontrollability of the situation. Researchers have tried to find a typical meaning structure of the situation for each emotion. For example, for anger this is mainly an undesirable issue caused by an external factor. (Näätänen et al. 1995, 58.) According to Näätänen and others (1995, 58), cognitive meaning structure classifies emotions quite well but not at all exhaustively. It is important to note that the relationship of cognitive assessment and emotion is not a one-way relationship. There is also reverse influence: mood influences content of thought so that these correspond to mood. For example in negative mood,

the individual experiences that problems are uncontrollable and evaluates others more critically in comparison with positive mood. Frijda (1993 in Näätänen et al. 1995, 58) states that cognitive factors as determinants of emotion have been overly emphasised and also confused with cognitive action caused by emotions.

In emotional experience it is important to differentiate the immediate emotional experience from meta-level examination related to it. The immediate emotional experience involves a certain kind of functional genuineness or authenticity; the individual is so involved in the situation that only afterwards she is aware of the occurrence of emotional experience. On the meta-level of the emotional experience, person is aware of her emotional experience and she is able to take some kind of evaluative stand to it. Meta-level consideration of emotional experience creates the foundation for the regulation of emotions and through that it has influence on self-regulation. (Näätänen et al. 1995, 59.)

There are differences in different emotion theories related to their view of significance of biological or subconscious factors. Many cognitively emphasised theories are apt to perceive the part of physiology only as an unspecific arousal which cognitive action causes or on which it impresses the final mark through certain interpretations. More biologically oriented theories give, for example, for some basic emotions their own biologically determined qualitative experiential characteristics, which cannot be reduced for smaller units or on which cognitions have only limited effect. (Izard 1986, 26; Näätänen et al. 1995, 59.) Emotional system is perceived partly independent from cognitive system, this means that emotional system is perceived as a system which has capacity to information transfer or conversion and which on its behalf has influence on cognitive action (Näätänen et al. 1995, 59; see also Izard 1986, 33). It is also evident that a significant part of information processing related to emotions occurs subconsciously, similarly as their motivational effect.

To sum, emotional processes are always present in human life and actions. Often emotions are perceived as forces that should be controlled by cognitive factors. It is clear that emotions are always related to some degree of control. However, at least an ultimate dichotomy between intellect and emotion may be questioned. Emotions do not exist only for regulation. Instead, they are an important part of experience and they have their own logical and basically adaptive characteristics, which may be utilised. Recently, there has been interest towards emotional intelligence. This means the individual's ability to utilise the information and energy involved in emotions. (see Näätänen et al. 1995, 61; see also Ihanainen 1995, 39.)

4.3 Emotional intelligence

Indeed, emotion has recently also been investigated in relation to intelligence; and the concept of emotional intelligence has been introduced. Emotional intelligence refers to an interrelated set of abilities that allow an individual to recognise, use and regulate emotion in an efficient and productive manner. (Feldmann Barrett and Gross 2001, 287–288.) Related to emotional intelligence, Goleman (1995) suggests that human beings have two different ways of knowing: the rational and the emotional which are intertwined. However, Goleman suggests that it is emotional intelligence that determines the success of life though rationality is emphasised in our society. There may be differentiated five domains of emotional intelligence: knowing one's emotions, managing emotions, motivating oneself, recognising emotions in others, and handling relationships (e.g. Goleman 1995; see also Feldmann Barrett and Gross 2001, 287–288).

Goleman (1995, 42–44; see also Petäjä & Koponen 2002, 17) suggests that self-awareness of one's own feelings is the key to emotional intelligence. This is an essential ability in developing self-knowledge. (Petäjä & Koponen 2002, 17; see also Freshwater & Robertson 2002, 112–113.) Being aware of and taking into possession one's own emotions are central also in developing interactions skills (Lonka 1999, 3989). The emotionally intelligent person also has a rich emotion knowledge base, which includes the meaning of the situation to the individual and her immediate goals (Feldmann Barrett and Gross 2001, 288; see also Yorks & Kasl 2002, 184–185).

This kind of process conception of emotion suggests a number of points at which individuals might differ in terms of emotion generation and emotion regulation. If an individual is not aware of an emotional response or represents it in poorly differentiated terms, it seems unlikely that the emotion will be employed or regulated to full advantage. There are also differences among individuals in how and when emotions are regulated. Regulation of emotions is important in order to maximise the degree to which they are tailored to the particular situation. (Feldmann Barrett & Gross 2001, 288.) Thus, it is important to take into account that emotions may also be utilised in the self-regulation process. This may occur only if the individual is able to acknowledge emotions. This is one dimension of meta-level evaluation. (Näätänen et al. 1995, 65.) In the similar vein, Niemi (2000, 102–104) uses the concept of "meta-mood skills" to refer to the emotional nature of learning. The concept, originated from Salovey, means the learner's awareness of her emotions in learning processes and the readiness to steer her for effective learning. Salovey and others emphasise the meaning of emotional skills in the use of

feelings to motivate, plan and achieve in life in general (Salovey et al. 1995, 126 according to Niemi 2000, 102). Meta-mood skills are closely related to motivation and through it to metacognition (Niemi 2000, 104).

The concept of emotional intelligence includes the idea that rational behaviour and action is possible only if the individual's mental life is consistent with her emotional life. Emotional intelligence includes the sense of proportion; simultaneously as the individual strives to strategically plan and guide her life, she realises the limited scope of life and the relativity of values and meanings. Here, understanding also other peoples' perspectives and respecting their thinking is important. (Goleman 1995, 42–44.)

Consequently, in addition to recognising one's own emotions, the individual has to be attuned to the emotions of others. (Goleman 1995, 42–44; see also Isokorpi & Viitanen 2001, 63–67.) Thus, the individual is able to acknowledge how the emotion functions interpersonally. The emotionally intelligent person engages in efficient emotion regulation in both self and others. This monitoring makes it possible for the individual to strategically manage emotion in self and others to produce the desired outcome in a given situation. (Barrett and Gross 2001, 288.)

4.3 Summary of emotions in learning

Thus, emotions – whatever they concretely are – come to the communities of learning and working through individuals' own history, social events, professional traditions, communal phenomena and gender. Any emotion is not emotion as such; instead all emotions have their roots. When we as human beings and communities of human beings get into touch with our emotions, they become understandable, we become familiar with them. They are not any more an incomprehensible bunch that disturbs us. (Ihanainen 1995, 41–42.) Experiences include always a variety of emotions. Emotions are an important part of our experienced world and experiential learning process. (e.g Ojanen 2000b, 104.) Ihanainen (1995, 45) suggests that interactive consciousness and emotional skilfulness are important skills in recent and future working life. Interactive consciousness includes our understanding about the meaning of emotions in interaction with others at work places. Emotional skilfulness is the skill to use emotions as means of observation and performance.

From the viewpoint of professional learning and clinical learning as part of it, it is especially important to understand the holistic nature of learning; in authentic nursing environments the learner encounters the range of challenging

events and situations that arouse emotions – they are an essential element of working and learning – and thus, it is necessary that they are acknowledged and dealt with.

5 Clinical learning in nursing education

Clinical learning is a major component of nursing education and has been acknowledged as central to nursing education (Lee 1996; Löfmark & Wikblad 2001; Mahara 1998; Palmer 1994). Consequently, in this study clinical learning is also perceived to be a key element in the learner's development towards professional expertise. Expertise has also been defined as the goal of Polytechnic education by the law (Ammattikorkeakoululaki 351/2003; Valtioneuvoston asetus ammattikorkeakouluista 352/2003). Thus, I have chosen to discuss professional education in the light of the concept of expertise and expertise research.

5.1 Professional expertise as an achievement of education

It is widely acknowledged that formal education occupies only a small proportion of the learning continuum and that most learning experiences actually occur outside the educational institution (e.g. Candy & Crebert 1991, 571) and especially after the professional education at workplaces. Thus, it is useful and appropriate to consider aspects of professional development in the light of expertise research because it is widely accepted that professional education should prepare learners, and give them readiness, to grow as experts in their field. Thus, it is evident that professional expertise is mainly achieved in two contexts: the prerequisites for expertise are created in educational environments, but professional expertise develops in authentic environments in working life (Tynjälä, Nuutinen, Eteläpelto, Kirjonen & Remes 1997, 476).

5.1.1 Study of expertise

Professional expertise has been studied and discussed in many different theory traditions (e.g. Lehtinen & Palonen 1997, 119; Billett 2001, 431; see also Eraut 1994, 123; Tynjälä et al. 1997, 475) and that is why it is difficult to form a coherent picture of it. However, different perspectives illuminate different aspects of professional expertise and recently the research of expertise had widened to take into account different aspects of expertise, not only cognitive. It is also evident that in the research of expertise it may be concretely perceived in the variation and integration of different theoretical

perspectives dealing with learning, knowledge and cognition (Lehtinen & Kuusinen 2001, 173).

Expertise became a subject for research as a result of work in the sixties, due to developments in artificial intelligence and cognitive psychology. These focused on basic information-processing capabilities that humans employ when they act intelligently in situations in which they lack any specialised knowledge and skill. (Glaser & Chi 1988, xv-xxi.) Thus, the early research of expertise focused on the cognitive aspects of performance (Eteläpelto 1997, 100; see also Billett 2001, 431-438; Bromme & Tillema 1995, 264) and the discipline of cognitive psychology characterised expertise as the product of the breadth and organisation of individual's domain-specific knowledge (e.g. Billett 2001, 431–432).

During the 1970s, psychologists began studying the acquisition of expertise within specific domains; expertise was perceived to be gained over long periods of time via concentrated and often self-motivated learning. More recently, learning theorists became concerned with the acquisition of disciplined bodies of knowledge and characteristic of academic subject areas (e.g. mathematics, science, computer programming, and social studies). Furthermore, researchers began to broaden their scope and consider input from other branches of cognitive science as well as from learning settings outside the laboratory or even outside the school. (Brown & Campione 1994, 232; see also Lehtinen & Kuusinen 2001, 174–175.) Later, studies have investigated expertise from the viewpoint of the behaviour of expert and novice. These studies show strong interaction between structures of knowledge and processes of reasoning and problem solving (Glaser & Chi 1988, xv-xxi; see also Perkins & Salomon 1989, 18) and they are strongly linked to research evidence, for example Dreyfus model of progression from novice to expert. Benner (1984) has adapted Dreyfus's model and applied it in nursing. Also Schön's (1983/1995) theory about 'reflective practitioner' that is widely quoted in literature, and which was discussed in chapter 2.5 may be included in the research of expertise (see Eraut 1994, 123).

Changes in society, professional culture and knowledge production have caused the need to reanalyse professional expertise (e.g. Tynjälä 2004, 174–175; Tynjälä et al. 1997). Hakkarainen, Palonen and Paavola (2002; see also Tynjälä 2004, 174–175; Tynjälä et al. 1997) differentiate three different perspectives to professional expertise.

First, professional expertise may be considered as acquisition and management of knowledge: cognitive competence. Secondly, professional expertise may be analysed as a cultural participation process: participatory view. This view, which is related to situated cognition perspective, was engendered

as a critique to the cognitive paradigm. Finally, expertise is also a dynamic development process: knowledge creation perspective. This synthesising view is perceived as necessary because its focus is the developmental processes of expertise, in which new practices and knowledge are created and which is based on interaction between individual and community. (Hakkarainen et al. 2002, 450–451.)

Currently, it is accepted that professional expertise cannot be defined only as a cognitive process; instead, it seems that prerequisite for achievements is that the individual is able to relate her own ability to abilities of other members of the community and also to competences of other communities (Engeström 1999, 249 - 255; see also Hakkarainen et al. 2002, 461; Oatley 1991, 102). Thus, this so called shared expertise also includes interactive and co-operative dimension: expertise is not perceived only as an individual ability; instead, it is more perceived as an ability of networks and organisations to solve new and ever changing problems together. (Launis & Engeström 1999, 64; see also Asanti, Lehtinen & Palonen 2002, 93–95; Candy & Crebert 1991, 583; Lehtinen & Palonen 1999, 156–157; Nummenmaa 2002, 135; Tuomi-Gröhn 2001, 30; Tynjälä et al.1997, 488–489.)

Consequently, it is perceived that the competence of the individual in the community of expertise does not develop only vertically from novice to expert but it also includes multi-professional horizontal learning which occurs between professionals and also between professionals of other fields (Engeström 1999, 256–257; see also Hakkarainen et al. 2002, 461). Thus, the development of professional expertise is perceived to occur in the dialectical process where the individual by responding to challenges of community creates skills and abilities on basis of which the community may develop its operation and create new practices that support individual's activity (Hakkarainen et al. 2002, 461–462). For example, Lonka and Hakkarainen (2000, 135) emphasise that the significance of so called socially decentralised cognition will increase in the future because one person is not able to manage on her own in ever changing working life where problems are openly defined problems which have not only one solution. Thus, high quality mental achievements are not based on individual expertise; instead, sharing mental resources enables achievements that an individual could not achieve on her own. This kind of shared expertise seems to be an efficient way to act both in working life and in science. (Lonka & Hakkarainen 2000, 135–136.)

It seems that similarly as in learning research, in expertise research, there is an aspiration for integration of the cognitive and sociocultural approaches.

5.1.2 Knowledge and knowing in expertise

Moreover, expertise research also considers the role of different kinds of knowledge in the action of expert. It is accepted that knowledge and knowing are central in expertise (e.g. Tynjälä & Nuutinen 1997, 184–185). Expertise knowledge includes many forms of knowledge (Chi 1987, 239-240; Collins et al. 1989, 476; Eteläpelto 1997, 96–99; Tynjälä 1999c, 171; Tynjälä & Nuutinen 1997, 184-185). Traditionally, in occupational psychology, the terms ”know how” and ”know what” are used. Accordingly, they are about the synonyms of procedural and declarative knowledge. (Kirjonen 1997, 26; see also Bereiter and Scardamalia 1989, 373; Bransford and Vye 1989, 192; Collins et al. 1989, 476; Eraut 1994, 15; Novak 2002, 122–127.)

Indeed, it has been perceived that as a basis of professional competence or expertise, there are two kind of knowledge, formal knowledge, so called propositional knowledge, which is both concrete, factual command of knowledge of certain discipline and also conceptual, theoretical and abstract knowledge. This kind of knowledge can be expressed conceptually and it can be explicitly used in reasoning decisions. This kind of knowledge is also often called as declarative knowledge which describes its nature; often this kind of knowledge is explicit. (Tynjälä 1999c, 171; see also Eteläpelto 1997, 98; Tynjälä & Nuutinen 1997, 184–185; Tynjälä et al. 1997, 481–482.)

The second component of expertise knowledge is practical knowledge which is mainly acquired through experience. This kind of knowledge is often implicit, so called tacit knowledge or intuitive knowledge that is difficult to explicate. (Tynjälä 1999c, 171; see also Eteläpelto 1997, 98; Tynjälä & Nuutinen 1997, 184–185; Tynjälä et al. 1997, 481–482.) Practical knowledge or knowing is based on experience, which means that it has been produced through the experience in problem-solving in practice situations; practical knowledge is also functional, meaning that this kind of knowledge is usually put into use in the real problem-solving situations where it guides action; practical knowledge is also personal because it is structured from personally significant experiences; it is also contextual and situational which means that it engenders and is best perceived in those concrete situations and settings where it has been acquired; it is also tacit and implicit and often remains subconscious. Practical knowledge is also informal because this kind of knowledge is used in evaluations and predictions in practice situation without being able to formal reasoning or conceptualising. (Eteläpelto 1997, 98; see also Lehtinen & Palonen 1997, 107; Tynjälä et al. 1997, 482.)

A professional has to have command of both declarative and practical knowledge because she has to be able to apply her knowledge to different and

complicated individual cases. She traces the focus of her action by herself on grounds of her declarative knowledge. The professional expertise may be perceived as mastery of declarative knowledge from the viewpoint of practice application. (Konttinen 1997, 52.)

However, recently there has been a move from this rough division of declarative and procedural knowledge to the more differentiated classifications (Eteläpelto 1997, 97). Thus, the main components of expert knowledge are suggested to include, in addition to practical and formal knowledge, also metacognitive knowledge or knowing (Eteläpelto 1997, 97; Vosniadou 1996, 97–98; see also Chi 1987, 239–241; Lehtinen & Palonen 1997, 115). Recently, in the research of development of expertise the significance of these three components of knowledge has been the focus of interest (e.g Bereiter & Scardamalia 1993, 74–75; Bromme & Tillema 1995, 263; Tynjälä 1999c, 172; see also Leinhardt, McCarthy Yong & Merriman 1995, 403–404) and it is suggested that in high-quality expertise these different aspects of knowledge are closely integrated (see Väisänen & Silkelä 2003, 30). Many authors suggest the use of concept of *knowing* instead of *knowledge*. In the term knowing, conceptual knowledge; personal, experiential knowledge; knowledge about values and beliefs; and the wisdom of the expert subject are integrated. (Billett 2001, 433; Eteläpelto 1997, 96–97.)

Thus, in the recent research the third kind of knowledge; metacognitive or self-regulative knowledge has been emphasised as an essential part of expertise knowledge. This type of knowledge includes metacognitive and reflective knowledge and skills. (Eteläpelto 1997, 99; Tynjälä 1999c, 171–172; 2004, 177; see also Bereiter and Scardamalia 1989, 373; Lonka & Hakkarainen 2000, 138.) Metacognition and refection were discussed more in detail in the previous chapters.

In addition to knowledge related factors and cognitive processes, values, motivational and volitional factors related to action (Eteläpelto 1997, 100; Tynjälä & Nuutinen 1997, 184-185) and also wider cognitive relations, images, metaphors, and attitudes (Bromme & Tillema 1995, 263) are now the focus of interest in expertise research similarly as in education and learning research in general. Consequently, reflective practice includes considering critically the actions of the whole team or work unit. Many approaches perceive expertise as reflective practice. (Tynjälä 1999c, 171–172; see also Poikela & Nummenmaa 2002, 35.)

5.1.3 Towards a professional's own theory

Integrating different forms of knowledge is perceived to be a key process in the development of expertise (Tynjälä 1999c, 172) and the development of the expert's own theory; this practical theory may be perceived as a tool of the expert. Consequently, during the learning process towards professional expertise the learners should have opportunities to theorise practice and particularise theory: it is important that the students have opportunities to transform theoretical knowledge so that it can be applied in individual cases and practical problems. Correspondingly, the learners' experiential and practical knowledge should be explicated, conceptualised and considered in the light of theoretical knowledge. (Tynjälä 1999c, 172–173; also Leinhardt et al. 1995, 403–404.)

Furthermore, Jarvis (2000, 33) suggests that because practice is changing rapidly, one has to recognise the fact that the process knowledge that might have been discovered in previous research might no longer be relevant in a current situation. He points out that theory has become a hypothesis to be tried out in the practice situation. Consequently, the knowledge of research only becomes practical knowledge for the practitioners when they can legitimise the knowledge through successful practice. Thus, it becomes part of their own body of knowledge or their own theory. (also Boshuizen, Schmidt, Custers & Van De Wiel 1995, 273–275; Jarvis 1999, 273; Leinhardt et al 1995, 404.) In the same vein, Rolfe (2002, 25) suggests that experts in nursing use at least three kinds of knowledge in their practice: propositional or scientific knowledge, which is acquired mainly from research; experiential knowledge, which is acquired from reflecting on past cases from one's own experiences; and personal knowledge gained from relationships with patients. He suggests that it would be important to reinstate reflective practice as a viable alternative to technical rationality rather than as an adjunct to it. Thus, the practitioner is no longer the passive recipient of scientific knowledge but rather the originator of her own context-specific practice-based knowledge. (Rolfe 2002, 27; see also Eraut 1994, 54–56.)

Eraut states that professional knowledge cannot be characterised in a manner that is independent of how it is learned and how it is used. The essential nature of the professional knowledge may be captured by looking at the contexts of its acquisition and its use. Eraut suggests that learning knowledge and using knowledge are not separated processes but the same process. (Eraut 1994, 19, 25.) Furthermore, he (1994, 102; see also Stevenson 2002, 12–13; Turpeinen 1998, 29–30) suggests that professional knowledge should be seen with the broadest possible meaning including in addition to propositional

knowledge, also personal knowledge, tacit knowledge, process knowledge and know-how. These all kinds of knowledge are necessary to professional performance and they should be included in professional education. The same idea is in Schön's (1983/1995, 24) writings about *technical rationality* view of professional knowledge where scientific knowledge is most highly valued and experiential knowledge or concrete problem solving has the lowest value.

5.1.4 Summary of expertise

As was discussed above, integrating different forms of knowledge is perceived to be a key process in the development of expertise (Tynjälä 1999c, 172). Furthermore, it is evident that learning and development towards a professional and expert does not develop only vertically from novice to expert but it also includes multi-professional horizontal learning which occurs between individuals (Engeström 1999, 256–257; see also Hakkarainen et al. 2002, 461).

The professional development towards expertise is especially important to be taken into account in clinical learning, because it is suggested that professional development is to large extent determined by experiences encountered and strategies used in practice (see Ruohotie & Honka 2003, 101–102; also Ora-Hyytiäinen 2004, 123). Clinical placements are also places that provide with good opportunities for learners to theorise practice and particularise theory; this is important from the viewpoint of integrating theory and practice which has been identified to be problematic in nursing education.

5.2 Clinical learning as an arena of development towards expertise

The purpose of clinical learning for nursing students is to provide the student with the opportunity to grow and develop as a person and health care professional towards professional expertise. Clinical learning enables learners to develop their clinical skills, to synthesise theory and practice, to support their socialisation into nursing, and to meet clinical role models (Jackson & Mannix 2001; Koh 2002a; 2002b; Wong et al. 1995). Clinical learning is a major component of nursing education and has been acknowledged as central to nursing education (Lee 1996; Löfmark & Wikblad 2001; Mahara 1998; Palmer 1994). Clinical learning environment, in addition to being an

appropriate setting for experiential and situated learning, is also a challenging learning environment. This challenge stems from the reality or authenticity of the setting: in their clinical learning environments, learners encounter real problems and are studying and learning in authentic nursing situations, in their future work places. It is important to explore clinical learning from the perspective of different learning approaches and perspectives, and from the viewpoint of individual learner.

In previous studies concerning clinical learning, there are various identified factors influencing on students' experiences and learning. The significance of mentors have been emphasised in many studies (Appendix 2). The mentors have many roles in facilitating student learning; they act as role models, teach and support the learner and give feedback. The relationship between the learner and the mentor is of great importance.

The theory – practice relationship has continuously generated research; much of the study has focused on the so called theory – practice gap (Appendix 3). In many studies the relationship of theory and practice has been identified problematic. It has also been identified that theory-practice integration may be enhanced by supporting learners' reflective thinking. It is also evident that mentors play an important role in supporting students to relate theory to practice.

Many of the studies that have focused on nursing students' experiences on clinical learning (Appendix 4) have identified the importance of mentors in practice placements. There are also studies that emphasise the student – patient relationship in learning. Consequently, different human relationships are meaningful in clinical learning.

5.3 Summary of clinical learning

To sum, in this study clinical learning is perceived as the activity where the learner is actively constructing knowledge and her own personal theory as part of her world view by interpreting new information on the basis of her previous experiences, knowledge, conceptions and beliefs while attending to actions of social community of health care in an interactive process.

It is perceived that the growth and development of the learner and the change of her performance and behaviour occurs through transformation process that presumes metacognition and reflection that enable the higher level of understanding. Clinical learning is perceived as an arena where the learner acquires readiness to grow into a professional expert. Self-directedness and self-regulation are important qualities in clinical learning – to be able

to act in complex, authentic situations which demand flexible and versatile actions the learner must possess metacognitive and reflective skills; through reflection and metacognition the learner is able to self-regulative actions: to set personal goals, to monitor and regulate her cognition, motivation, emotions, behaviour and environment in order to achieve set goals. However, it is also important to take into account the role of subconscious processes in learning.

Moreover, I perceive an individual's professional growth and development to be a holistic process where the person's action and competence in her work and also in learning a profession is based on the unity of knowledge, skills, volition and emotions (cf. Laurila 2003, 68). Professional growth and development in this study is perceived as the student's growth and development in practise towards professional competence and expertise. The challenges of the growth engender from experiences in practice and the succeeded solutions of these tasks and experiences develop both the learner, practice of action and the profession. (cf. Laakkonen 2004, 13.)

6 Methodological background of the study

6.1 Key issues of the phenomenological approach

The empirical part of this study is primarily based on a phenomenological view. A desire to thoroughly understand students' unique experiences have led me to choose the phenomenological method. Edmund Husserl (1859–1938) is generally acknowledged as the founding father of phenomenology. Philosophers such as Heidegger, Merleau-Ponty and Sartre further developed phenomenology. The guiding theme of phenomenology is to go "back to the 'things themselves'" (Giorgi 1985b, 8). Later, phenomenology has mainly been perceived "the name for a philosophical movement whose primary objective is the direct investigation and description of phenomena as consciously experienced without theories about their causal explanation and as free as possible from unexamined preconceptions and presuppositions" (Spigelberg 1975, 3). A phenomenon under research is the core of all phenomenological research, and consequently the starting point of scientific quality of the research. According to phenomenological way of thinking, the basis of scientific quality is how a used method is able to capture the phenomenon under research. (Perttula 2000, 428; 1995a; see also Giorgi 1994, 191–192.) Phenomenology acknowledges the importance of the individual's experience and how the data produced, uninfluenced by predictive prescriptions, can be of value and significance (Green 1995, 421).

The first objective of the phenomenological approach is the enlarging and deepening of the range of our immediate experience (Spiegelberg 1982, 679). Phenomenology is interested in questions like what is man's consciousness, how it is structured and how it is functioning and what kind of experiences the consciousness is composed of. An empirical, experiential question leads the phenomenologist to understand other people's everyday life. (Perttula 2000, 429; also Giorgi 1985b, 8; 1994, 207.) The lifeworld, the world of *lived experience* is both the source and the object of phenomenological research. The aim of phenomenology is to transform lived experience into a textual expression of its essence. (van Manen 1990, 36.) According to Perttula (2000, 429; 1995b, 4), the same empirical question can be settled from point of view of any discipline that is interested in man's experience because the aims of phenomenology do not recognise differentiating disciplines.

In literature there is a lot of discussion about the phenomenological method, and how its application has been uneven, for example in nursing research (see e.g. Green & Holloway 1997; Giorgi 1997; Koch 1995; Cohen & Omery

1994; Paley 1997). Being aware of the critique, I will consider the different aspects that should be taken into account in order for method to fulfil what Giorgi (1997) calls the minimum criteria for the phenomenological study. He identifies four key issues, which have to be understood in order to understand the phenomenological method.

The first characteristic is that phenomenology thematises the phenomenon of consciousness and in its most comprehensive sense; it refers to the totality of lived experience that belongs to a single person (Giorgi 1994, 192). Consciousness is the only access human beings have to the world. Thus all we can ever know must present itself to consciousness. (van Manen 1990, 9.) The totality of experiencing, consciousness, originates and acts in human being as meanings. In our consciousness, we are in relationship to the world through different kinds of meanings, such as knowledge, emotion, will and faith. In our meaning experiences we orientate to the reality and are able, at least to some extent, steer our course of life. (Rauhala 1995, 5.) Giorgi states that it is important to acknowledge the role of consciousness and consider it because it cannot be avoided. Thus, if ignored it silently makes its presence felt anyway. Consciousness is described as the medium of access to whatever is given to awareness; nothing can be spoken about or referred to without implicitly including consciousness. Phenomenology starts from the perspective of consciousness and allows that whatever presents itself to consciousness, precisely as it presents itself, is a legitimate starting point for research. (Giorgi 1994, 192; see also van Manen 1990, 9–10.)

Secondly, in phenomenology, a precise meaning is given to the concept *experience.* According to Giorgi (1997), Husserl identified as the main characteristic of consciousness the fact that it presents objects to us, and this presenting function he called ”intuition,” which refers to ordinary types of awareness. By experience, Husserl meant the intuition of ”real objects” which refer to those objects that are in space and time and thus are given in ordinary perception. Then, intuition is the broader term and experience the narrower one, because experience refers to a narrower range of ”presences” – presences that carry the index of reality with them. Giorgi states that this distinction is important because human sciences are interested in such phenomena that may not have ”realistic” references, for example, hallucinations in psychology and rituals in anthropology. Giorgi adds that even when ”real objects” are the reference points, the human sciences concentrate on how such objects are perceived and not so much on their ”isness” or real character. (Giorgi 1997.) Thus, the goal of phenomenology is to uncover and describe the internal meaning structures of lived experience. It attempts to explicate the meanings as we live them in our everyday existence, our lifeworld. It aims

at gaining a deeper understanding of the nature or meaning of our everyday experiences. (van Manen 1990, 9–11.)

The third issue is the precise meaning of the concept *phenomenon* for phenomenology. It means the presence of any given precisely as it is given or experienced: full range of ”givennesses” that are present and in terms of the meaning that the phenomena have for the experiencing subjects. It is always the meaning of the object precisely as given that is the focus. (Giorgi 1997; see also Gadamer 1976, 131–132, 152.) Thus, phenomenology aims at gaining a deeper understanding of the nature or meaning of everyday experiences. According to van Manen (1990, 9), it attempts to gain insightful descriptions of the way persons experience the world pre-reflectively, without classifying or abstracting it.

The fourth point is intentionality. According to Giorgi, (1997; see also Berger and Luckmann 1966/1979, 34–36) for Husserl intentionality is the essential feature of consciousness, and it refers to the fact that consciousness is always directed to an object that is not itself consciousness (although it could be, as in a reflective act). Perttula (1998, 51) clarifies this issue by stating that the phenomenology ”analyses the human world which is given to consciousness *through* intentionality.”

An important point in a phenomenological method is a reference to its subjective characteristic. Giorgi (1994, 205) states that subjectivity cannot, and should not, be eliminated in phenomenological research, but according to him subjectivity in the negative sense can be transcended. Not all subjectivity is necessarily negative. Giorgi adds that for phenomenology, nothing can be accomplished without subjectivity. Consequently, its elimination is not the solution. Rather, *how* the subject is present is crucial, and objectivity itself is an achievement of subjectivity. Thus, one could say that in all research ”what is” or the truth or meanings should be valued, but it is similarly true that subjectivity is needed to achieve those values. (Giorgi 1994, 205.) It is important for the researcher to acknowledge this subjectivity and to be aware of it throughout the research process.

6.2 Characteristics of the phenomenological method

The method has to be understood from within the phenomenological framework displayed above. The method includes three essential and interrelated stages: description, reduction and search for essences (Giorgi 1985a, 42–43; 1994, 207; 1997).

First, description: the phenomenon to be studied has to be described as precisely as it presents itself. The key idea of phenomenological philosophy is what *is* and *appears* not what anyone thinks or says about it. (Spigelberg 1975, 15.) Description means giving linguistic expression to the object of any given act precisely as it appears within that act: through the medium of language, one is able to communicate to others the objects of consciousness to which one is present, precisely as they are presented. Giorgi states that ”description is the articulation of the given as given or experienced”. (Giorgi 1997, 236.) Thus, it is important to catch the meaning or meanings that the phenomena have for the experiencing subjects. In this study, my aim is to capture the way in which the phenomenon of clinical learning appears in nursing students' lives.

Secondly, the reduction: the researcher brackets or disengages herself from all past knowledge about the phenomenon, in order to meet it freshly and to describe it precisely as it is experienced, and to consider what is given precisely as it is given (Giorgi 1997). Researchers, like all human beings in the everyday world, carry their values, prejudices, emotions and ambitions with them. Thus, crucial to the success of phenomenological research is the heightened awareness of the researcher's consciousness. In order to accomplish this, reduction is required, which involves our original awareness of a lived experience by means of bracketing. (Merleau-Ponty 1962/1978; Giorgi 1994, 205; Asworth 1997.) Perttula (1998, 58) points out that bracketing does not require the researcher to deny preconceptions or ambitions but to identify them and set them aside temporarily. The researcher wants to know what is really happening with the phenomenon under the investigation, and keeping with such an attitude, the researcher is deliberately trying not to influence the results (Giorgi 1994, 205, 212). The essential point is that objects and events are not apprehended in neutral fashion in the natural attitude. Depending on what questions one tacitly takes for granted, the world is interpreted one way or another. If one does not think or choose to ask about the purpose of an artefact, its historical significance as well as its function it is thereby interpreted in negative or even false ways. (Natanson 1973, 70.)

According to Giorgi (1994, 205) the reduction is a means of rendering oneself as non-influential as possible during the process of research in order to come up with valuable findings. It wants to see them, and to see them in a new way, as phenomena; as they appear to us, in all their richness, but also in their incompleteness, regardless of whether these phenomena are matched by a corresponding ”reality” (Spigelberg 1975). The world in itself is very indeterminate. Meaning is not out there in the world simply awaiting our discovery of it. Meaning is unthinkable without the concept of 'mind' – a

conscious, experiencing subject. Meanings are not merely encountered and gathered along the way. They are created. (Merleau-Ponty 1965/1978; see also Crotty 1996.) According to Rauhala (1990, 51; 1993, 127) the concept of meaning is understood in a broad sense: meaning is each noematic relation of human being to the world and oneself. Thus, for example, anxiety, fear, love, rational decision, and satisfaction are meaning.

The second sense in which the reduction is employed is with respect to the noematic aspects of the subjects' descriptions. It is granted that the subjects really lived through the experiences and meanings they describe insofar as they were acts that took place for them at a specific place and time. However, what is being referred to is not taken as the objective truth but only as the correlate of what it really was. These meanings of the situation for the subject are taken precisely what they are: meanings of the situation for the subject. What *is,* has to be ascertained in other ways and then compared to the (reduced) perspective of the subject. (Giorgi 1985b.) Giorgi (1997) adds that no study can be considered phenomenological if some sense of the reduction is not articulated and utilised.

Thirdly, search for essences: after the description that is obtained within the attitude of reduction, the researcher begins the process that is called free imaginative variation (or thought-experiment by Spigelberg 1975) whereby aspects of the concrete phenomenon are varied until it's essential or invariant characteristics show themselves. Whatever is given factually becomes one example of a possible instance of the phenomenon, and by multiplying possibilities one becomes aware of those features that cannot be removed and thus what is essential for the object to be given to consciousness. (Giorgi 1994, 214–215.) Natanson (1973, 67) clarifies this by stating that we are asking what is invariant in the object or the event and what the minimal conditions are for something to be presented, and what alterations on some aspect of what is fantasised can make a change in the thing imagined. The invariant characteristics and their relationships to each other are then described; a description of the phenomenon, a description which regardless of all its problems and limitations is apt to sharpen our very seeing (Spigelberg 1975), and this becomes the structure of the phenomenon (Giorgi 1994). This representation is abstract and idealistic. Thus, when it is implemented within the human sciences, many additional and contextual factors should be taken into account. (Giorgi 1994.) In the next chapter (7.2), when describing the analysis, I will give examples of ways in which I carried out the reduction and the search for essences in this study. These are also assessed in the last chapter (10.1) where I will discuss the credibility of the study.

Giorgi (1994, 207) deals with some of the contextual issues mentioned above, the first being loyalty to the phenomenon. This issue deals with the research question being answered richly. The aim of the research is to capture the way in which the phenomenon appears in everyday life. Giorgi (1994, 207) adds that this does not mean that every detail has to be recorded but that the essential dimensions of the phenomenon are permitted to manifest themselves in an observable way. The second contextual issue is the demanding nature of qualitative research. Giorgi (1994, 208; see also Miles & Huberman 1994) states that one often hears complaints about the labour intensiveness of qualitative research. Giorgi suggests the researcher should bracket the efficiency issues and stick to what is theoretically sound and justifiable. It is important to dwell with the data to a depth that is appropriate (Giorgi 1994, 208). Dwelling with the research material has come very true in my study, because the process has took five years altogether and the analysis has been carried out in many stages; the length of the research process has allowed time for intuitions to develop.

In addition to phenomenology, the basis of my viewpoint in the empirical part of the study is especially in existential phenomenology. Existential phenomenology is a fusion of the phenomenological and the existential traditions. Existential phenomenology aims at describing how phenomena present themselves in lived experience, in human existence (van Manen 1990). Existential phenomenology perceives the relation of human being to the world not only as the problem of behaviour and performance, but especially as the problem of meaning relation. Existential phenomenology aims to cover the whole scale of the problem of human meaning and thus aims the roots of the subjective world view. (Lehtovaara 1994a, 11.) These related concerns about the nature of human existence and the freedoms that it involves require an approach which addresses directly the phenomena of human life which is rooted in these phenomena, rather than in the more abstract debate of other philosophical approaches (Reed 1994, 337.)

According to Attig (1985, 162) the core of existential phenomenology is that there can be nothing which is philosophically more important than the detailed and careful exploration and description of human experiences. In and through experience individuals are involved in the world. They experience the surrounding environment, themselves and other experiencing beings. ”Their experience include perceiving, exploring, doubting, reflecting, judging, evaluating, knowing, learning, imagining, remembering, creating, decision-making, feeling, communicating, cooperating, empathizing, befriending and loving” (Attig 1985, 162). According to Perttula (2000, 429; see also Rauhala 1993, 91) the researcher possessing this approach is aiming to describe

phenomenologically the phenomenon under research knowing that the goal is in ultimate sense *impossible* to gain. The phenomenological method is a means to be aware and control interpretativeness and, accordingly, to create qualifications to see the phenomenon phenomenologically. The control of interpretativeness means trying to perceive phenomena directly and to abandon the natural and ordinary way of thinking about cultural and individual ideas of the world. (Perttula 2000, 429; 1998.) Thus, the goal of the researcher is to describe the core of the experiences that another person has verbalised; consequently the research process is person-oriented (Perttula 1998, 28).

6.3 Critical incident technique

6.3.1 Defining critical incident

The critical incident technique was developed by Flanagan (1954) in the 1950's. He was an aviation psychologist and he used critical incident technique in gathering information about effective and ineffective behaviour performed by pilots of the World War II. Later, the method has been used in different ways especially in nursing research and education. The technique was used in nursing and nursing education in different ways already in the 1960's. Mostly it has been used in gathering research data.

Critical incidents are brief descriptions written by learners about meaningful events in their lives (Brookfield 1990, 179). Any experience that the individual encounters may be a critical incident and therefore a situation the individual can reflect upon (Ghaye & Lillyman 1997, 80; 2000, 106). Critical incident is also defined and used differently in education. Tripp (1993, 8) describes that "Incidents happen but critical incidents are produced by the way we look at a situation: a critical incident is an interpretation of the significance of the event". He suggests that teachers may develop their teaching through analysing critical incidents that take place in their work.

There are also other concepts that are used either as synonyms for critical incident or which are close to the concept of critical incident. The concepts that have been used as synonyms for critical incident are critical event, significant event, critical learning experience and significant learning experience. Other concepts used are significant life experience (Merriam & Clark 1993), symbolic growth experience (Frick 1987; 1990), and authentic experience (Rahilly 1993), which are used in psychological research. In the following, there are a few examples of how these concepts have been used in research.

Frick (1987; 1990) explored people's symbolic growth experiences by which he refers to those significant moments in life when one creates personal meaning by symbolising her immediate experience in the interest of heightened awareness and personal growth. As one perceives the symbolic dimensions of her immediate experience, she becomes creative agent in her own learning. Merriam & Clark (1993) explored adults' significant life experiences and noticed that for learning to be significant it must personally affect the learner and it must be subjectively valued by the learner. Learning may result in an expansion of skills, sense of self or life perspective or it can lead to a transformation of the whole person. Rahilly (1993) conducted a phenomenological study where she explored individuals' authentic experiences. Her aim was to reveal the essence of authentic experience. She discovered that authentic experience is a way of living or experiencing that can be applied to or triggered by numerous subjective experiences.

In my study, I use the concept *critical incident* because it is the original concept developed by Flanagan (1954) and it describes thoroughly the nature of the event that is encountered. The concept has also been criticised, because the word *critical*, especially in nursing, may lead people to think life-threatening situations. However, the term *critical* in English language means that situation or event is extremely important. Thus, in this context, it seems to be a suitable term. Of course, it is important to explain the term to research participants or students so that they are aware what kind of events they need to document. Quite often in the context of education, the term *critical incident* is replaced by the concept *critical learning incident.* However, I am faithful to the original concept *critical incident* in my study.

6.3.2 Critical incident technique as a data gathering method in research

Critical incident technique has widely been used as a data gathering method in nursing and health care research. In these cases, the analysis of the data has been either quantitative or qualitative (Burns & Harm, 1993; Cheek & O'Brien 1997; Cox, Bergen & Norman 1993; vonPost 1996; Reed 1994; Silen-Lipponen, Turunen, Tossavainen, Smith & Russel 1999; Silen-Lipponen 1997). Koponen, Perälä and Räikkönen (2000a) have conducted a review about the use of the critical incident technique in nursing science. According to them the technique is feasible in nursing research, for example when the aim is to describe patients' experiences of their care and defining quality indicators from clients' viewpoint. Byrne (2001) considers that in addition to the use as a research method, it may be used to develop professionals themselves and

their work. It allows professionals to understand the dimensions of their role in clinical settings and their interactions with patients and other clinicians.

The critical incident technique has been identified to be a useful method in exploring the quality of health care (Kemppainen 2000; Norman, Redfern, Tomalin & Oliver 1992). Valentino, Blue, Donnelly and Stratton (1999) carried out a study where they explored the most valuable critical incidents of physicians in a 4th-year acting internship in surgery. They conclude that understanding critical learning events provides an opportunity to accommodate individual learning experiences and to develop the programme. Allery and Owen (1997) explored, by using critical incidents, why general practitioners and consultants change their clinical practice.

Related to the health care quality there are also studies where patients' experiences of health care have been explored (Cox, Bergen & Norman 1993; Koponen, Perälä & Räikkönen 2000b). The method has also been used widely in investigating nurses' experiences and health professionals' work from different perspectives (Benner 1984; Gyllensten, Salford & Ekdahl 2000; Martin 1998; Martin & Mitchell 2001; Narayanasamy and Owens 2001; von Post 1996).

Furthermore, the critical incident technique has also been used in the research of education; in Finnish teacher education it has been used by Kallinen (1997) who examined nursing teacher students' critical incidents during their teacher education, and by Silkelä (1996; 1997; 1999; 2000; 2001) who investigated teacher students' significant learning experiences. The students in his study (1996, 130) perceived that exploring significant events may produce knowledge about learners' thinking processes and cognitive development as well. Varila (1999) conducted a study where emotions were explored from the viewpoint of adult education. He used significant learning experiences as the data. The results revealed that emotions are an integral part of significant learning experiences. The emotional atmosphere is a significant aspect in the teaching-learning event. Antikainen (1996) has explored what kind of significant learning experiences people have in different stages of their lives, and what is the origin of these experiences. He perceives significant learning experiences to be turning points in peoples' learning biographies. He interprets the lists of learning experiences as *coping narratives*, because they tell about skills and knowledge by which individuals have been coping in their lives. (Antikainen 1996, 256.) Sparks and Butt (2000) explored student teaching action plans in multicultural education. They used students' multicultural incidents as research material. It was evident that the student teachers became more aware of their own bias and developed a more sensitive attitude toward minority populations. CI-technique has also been used in

medical training (e.g. Alpert, Youngerman, Breslow & Kosa 1973; Mathers, Challis, Howe & Field 1999). Alpert and others (1973) conducted a study where two interns studied their perception of learning internship by using critical incident technique. The majority of the incidents were technical and only a few were interpersonal.

6.3.3 Critical incident analysis as a teaching and learning method

Analysis of critical incidents is one of the writing methods that educators can use both in order to develop their own and their students' reflective skills. Critical incidents are brief descriptions written by students about significant events in their lives (Brookfield 1990, 179).

Critical incident analysis is perceived to be a valuable teaching and learning method in nurse education, especially in clinical learning, because it helps learners to analyse their learning experiences that take place in practice situations and synthesise the theory and practice of nursing. A prerequisite for analysing critical incidents is that the learner is able to recall the experience and feelings related to the event and to learn from the event through writing-, thinking- and analysing process. Within the analysis, the experience or the event is transformed into concepts, which consequently may be helpful in future experiences. (Parker, Webb & D'Souza 1994, 113.)

When using critical incident technique a teacher has to give good instructions to the students. The guidelines should be brief and clear. Documentation and analysis of a critical incident should include identifying the event, describing the relevant details and circumstances (what happened, when, how did it happen, why, where), listing the people involved in the event, describing the learner's role in the situation and finally, analysis of the incident. They have to include also the reasons for their choice. (Brookfield 1990, 200.)

According to Brookfield (1987, 97–99), the critical incident technique prompts learners to identify an event that for some reason was of particular significance to them. The educator provides instructions on what kind of incident is to be identified, and students are then asked to write an account describing the incident. These descriptions are to be written as specifically as possible, with particular details provided as requested. The advantage of critical incident exercises in eliciting learners' assumptions is that the emphasis is on specific situations, events, and people. Instead of being asked to write about abstract concepts, learners concentrate on describing particular events. These are much easier to report on than are judgements or underlying assumptions. (Brookfield 1987, 97–99.)

When using a critical incident technique, an educator would have a record of the concerns and feelings of students regarding their anxieties and difficulties, as well as successes. The advantage of this approach, according to Brookfield, is that critical incidents provide the teacher with exact descriptions of typical experiences. Based on this collection of real-life descriptions that are actual events, it becomes much easier to design meaningful learning experiences and education programmes grounded in the actual experiences and needs of participants. (Brookfield 1987, 97–99; see also Martin & Mitchell 2001.)

The critical incident technique enables the information to be obtained privately rather than by asking students to define their experiences in front of other students. Students may find direct questions, as they require revealing individual experiences, difficult to answer publicly. By having opportunity to provide anonymous written accounts of their typical experiences, students feel safe. (Brookfield 1987, 97–99.)

The advantage of this approach is also that students are talking and writing about themselves, without necessarily being consciously aware of this. When they, for example, perceive another person's actions as unprofessional, they are saying something about their own conceptions of good practice and professional work. This may well remove much of the pressure they would otherwise feel if asked to talk about their own concepts of professionalism. (Brookfield 1987, 97–99.) It is easier for learners to write about their concrete experiences than explore, analyse and assess their values and actions. However, by reflecting and analysing their experiences and events that they have encountered, it is possible for learners to become aware of their values and their own contribution to actions.

The critical incident technique has been used as a teaching and learning method both in education in general (Preskill 1997), nurse education (Durgahee 1996; Martin & Mitchell 2001; Minghella & Benson 1995; Parker, Webb& D'Souza 1994; Procter & Reed 1993, 43; Smith 1998; Smith & Russell 1991, 1993) and in nursing teacher education (Turunen 2002). It has also been used in medical schools as a teaching and learning method and found to be one educational tool to humanise medical education (e.g. Hupert & Pels 1995). The studies where the CI-method has been used as a teaching and learning method in nursing education have mostly been small-scale studies and usually covered a short period of the course. However, there is evidence that the technique is a valuable tool in developing reflective skills during the education. Reflection of critical incidents can be integrated into an education programme.

Critical incident analysis involves both writing about and reflecting on an incident, which occurred in the practice setting. It is therefore suggested

that critical incident analysis can be used effectively as an educational tool to assist nursing students to learn from their experiences, thus providing the opportunity to develop new skills, knowledge and attitudes. Critical incident analysis enables students to re-integrate existing knowledge with new knowledge, thus identifying implications for future personal and professional practice. (Parker, Webb & D'Souza 1994.)

Burnard (1991) suggests the critical incident method may also be used in a way where students' own experiences are not used but instead he recommends exploring and reflecting a fictive or real videotaped event. Burnard emphasises the phenomenological role of the teacher in experiential learning. It is a teacher's duty to encourage and support students to describe and interpret their experiences.

Most of the literature (e.g. Brookfield 1993; Durgahee 1998; Greenwood 1998) supports and values the use of critical incident technique as a tool by which a reflective practice can be enhanced. There has also been critique, such as lack of teaching skills and the feeling of being threatened because of the 'revealing processes' (Brookfield 1990; Fowler & Chevannes 1998). It is identified to be important to study further the use of critical incident analysis in nursing education.

7 Empirical research process

7.1 Setting and participants

The focus of this study is to describe the experiences of nursing students. The study explored the experiences of nursing students, providing an opportunity for eight students to reveal their experiences regarding their critical incidents in clinical settings throughout the Nursing Programme. The participants in this study were eight student nurses from a Degree Programme in Nursing of a Polytechnic in Finland. The tuition for this student group was carried out in English.

All nursing programmes in Finland leading to registration as a nurse are three and a half year programmes in Polytechnics. During the nursing programme, the students of this study had eight placements in a variety of settings. The first seven, included in this research (Figure 1), comprise of a health care centre (mostly elderly patients), a medical ward, a surgical ward, an operation theatre, a psychiatric unit, a paediatric ward and a community placement. The length of the practice periods varied from three to seven weeks. Thereafter, comprising the last term of the education, the students' placements focus on the branch of nursing they have opted to deepen – this period was excluded from this research, because the common part of the studies was completed before the last term. During the practice periods, all students are allocated a mentor and a substitute mentor for each placement. The mentor is usually a staff nurse. In addition to the mentor, the students have a teacher acting as a link person between school and clinical setting. The teacher supports and facilitates both students and their mentors. The teacher meets every student at the beginning of each practice period in order to discuss the objectives of the period and the learning needs of the student. At the end of each practice period, an evaluation discussion is arranged. The student, the mentor and the teacher are participants in this meeting. Usually, the teacher meets the student once a week during the practice period in order to discuss clinical learning. Sometimes, the mentor is present in these discussions.

At the time of the research commencement, the students had completed their first term of study. The research material was collected at various stages nearly throughout the education: the collecting of research material lasted for two and a half years, from the second, (spring 1999), to the sixth that is the second last, (spring 2001), term of the nursing programme.

The students were introduced to the idea of keeping a diary and recording retrospectively their critical incidents about their experiences in practice

placements. A critical incident was defined to be an event that had an impact on them (Appendix 5). The students were asked to record incidents soon after the experience. They were asked to document one account of critical incident per week during every clinical placement. Thus, the material was collected at various stages throughout the Nurse Education Programme. I collected the incidents on completion of each of the practice placements. The use of critical incident technique was planned to be a part of the educational strategy within the nursing programme of this student group, and at the same time, the incidents provided the source of research material for this study. Material collection was seen as a process of discovery, concentrating in the first instance on each individual as a separate case, a possibly unique world. We cannot assume that the meaning of the 'same' situation is the same for different individuals. Later analysis may reveal general features of the situation (see Ashworth 1997). The educational input was largely derived from the works of Flanagan (1954) and Smith & Russell (1991; 1993). It was felt that, with critical incident analysis, theory may become linked more closely to the students' day-to-day practice and they are encouraged to develop skills of reflection. I, in addition to being the researcher, acted as a group leader of this student group throughout their three and half years' nursing education programme.

In addition to recording the incidents, these were used in different ways in learning and teaching during different courses. The students had an opportunity to discuss the incidents with their mentors and teachers during and after their practice periods. Incidents were discussed in seminars and the students used them as a reference in their written assignments. The use of incidents depended on the teachers of different courses. I, as the researcher of this study, discussed with every student at least once every term during the education.

The collected critical incidents were then used as research material in this study. Part of the students' experiences supplied full and varied material of critical incidents while part of the experiences provided scantier accounts of events. The length of the critical incidents varied from a few lines to four pages, the major of accounts being 1-2 pages. Each documented critical incident included the description of an event. In addition to the description, most of the incidents included also reasoning of the choice and the analysis of the event. The total number of the incidents was 225. Most of the students recorded about 30 critical incidents altogether, the highest number of incidents per student being 37. One of the students documented only 14 incidents. The critical incidents documented by the students provided experiences from

different kinds of practice settings both in hospitals and in a community including both acute and long-term care.

LEARNING →

Critical incidents

Spring 1999	Autumn 1999	Spring 2000	Autumn 2000	Spring 2001
Health Centre Wards	Medical Nursing	Surgical Nursing + Operation Theatre	Paediatric Nursing + Community Nursing	Mental Health Care
4 weeks	7 weeks	7 weeks + 3 weeks	4 weeks + 7 weeks	6 weeks

RESEARCH →

Critical incidents

Figure 1. The students' clinical placements and the setting of this study.

7.2 Process of analysis

Different kinds of procedures can be used to assist analysis of qualitative data in phenomenological research to generate a description of relevant aspects of the life-world (e.g. Anderson 1991). It is said that it is more an obligation than a permission to a researcher to work up a method to be suitable for the phenomenon under investigation: the phenomenon sets the goal and the method does the job. When investigating a phenomenological phenomenon, a disciplinary method is required. (Green 1995; Perttula 2000, 429; Rose, Beeby & Parker 1995.) The most characteristic core of phenomenology is its method (Spigelberg 1982, 679). According to many researchers (e.g. Giorgi 1985b; Merleau-Ponty 1962/1978; Spiegelberg 1982, 679) phenomenology can be best understood in terms of the phenomenological method that has four characteristics: it is descriptive, it includes reduction, and it is the search of essences. The fourth characteristic is intentionality which means that consciousness is always directed toward something that is not consciousness itself.

As phenomenology is rooted in the world-view that the reality is not separate from individual experience it consequently respects the subjective reality generated by the person (Rose, Beeby & Parker 1995). Therefore, it is important to bear in mind that the purpose of phenomenology is to describe the lived experience of people. Thus, it is suggested that the researcher using a phenomenological approach needs to develop specific research skills to enable her to get the 'lived experiences' without contaminating the data. (Jasper 1994.) Methods of data analysis that fragment the lived experience may distort what it seeks to describe. Furthermore, the documentation of that experience should be done in such a way that it is true to the lives of the people described. (Anderson 1991.)

It has been claimed that the method is so essential part of phenomenology that it is suggested to be a thread that knits together different traditions of phenomenology (Merleau-Ponty 1962/1978, viii; Spiegelberg 1982, 679; Perttula 2000, 429). The final form of a chosen method is dependent both on the researcher's theoretical commitments and the empirical phenomenon. Perttula (1998) even states that the method should not be chosen but instead it should be created. From the theoretical viewpoint it is essential what is considered as description and what as interpretation, and what is the position of each in a phenomenological method (Giorgi 1992, 121–122; Perttula 1996; 2000, 429).

This study attempts to uncover the individual meaning networks of the lived experiences of the nursing students in their practice placements through the nursing education programme. The lived experience was collected by obtaining experiential descriptions of the students' collection of critical incidents that happened during their practice periods. The aim of this research is to disclose the individual meaning networks of the lived experiences of eight nursing students who were studying in a Degree Programme in Nursing in a Polytechnic in Finland.

In this study the analysis described by Giorgi (1985a; 1985b) and further modified by Perttula (1998; 2000) was adopted. In the course of the analysis process minor modifications were done. Analysis of the data is described according to the procedural steps of analysis that was originally developed by Perttula (1998). The method includes two parts: the individual-specific part and the general part. The individual-specific part of the method produces idiographic (Giorgi 1985) knowledge. The results of this individual-specific part are the descriptions of experienced world of the research participants (or as Giorgi calls it: an individual psychological structure). According to Perttula (1998), this individual meaning network, as he calls it, may include verbalisations of both repeated and single experiential meanings. It is suggested

that the more the study is orientated as existential phenomenology the more individual knowledge is emphasised (Perttula 2000). One of my main aims in this study was especially to gain knowledge about the phenomenon of clinical learning as experienced by particular individuals and this was one of the reasons for the chosen method. I felt that by using other methods of analysis the uniqueness and individuality of experiences dissolves.

The goal of the general part of the method is to produce a general description that should cover all the individual meaning networks as a whole. The analysis moves beyond the individuals to the generally essential, yielding the general, that is nomothetic, structure of the phenomenon (Giorgi 1985b). It may be necessary to construct more than one final general meaning network (Perttula 1998). This was the case in this study.

7. 2.1 The individual-specific part of the method

The individual-specific part of the method produces idiographic knowledge. The centrality of it is due to the unique and situated nature of experiential meanings. (Perttula 1998.) The individual part includes seven stages.

Next, I will show, stage by stage, the analysis process of my study. In the individual-specific part of the method (Table 2), the analysis proceeded one critical incident at a time and on the level of one research participant at a time. I will use one research participant as an example to demonstrate the analysis process.

The first stage of the individual-specific part of the method: Reading all of the subjects' descriptions in order to make sense of them.

In the first stage of analysis all the subjects' descriptions of critical incidents were read through. Actually, I read the critical incidents for the first time gradually: I collected the incidents after every practice period during two and a half years, and right after collecting them I read them through and wrote them on a computer by myself in order to become acquainted with them. When starting the actual analysis, the aim was to read the research material through because it is necessary that the researcher become acquainted with the research material.

Perttula (1998) states that bracketing the empirical phenomenon under examination may be begun in this first stage of the analysis. Bracketing is a very important part of the phenomenological analysis. This means that the researcher tries to bracket all past knowledge about the phenomenon being studied (Giorgi 1994). According to Perttula (1998), the aim of psychological

TABLE 2. The stages of analysis at one participant's level (individual-specific part).

Stage	Action	Goal	Result
1. stage	Reading all of the subjects' descriptions of critical incidents.	Receiving a general sense of the students' experiences in their critical incidents.	Acquaintance with the material as a whole.
2. stage	Forming classifying themes referring to the central issues of the research material.	Organising the extensive material for further analysis.	Four themes.
3. stage	Dividing the research material (critical incidents) into meaning relations. Adding a code to the end of each meaning relation to mark a practice period when an event had taken place.	Dividing, by using intuition, the critical incidents; one incident at a time, into sequences that include one meaning of something.	The list of discriminated meaning relations with codes.
4. stage	Transforming the meaning relations into researcher's language through a process of phenomenological reduction and imaginative variation.	Transformations express necessary and sufficient substance of each meaning relation.	The transformed meaning relations.
5. stage	Including every transformation in a classifying theme.	Organising the material in order to facilitate further analysis.	Transformed meaning relations included in the themes.
6. stage	Constructing the individual meaning network of each classifying theme.	Clarifying how individual experiential meanings are related to each other.	Theme-specific meaning networks.
7. stage	Constructing the individual meaning networks.	Catching the experienced world.	The students' individual meaning networks: *Individual experienced clinical learning portrayals*.

bracketing is ”to promote the differentiation of the experiential meanings of the research participants and the researcher.” The bracketing can be carried out by different ways. Many researchers suggest that it should be carried out by familiarising oneself with the theoretical knowledge of the phenomenon under investigation only after the analysis will have been completed. I felt that this was impossible in my case; I had been interested in the topic for so long time and worked with it for years that I felt that I was very familiar with it already. What I did instead was that I aimed to be aware of my natural attitude by reflecting my theoretical knowledge and experiences of the phenomenon of clinical learning. Moreover, throughout the analysis process I was aware of psychological bracketing in order to set aside my personal preconceptions about what kind of meaningful experiences students may have during their practice periods. However, I also was aware that it is not possible to eliminate the researcher's subjectivity from the research in existential phenomenology (Rauhala 1993; see also Bergum 1991).

The second stage of the individual-specific part of the method: Classifying themes referring to the central issues of the research material are formed.

In the second stage, I formed the classifying themes of the research material. Forming classifying themes is helpful in organising an extensive material. According to Perttula (1998) forming the classifying themes means that the researcher organises the research material according to the factuality of the situated experiential meanings. There are two ways to form the classifying themes: they can be formed either by forming themes in order to organise the research material as a whole or by forming the themes separately for each participant. It is important to define the themes as broad as possible in order to avoid predefining the experiential meanings which could be associated with them. (Perttula 1998.) I formed the themes to organise the research material as a whole. In spite of acknowledging that themes should be broad enough, I first defined the themes too narrow so that I had difficulty in organising individual-specific networks. After this experience I redefined the themes to be broader. I named the classifying themes: *the actions related to the students themselves, the actions related to the patients and families, the actions related to the mentors, and the actions related to the other staff*. These themes form the constituents to which the experiential meanings of the students were related.

The third stage of the individual-specific part of the method: The research material (critical incidents) is divided into meaning relations.

The aim of the third stage, to divide the research material into meaning relations, is described in dividing the critical incidents, one incident at a time, into sequences that included one meaning of something and could be understood in itself (see Perttula 1998). This is a necessary action, because it is not possible to analyse the whole text simultaneously (Giorgi 1985b). The separation of meaning relations is guided by the intuition of the researcher.

Similarly, as I divided the research material into meaning relations I added a code (Appendix 6) to the end of each meaning relation to refer to the practice period when the event had taken place in order to be able in the later stages of analysis to recognise possible changes that may take place during the nursing course.

The fourth stage of the individual-specific part of the method: The meaning relations are transformed into researcher's language by means of phenomenological reduction.

The transformation takes place basically through a process of reflection and imaginative variation (Giorgi 1985b). Other concepts have also been used: free variation in fantasy (Husserl 1973) and free variation in imagination (Natanson 1973, 67). According to Natanson (1973, 67) the researcher asks questions, such as, what is invariant in the event, what the minimal conditions are for something to be presented/represented, and what alterations in some aspect what is imagined can make a change in the thing imagined? He adds that there is a great diversity in the way in which free variation can be carried out. The researcher has to find a balance between too cautious and too bold a way of accomplishing the transformations (Perttula 1998). It is recommended to use the general language of the discipline in verbalising the transformations. However, Giorgi (1994) warns of being pulled between the two extremes of surrendering the disciplinary meaning to the everyday meaning of the participants, or else using the jargon of the discipline in such an abstract and external way that a certain richness of meaning is lost. It is necessary, phenomenologically, that it is the meaning for the participant that has to be captured, but it is equally important that the meaning must be taken up and be re-expressed in the language of the researcher's discipline. The disciplinary concepts should not be so high-level abstractions – at least initially – that the richness of the meaning-for-participant is lost (Giorgi 1994). Perttula (1998; 1993, 270) adds that it is important for the researcher to

avoid the theoretically-loaded words and to use unambiguous and transparent words in verbalisation.

At this stage, analysis – reflection and imaginative variation - moved back and forward between the original descriptions and the meaning relations. The goal was to understand the meaning of every meaning relation and grasp the essence of the phenomenon. Thus, each meaning relation was transformed into the researcher's language; I wrote the transformation after the original text aiming to use the general language of education science.

Particularly in this step the phenomenological researcher is engaged in something which cannot be precisely delineated, the researcher is involved in creative insight (Colaizzi 1978). I experienced this stage as the most challenging and time-consuming stage in the analysis process.

The fourth stage, the result of which is seen in the right column, shows the transformations that I have done for each meaning relation. Though one critical incident usually dealt with one event, it could include many meaning relations. The code after meaning transformations tells which practice period is in question. During this stage of study, the software package ATLAS/ti was used. It allowed organising the transformations systematically to the chosen themes in the next stage of analysis.

Example: Student 1:

This incident involves the same patient and his mother as previously mentioned. As I stated earlier this boy was about to have stem cell transfer which happened during the last week of my clinical practice on Thursday. During the morning rapport this little boy was calling that he needed to void. I went to his room and he said to me that he had passed faeces. I started to lift him up from the bed and carry out to the bathroom when his mother arrived. I told her that he had just called and what I was about to do. She said to me that she can continue from there and I told her that I will come with my mentoring nurse to take the blood samples and make the bed. When we arrived to the room again the mother had taken already all the bed sheets away and looked kind of furious. I noticed that there weren't any clothes available for the boy so I told to go and collect them when the mother replied that I don't need to go and she can take care of her son by herself. I was astonished! How could this mother with whom I had spent last three days talking, listening and comforting had a change of heart so suddenly?!	*She was taking care of a child until the boy's mother wanted to take care of her son by herself, and stated it to her in a way that she thought was hostile. She was astonished of the hostility of the mother. (2A)*

My mentor and I went outside and started talking about what had just happened. First I thought if I had done or said something to upset her but then my mentor (who wasn't my signed tutor by the way!) told me that I just witnessed a situation the nurses come across sometimes at this ward. My tutoring nurse guessed that maybe the mother was upset with the night shift nurses for not changing the diapers or then she just was protective about her son. She told me that sometimes the parents feel "threatened" when their child allows somebody else to take care of them. My tutor knew how challenging it had been to make good, close contact with this specific boy and I had finally won his heart and created a trusting relationship with him. His parents had noticed that also when the day before he had had a "fit" and thrown all his toys around the room and didn't allow anybody else except me to enter his room.	*She talked with her mentor about the situation which she found difficult and strange. The nurse explained that every now and then patient's relatives' emotions vary and they can have negative attitude towards the staff. (2A)*
The mother's reaction puzzled me a lot but then I information about the stem cell transfer and was afraid of it. I just happened to be an easy target for her anger and worry. As it later that day turned out the parents really did have about the transfer totally different idea than it actually then was. After the morning incident I let the family be on their own until the transfer and just stated that if they needed anything they could call me/us.	*Afterwards, she was thinking a lot of the relative's behaviour and understood the situation. (2A)*
After all everything went all right and in my opinion I got a lot of comfort from my mentoring nurse. She saw that it was confusing me more than I said. Luckily I had her beside me!	*She felt happy that her mentor supported her after the difficult situation. (2A)*

The fifth stage of the individual-specific part of the method: Every transformation is included in a classifying theme.

The fifth stage was to include each transformation, together with its meaning relation, in the classifying theme or themes. This stage is helpful in organising the extensive material in order to facilitate further analysis. From the example of one critical incident described above, I included the first transformation in the classifying theme of *the actions related to the patients and families*, the second and the third transformation in the classifying theme of *the*

actions related to the students themselves, and the fourth transformation in the classifying theme of *the actions related to the mentors.* In this stage, the transformations whose situated factuality was ambiguous, I included in more than one classifying theme in order not to lose significant meanings associated with any particular theme. During this stage of study, the software package ATLAS/ti was used. ATLAS/ti allowed organising the transformations systematically to the chosen themes.

In the following, one research participant is used as an example that shows all the transformations of one classifying theme: *the actions related to the mentors.* The code after the transformation refers to the practice period in question.

Example: Student 1

The actions related to the mentors

She describes how she was taking care of a blind patient and getting support from her mentor when meeting a problem that she cannot decide by herself. 1B
She describes her mentor to be a good supervisor. 0.
She was astonished at the client's strange behaviour and was discussing it with her mentor. In spite of her previous studies the student was not prepared to meet this kind of situations. She learned that mental health services are really important. 2B.
She is teaching a patient with her mentoring nurse and feels that the nurse is very professional and expert in teaching. 1B.
After a patient's discharge she is discussing the patient and the care of his disease more in detail with her mentoring nurse; she was especially interested in ethical points. 1B.
Not being able to observe how the nurse will handle the situation with the relative, she decides to discuss with the mentoring nurse later. 0.
Afterward she discussed her patient teaching experienced with her mentor and received positive feedback from her. 2B.
She talked with her mentor about the situation which she found difficult and strange. The nurse explained that every now and then patients' relatives' emotions vary and they can have negative attitude toward the staff. 2A.
She felt happy that her mentor supported her after the difficult situation. 2A.
She discussed her negative experience with a nurse with her mentor and found her attitude supportive. 2B.
She felt her skills in a certain procedure to be inadequate, and realised that she needs more practice in doing it. Her mentor supported her idea to go to practice the skill in another unit. 2B.

The sixth stage of the individual-specific part of the method: The individual meaning network of each classifying theme is constructed.

The aim of this stage is to clarify how individual experiential meanings are related to each other as a manifestation of their inherently intertwined nature (Perttula 1998). In this stage the analysis was carried out by one theme at a time. The result of this stage includes successively described theme-specific networks. I will present the description of one person's experiences based on the transformations of one classifying theme that of *the actions related to the mentors.*

Student 1:

She values the mentor's ability to be a good supervisor. She finds it important that the mentor is able to support the student especially in difficult situations. The mentor works as a role-model but can also neglect the student.

She appreciates the feedback given by the staff. She finds it especially important in challenging situations. It is also important to her to discuss her actions with her mentor. She feels that feedback helps her to develop her self-confidence.

The staff's action is significant for her learning. The staff, while working professionally, is a kind of a role model to her. In these situations their work is patient-centred. There are also opposite situations where the staff is working unprofessionally and she is confused not knowing what to do. The staff can also have a negative attitude towards students and she finds this to be unfair.

The seventh stage of the individual-specific part of the method: The individual meaning network of the empirical phenomenon is constructed.

According to Perttula (1998), the term 'individual meaning network' refers to the core of the mosaic of intertwined meanings concerning the thematised empirical phenomenon in a particular empirical study. The individual meaning network may be a synonym for the whole experienced world. However, it is not possible to empirically catch the entire experience. After having constructed the theme-specific individual networks, the final construction of the individual networks was carried out. Before constructing the final individual networks, I retained the versions of individual networks where the codes, which referred to the order of the practice periods, remained. Here is an example.

Student 1
The individual meaning network with the codes remaining.

She values the mentor's ability to be a good supervisor (0, 1bx2). She finds it important that the mentor is able to support the student especially in difficult situations (2ax2).The mentor works as a role model but can also neglect the student (1b). Often, she is discussing situations afterwards with her mentor or other nurses (0, 1b, 2b, 2c). She appreciates the feedback given by the staff. She finds feedback especially important in challenging situations. It is also important to her to discuss her actions with her mentor (0, 1b, 2b). She feels that feedback helps her to develop her self-confidence (0x3, 1b, 2a, 2b).

The staff's action is significant for her learning. The staff, while working professionally, is a kind of a role model to her. (0, 1a, 2a, 2c) In these situations their work is patient-centred (1a, 2a, 2c). She admires the staff's professionalism – which does not exclude emotions – and ability to deal with difficult situations (2c). There are also opposite situations where the staff is working unprofessionally and she is confused not knowing what to do (1a, 1b, 2ax2, 2bx2, 2c). The staff can also have a negative attitude towards students or they are not willing to supervise students and she finds this to be unfair (1a, 1b, 2a, 2c).

It is important and rewarding to have own patients. She appreciates her ability to create a good relationship with patients. The appreciation is mutual (1b, 2c).

Feedback given by the patients or relatives is rewarding. It gives the feeling of success (1a, 1bx3, 2cx2). Sometimes she is confused by the behaviour of the patient or relative. Afterwards, she is reflecting these issues (2a, 2bx2, 2c).

She is working independently, doing procedures she is able to carry out on her own, when her mentoring nurse is not available. Sometimes working alone causes frightening situations, but at the same time these situations can be rewarding when she finds she is able to work independently or on the best possible way (2a, 2b). She is happy while having an opportunity to do a new challenging procedure. When making a mistake she is shocked but able to behave reliably (1b). While feeling that her skills are not good enough to carry out a certain procedure, she arranges that she is able to practice them (2b). She succeeds to carry out the procedure, which her mentor failed to do, and she has a feeling of success. She feels that she is able to apply theoretical knowledge learned at school to the present situation in hospital and is wondering why the professionals do not always work according to these principles (2a, 2b).

Afterwards, she is thinking about the events in which she has been involved, and staff's actions as well. She is thinking about if her actions have been reasonable in those situations. She also checks some issues in literature. She wants to discuss challenging and difficult situations also with her mentoring

nurse. She is dealing with ethical issues as well (2b, 2c). Because of her successful learning of a skill, she realised that it would be necessary for other students to have the similar opportunity to practice the skill that needs constant practice (2b).

She feels that her previous experience helps her to deal with teaching the patient and in different kinds of challenging situations with patients. She was impressed when nurse gave the keys of medicine cabin to her and asked her to add a drug on medicine tray. She felt that she was trusted already on the first day (0).

She considers her feelings towards different kinds of patients. She is confused sometimes when meeting 'different' clients. (2b, 2c). She is thinking of patients and her own actions in different situations sometimes at home, too (2c). She is empathizing with patients and sometimes feeling strong emotions without a reason. Especially her own patients make her feel different kinds of emotions (1a, 2a, 2bx2, 2c). In addition, situations where patients are recovering or feeling better make her happy (1ax2, 2c) and the situations where patients are uncomfortable or are not treated properly in her opinion make also herself unhappy or worried (1ax2, 2c). Sometimes the staff is involved in these situations ignoring the patient and she feels inadequate in these events.

She describes her different kinds of learning experiences. She describes her own qualities; how she found that she is able to teach patients efficiently for better future and how it is important to behave naturally with different kinds of clients (2b). She also finds it important to be responsible in situations where a mistake has taken place(1b). She considers the actions of the staff; how one person may have a strong effect on the atmosphere of the working place (1b) and how the staff sometimes have a negative attitude towards students and students are not respected as work mates. She decides that in future her attitude towards students would not be negative (1a). Also patients' and relatives' behaviour made her to consider these issues afterwards and understand the situation better (1b, 2a). She also learned that nurses meet challenging situations in their work, and it is not always possible to be prepared to everything but sometimes one has to trust on intuition (2b, 2c). She compares theoretical knowledge with situations in practice and describes how she learned what a theoretical concept means in practice. She also felt that what she has learned in the classroom does not always come true in practice (1a, 2a), or that she learned to understand a certain illness after meeting a patient with this illness though she had studied the disease already at school (2c).Towards the end of her studies, she feels that she is quite capable in dealing with difficult situations with the patients (2c). At the same time she learned that she still worries a lot about patients also at home (2c). There is also a situation where she feels that a role of the student hindered her to discuss with the nurse about her actions. Afterwards she is thinking about the student's role (2b).

After this, the final individual experienced clinical learning networks were constructed. Here is an example of one student's individual network which in this study is called an individual experienced clinical learning portrayal.

Student 1:
The individual experienced clinical learning portrayal

She values the mentor's ability to be a good supervisor. She finds it important that the mentor is able to support the student especially in difficult situations. The mentor works as a role-model but can also neglect the student. It is important to her to discuss her actions with her mentor. Often she is also afterwards discussing nursing situations with her mentor or other nurses. She appreciates the feedback given by staff. She finds feedback especially important in challenging situations. She feels that feedback from staff and mentors helps her to develop her self-confidence.

The staff's action is significant for her learning. Staff, while working professionally, is a kind of a role model to her. In these situations their work is patient-centred. She admires staff's professionalism – which does not exclude emotions – and ability to deal with difficult situations. There are also opposite situations where staff is working unprofessionally and she is confused not knowing what to do. The staff can also have a negative attitude towards students or they are not willing to supervise students and she finds this to be unfair.

It is important and rewarding to have own patients. She appreciates her ability to create a good relationship with patients. The appreciation is mutual. Feedback given by patients or relatives is rewarding. It gives her the feeling of success. Sometimes she is confused by the behaviour of patients or relatives. Afterwards, she is reflecting these issues.

She is working independently, doing procedures she is able to carry out on her own, when her mentoring nurse is not available. Sometimes working alone causes frightening situations, but at the same time these situations can be rewarding when she finds she is able to work independently or on the best possible way. She is happy while having an opportunity to do a new challenging procedure. When making a mistake she is shocked but able to behave reliably. While feeling that her skills are not good enough to carry out successfully a certain procedure, she arranges that she is able to practice doing it. Once, she succeeds to carry out the procedure which her mentor failed to do, and she has a feeling of success. She feels that she is able to apply theoretical knowledge learned at school in different situations in hospital and is wondering why the professionals do not always work according to these principles.

Afterwards, she is thinking about the events in which she has been involved, and staff's actions as well. She is considering if her actions have been reasonable

in those situations. She also checks some issues in literature. She wants to discuss challenging and difficult situations with her mentoring nurse. She is dealing with ethical issues as well. In the middle of her studies there is an episode where she considers her own learning and other students' learning opportunities as well; as a result of her successful learning of a skill, she realises that it would be necessary for other students to have the similar opportunity to practice the skill that needs constant rehearsal.

During her first practice period, she is impressed when her mentoring nurse seems to trust on her already on the first day of a practice period by letting her to carry out a task that she found to be challenging taking into account her noviciate. Later, during her placements she feels that her previous experience helps her to deal with patient education and also cope in different kinds of challenging situations with patients.

She considers her feelings towards different kinds of patients. She is confused sometimes when meeting 'different' clients. She is thinking of patients and her own actions in different situations sometimes at home, too. She is empathizing with patients and sometimes feeling strong emotions without a reason. Especially her own patients make her feel different kinds of emotions from empathy and joy to sorrow and anxiety, Also situations where patients are recovering or feeling better make her happy and the situations where patients are uncomfortable or are not treated properly make also herself unhappy or worried. Sometimes staff is involved in these situations ignoring the patient and she feels inadequate in these events.

She illustrates her different kinds of learning experiences. She describes her own qualities; how she finds that she is able to teach patients efficiently for better future and how it is important to behave naturally with different kinds of clients. She also finds it important to be responsible in situations where a mistake has taken place. She considers the actions of staff; how one person may have a strong effect on the atmosphere of the working place and how staff sometimes has a negative attitude towards students and students are not respected as work mates. She decides that in future her attitude towards students would not be negative. Also patients' and relatives' behaviour made her to consider these issues afterwards and this reflection helps her understand situations better. She also learns that nurses meet challenging situations in their work and it is not always possible to be prepared to everything but sometimes one has to trust on intuition.

She compares theoretical knowledge and practice situations: there is an incident where she describes how she learned what a theoretical concept means in practice. After one episode she states that the issues learned at school do not always come true in practice. She also learns to understand a certain illness only after meeting a patient with this illness though she had studied the disease already at school. Towards the end of her studies, she feels that she is quite capable in dealing with difficult situations with the patients.

At the same time she learns that she still worries a lot about patients also at home. There is also a situation where she feels that a role of the student hinders her to discuss with the nurse about her actions. Afterwards she is reflecting the student's role in practice placements.

7.2.2 The general part of the method

The second part of the phenomenological analysis includes moving on from individual knowledge towards general knowledge. In existential phenomenology this movement besides being a theoretical and conceptual problem, is also a practical issue. It is a real transition but for that reason it offers different kinds of ways to conduct the analysis because general knowledge does not have a referent in the human world in the same way as the individual description has its referent in the situated individual experienced world of the research participant. (Perttula 1998; 2000, 430.)

General knowledge about real experiences is, in its basic nature, more constructed by the researcher than individual specific knowledge. Thus individual specific knowledge at its best corresponds to the individual's consciousness whereas general knowledge about people's experiences cannot be seen in the same way. However, it is the researcher's duty to work up with interpretativeness so that it is possible to see the phenomenon. The general knowledge has to cover all essential knowledge from the individual-specific part but not anything that is not included in individual-specific networks. (Perttula 2000, 430.) It is suggested that this can be achieved through the flexibility of the method. Its 'imaginative' flexibility allows a researcher to engage in imaginative variation on several levels of generality, and its conceptual flexibility allows her to search for final verbalisations. It is seeking for equilibrium between two issues; knowledge about the phenomenon under investigation to be meaningful and general knowledge to be covering the essential. (Perttula 1998; 2000, 431.)

The general part of the method includes six stages. (Table 3). I use one individual experienced clinical learning portrayal as an example to demonstrate the analysis process.

The first stage: adopting the research attitude

The foundation of the first stage is to regard the individual experienced meaning networks as the proposals of possible general meanings. Individual networks are proposals about the knowledge towards which the researcher is proceeding. In this stage, an individual network does not indicate 'backwards'

TABLE 3. The stages of the general part of the analysis.

Stage	Action	Goal	Result
1. stage	Adopting the research attitude.	Regarding the individual experienced meaning networks as the proposals of possible general meanings.	Perceiving individual networks as proposals about the knowledge towards which the analysis is proceeding.
2. stage	Separating meaning relations and transforming them into proposals of meaning relations.	Transforming meaning relations into such language where individuality of experiences is faded out.	Proposals of meaning relations.
3. stage	Forming the organising themes.	Organising the material in order to facilitate further analysis.	Themes.
4. stage	Including the meaning relation proposals into the themes.	Organising the material in order to facilitate further analysis: Every meaning relation proposal is included in one of the themes.	Meaning relation proposals included in the themes.
5. stage	Forming the theme proposals	Describing the main content of one theme at a time.	Theme proposals.
6. stage	Constructing the proposal for a general meaning network	A general proposal of the phenomenon under research.	Tentative general meaning networks
7. stage	Constructing the general network	A general network of the phenomenon under research.	*General clinical learning portrayal types in the light of critical incidents.*

to the individual's experienced world but 'forwards' towards the general knowledge that is forming. However, the analysis has to proceed so that both the researcher and the readers of the study are able to acknowledge the individuals included in different general meaning network types. (Perttula 2000, 433.)

The second stage: separating meaning relations and transforming them into proposals of meaning relations.

Each individual network (*individual experienced clinical learning portrayal)* is divided into meaning relations. This stage is analogical with the stage three in the individual specific part. Because the research material is now more organised than originally, the meaning relations are more 'crystallised' and more easily separated. Stretching out towards the general knowledge is pointed out by transforming meaning relations to such language where individuality of experiences is faded out. The results are called proposals of meaning relations. (Perttula 2000, 434.)

In the following example, the separated meaning relations are displayed first and the transformations carried out from each meaning relation are in italics in brackets after each meaning relation.

Example: Student 1

1. She values the mentor's ability to be a good supervisor. *(Mentor's ability to be a good supervisor is valued).*
2. She finds it important that the mentor is able to support the student especially in difficult situations. *(Mentor's support is especially valued in challenging situations).*
3. The mentor works as a role-model but can also neglect the student. *(Good mentors act as role-models but there are also poor mentors).*
4. It is important to her to discuss her actions with her mentor. Often she is also afterwards discussing nursing situations with her mentor or other nurses. *(Discussing with mentors both during and after situations is appreciated).*
5. She appreciates the feedback given by staff. She finds feedback especially important in challenging situations. She feels that feedback from staff and mentors helps her to develop her self-confidence. *(Feedback from staff is valued. The need of feedback is especially important after challenging situations. Feedback supports development of self-confidence).*
6. The staff's action is significant for her learning. Staff, while working professionally, is a kind of a role model to her. In these situations their work is patient-centred. She admires staff's professionalism – which does not exclude emotions – and ability to deal with difficult situations. *(While working professionally, the whole staff actions as a role-model. Professionalism includes patient-centeredness and ability to cope with difficult situations).*

7. There are also opposite situations where staff is working unprofessionally and she is confused not knowing what to do. *(Staffs' unprofessional working causes confusion).*
8. The staff can also have a negative attitude towards students or they are not willing to supervise students and she finds this to be unfair. *(Staffs' negative attitude and their ignorance of students are found to be unfair).*
9. It is important and rewarding to have own patients. *(Having own patients is considered rewarding).*
10. She appreciates her ability to create a good relationship with patients. The appreciation is mutual. *(Good relationship with patients is valued. Mutuality in relationships is important).*
11. Feedback given by patients or relatives is rewarding. It gives her the feeling of success. *(Feedback from patients and relatives is valued because it is considered emotionally rewarding).*
12. Sometimes she is confused by the behaviour of patients or relatives. Afterwards, she is reflecting these issues. *(The behaviour of patients or relatives may sometimes cause feelings of confusion. These issues are reflected afterwards).*
13. She is working independently, doing procedures she is able to carry out on her own, when her mentoring nurse is not available. *(Sometimes it is necessary to work independently if, for example, the mentor is not available. In these situations it is necessary to choose procedures that one is capable of doing).*
14. Sometimes working alone causes frightening situations, but at the same time these situations can be rewarding when she finds she is able to work independently or in the best possible way. *(Working independently is experienced both rewarding and worrying).*
15. She is happy while having an opportunity to perform a new challenging procedure. *(Performing new procedures cause positive feelings).*
16. When making a mistake she is shocked but able to behave reliably. *(Making a mistake causes anxiety but behaving reliably is a necessity).*
17. While feeling that her skills are not good enough to carry out successfully a certain procedure, she arranges so that she is able to practice doing it. *(It is experienced to be necessary to practice skills that are not yet possessed).*
18. Once, she succeeds to carry out the procedure which her mentor failed to do, and she has a feeling of success. *(Feelings of success are experienced in the situations where the permanent staff needs students' contribution).*
19. She feels that she is able to apply theoretical knowledge learned at school in different situations in hospital and is wondering why the professionals do not always work according to these principles. *(Theoretical knowledge is applied into practice. It is considered why the theory does not always come true in practice).*

20. Afterwards, she is thinking about the events in which she has been involved, and staff's actions as well. *(The events in wards are reflected afterwards).*
21. She is considering if her actions have been reasonable in those situations. *(Own actions in practice are reflected afterwards).*
22. She also checks some issues in literature. *(Sometimes the issues encountered in practice are verified in literature).*
23. She wants to discuss challenging and difficult situations with her mentoring nurse. *(It is important to discuss challenging situations with mentors).*
24. She is dealing with ethical issues as well. *(Ethical issues are reflected on).*
25. In the middle of her studies, there is an episode where she considers her own learning and other students' learning opportunities as well. As a result of her successful learning of a skill, she realised that it would be necessary for other students to have the similar opportunity to practice the skill that needs constant rehearsal. *(Other students' learning opportunities are taken into account).*
26. During her first practice period, she is impressed when her mentoring nurse seems to trust on her already on the first day of a practice period by letting her to carry out a task that she found to be challenging taking into account her noviciate. *(Being trusted in a novice stage is experienced especially rewarding).*
27. Later, during her placement she feels that her previous experience helps her to deal with patient education and also cope in different kinds of challenging situations with patients. *(In later stages of practice, previous experiences make situations easier to handle).*
28. She considers her feelings towards different kinds of patients. *(Feelings towards clients are reflected).*
29. She is confused sometimes when meeting 'different' clients. *(Meeting 'different' clients may cause confusion).*
30. She is thinking of patients and her own actions in different situations sometimes at home, too. *(Encountered patients and own actions in wards are considered sometimes also at home).*
31. She is empathizing with patients and sometimes feeling strong emotions without a reason. *(Empathy and emotions are experienced towards patients).*
32. Especially her own patients make her feel different kinds of emotions from empathy and joy to sorrow and anxiety. *(Especially working with own patients includes a lot of emotions).*
33. Also situations where patients are recovering or feeling better make her happy and the situations where patients are uncomfortable or are not treated properly make also herself unhappy or worried. Sometimes staff is involved in these situations ignoring the patient and she feels inadequate in these events. *(Often emotions are related to patients'*

health and disease. Sometimes staffs' ignorance of patients causes feelings of inadequacy).

34. She illustrates her different kinds of learning experiences. *(It is typical to illustrate different kinds of learning experiences).*
35. She describes her own qualities; how she found that she is able to teach patients efficiently for better future and how it is important to behave naturally with different kinds of clients. *(Reflecting on own qualities-positive- is meaningful).*
36. She also finds it important to be responsible in situations where a mistake has taken place. *(Reflecting on mistakes is important; responsibility while making mistakes is considered important).*
37. She considers the actions of staff; how one person may have a strong effect on the atmosphere of the working place and how staff sometimes has a negative attitude towards students and students are not respected as work mates. She decides that in future her attitude towards students would not be negative. *(The actions of staff are considered. Especially staff's attitudes towards students are significant and meaningful for behaving in future).*
38. Also patients' and relatives' behaviour made her to consider these issues afterwards and this reflection helps her understand situations better. *(Reflecting on patients' and relatives' behaviour supports understanding of the situations).*
39. She also learns that nurses meet challenging situations in their work and it is not always possible to be prepared to everything but sometimes one has to trust on intuition. *(Practice periods also taught to understand that it is not possible for nurses to be prepared to everything but it is necessary to use intuition).*
40. She compares theoretical knowledge and practice situations: there is an incident where she describes how she learned what a theoretical concept means in practice. After one episode she states that the issues learned at school do not always come true in practice. She also learned to understand a certain illness only after meeting a patient with this illness though she had studied the disease already at school. *(Theory and practice are compared. Sometimes the practice supports understanding what has been learnt in theory).*
41. Towards the end of her studies, she feels that she is quite capable of dealing with difficult situations with the patients. *(Experience has helped to deal with patients).*
42. At the same time she learned that she still worries a lot about patients also at home. *(Even towards the end of the education, patients are in thoughts also during free time).*
43. There is also a situation where she feels that a role of the student hindered her to discuss with the nurse about her actions. Afterwards she is reflecting on the student's role in practice placements. *(Student's role may sometimes hinder actions in practice).*

The third stage: forming the organising themes

After the meaning relations have been transformed into proposals of meaning relation, organising themes are formed. Each proposal has its origin in the particular individual network. There is no need to form united themes because the aim is to outline individual meaning relations of each proposal. The themes in the example above are: *mentor; staff; patient; student's own action; learning and reflection; other students.*

The fourth stage: including the meaning relation proposals into the themes

Every meaning relation proposal is included in one of the themes.

Example: Student 1.

Mentor
- Mentor's ability to be a good supervisor is valued. (1)
- Mentor's support is especially valued in challenging situations. (2)
- Good mentors act as role-models but there are also poor mentors. (3)
- Discussing with mentors both during and after situations is appreciated. (4)
- It is important to discuss challenging situations with mentors. (23)

Staff
- Feedback from staff is valued. The need of feedback is especially important after challenging situations. Feedback supports development of self-confidence. (5)
- While working professionally, the whole staff acts as role-models. Professionalism includes patient-centeredness and ability to cope with difficult situations. (6)
- Staffs' unprofessional working causes confusion. (7)
- Staffs' negative attitude to and their ignorance of students are found to be unfair. (8)
- Being trusted in a novice stage is experienced especially rewarding. (26)
- Sometimes staffs' ignorance of patients causes feelings of inadequacy. (34)
- The actions of staff are considered. Especially staffs' attitudes towards students are significant and meaningful for behaving in future. (38)

Patient
- Having own patients is considered rewarding. (9)

- Good relationships with patients are valued. Mutuality in relationships is important. (10)
- Feedback from patients and relatives is valued because it is considered emotionally rewarding. (11)
- The behaviour of patients or relatives may sometimes cause feelings of confusion. These issues are reflected afterwards. (12)
- Feelings towards clients are reflected on. (28)
- Meeting 'different' clients may cause confusion. (29)
- Empathy and emotions are experienced towards patients. (31)
- Especially working with own patients include a lot of emotions. (32)
- Often emotions are related to patients' health and disease. (33)
- Reflecting on patients' and relatives' behaviour supports understanding of the situations. (39)
- Experience has helped to deal with patients. (42)
- Even towards the end of the education, patients are in thoughts also during free time.(43)

Own action
- Sometimes it is necessary to work independently if for example the mentor is not available. In these situations it is necessary to choose procedures that one is capable of doing. (13)
- Working independently is experienced both rewarding and worrying. (14)
- Doing new procedures cause positive feelings. (15)
- Making a mistake causes anxiety but behaving reliably is a necessity. (16)
- It is experienced to be necessary to practice skills that are not yet possessed. (17)
- Feelings of success are experienced in the situations where the permanent staff needs students' contribution. (18)
- Student's role may sometimes hinder actions in practice. (19)

Learning and reflection
- Theoretical knowledge is applied into practice. It is considered why the theory does not always come true in practice. (19)
- The events in wards are reflected afterwards. (20)
- Own actions in practice are reflected afterwards. (21)
- Sometimes the issues encountered in practice are verified in literature. (22)
- Ethical issues are reflected on. (24)
- In later stages of practice, previous experiences make situations easier to handle. (27)
- Encountered patients and own actions in wards are considered sometimes also at home. (30)
- She illustrates her different kinds of learning experiences. It is typical to illustrate different kinds of learning experiences. (35)

- Reflecting on own qualities-positive- are meaningful. Own action, reflection. (36)
- Reflecting on mistakes is important; responsibility while making mistakes is considered important. (37)
- Practice periods also taught to understand that it is not possible for nurses to be prepared to everything but it is necessary to use intuition. (40)
- Theory and practice are compared. Sometimes the practice supports understanding what has been learnt in theory. (41)

Other students
- Other students' learning opportunities are taken into account. (25)

The fifth stage: forming the theme proposals

The analysis proceeds from meaning-relation proposals to the theme proposals. This is achieved by describing the main content of one theme at a time.

Example: Student 1

Mentor
Mentor's ability to be a good supervisor is valued. Mentor's support is especially important in challenging situations. Good mentors act as role-models but there are also poor mentors. Discussing with mentors both during and after situations is appreciated. It is especially important in challenging situations.

Staff
The actions of staff are considered. Especially staffs' attitudes towards students are significant and meaningful for behaving in future. When working professionally the whole staff acts as role-models. Professionalism includes patient-centeredness and ability to cope with difficult situations. Sometimes staff's unprofessional working causes confusion. Staff's negative attitude and their ignorance of students are found to be unfair. Sometimes also staff's ignorance of patients causes feelings of inadequacy. Feedback from staff is valued. The need for feedback is especially important after challenging situations. Feedback supports development of self-confidence. Being trusted in a novice stage is experienced especially rewarding.

Patient
Feelings towards clients are reflected on. Having own patients is considered rewarding. Good relationship with patients is valued. Mutuality in relationships is important. Empathy and emotions are experienced towards patients. Especially working with own patients includes a lot of emotions. Often these are related to patients' health and disease. Feedback from patients and relatives is valued because it is considered emotionally rewarding. However, meeting

'different' clients or the behaviour of patients or relatives may sometimes cause feelings of confusion. These issues are reflected afterwards. Reflecting on patients' and relatives' behaviour supports understanding of the situations. Experience has helped to deal with patients. However, even towards the end of the education, patients are in thoughts also during free time.

Own action
Sometimes it is necessary to work independently if, for example, the mentor is not available. In these situations it is necessary to choose procedures that one is capable of doing. Working independently is experienced both rewarding and worrying. Doing new procedures cause positive feelings. It is experienced to be necessary to practice skills that are not yet possessed. Making a mistake causes anxiety but behaving reliably is a necessity. Feelings of success are experienced in the situations where permanent staff needs students' contribution. Student's role may sometimes hinder actions in practice.

Learning and reflection
It is typical to illustrate different kinds of learning experiences. The events and own actions on wards are reflected on afterwards. Ethical issues are reflected on. Encountered patients and own actions in wards are considered sometimes also at home. Reflecting on own qualities-positive- is meaningful. Also reflecting on mistakes is important; responsibility while making mistakes is considered important. Theory and practice are compared. Sometimes the practice supports understanding what has been learnt in theory. Theoretical knowledge is applied to practice. It is considered why the theory does not always come true in practice. Sometimes the issues encountered in practice are verified in literature. In later stages of practice, previous experiences make situations easier to handle. Practice periods also taught to understand that it is not possible for nurses to be prepared for everything but it is necessary to use intuition.

Other students
Other students' learning opportunities are taken into account.

The sixth stage: constructing the proposal for a general meaning network

The sixth stage is to construct the tentative general meaning networks. The analysis proceeds from meaning network proposals towards a general proposal of the phenomenon under research. One proposal is formed from every individual experienced clinical learning portrayal. The result of this step was eight tentative proposals (Appendix 7) for a general meaning network.

Example: Student 1

Having own patients is rewarding. Feelings towards clients are reflected on. Good relationship with patients is valued. Mutuality in relationships is important. Empathy and emotions are experienced towards patients. Especially working with own patients includes a lot of emotions. Often these are related to patients' health and disease. Feedback from patients and relatives is valued because it is considered emotionally rewarding. However, meeting 'different' clients or the behaviour of patients or relatives may sometimes cause feelings of confusion. These issues are reflected on afterwards. Reflecting on patients' and relatives' behaviour supports understanding of the situations. Experience has helped to deal with patients. However, even towards the end of the education, patients are in thoughts also during free time.

Mentor's ability to be a good supervisor is valued. Mentor's support is especially important in challenging situations. Good mentors act as role-models but there are also poor mentors. Discussing with mentors both during and after situations is appreciated. The actions of staff are considered. Especially staffs' attitudes towards students are significant and meaningful for behaving in future. When working professionally the whole staff acts as role-models. Professionalism includes patient-centeredness and ability to cope in difficult situations. Sometimes staff's unprofessional working causes confusion. Staff's negative attitude and their ignorance of students are found to be unfair. Sometimes also staff's ignorance of patients causes feelings of inadequacy. Feedback from staff is valued. The need of feedback is especially important after challenging situations. Feedback supports development of self-confidence. Experience of being trusted in a novice stage is especially rewarding.

Working independently is experienced both rewarding and worrying. In these situations it is necessary to choose procedures that one is capable of doing. Doing new procedures cause positive feelings. It is experienced to be necessary to practice skills that are not yet possessed. Other students' learning opportunities are also taken into account. Making a mistake causes anxiety but behaving reliably is a necessity. Feelings of success are experienced in the situations where the permanent staff needs students' contribution. Student's role may sometimes hinder actions in practice.

It is typical for the student to illustrate different kinds of learning experiences in detail. The events and own actions in wards are reflected afterwards. Especially ethical issues are reflected on. Encountered patients and own actions in wards are considered sometimes also at home. Reflecting on own qualities, which are considered as positive, is meaningful. Also reflecting on mistakes is important; responsibility while making mistakes is considered necessary. Theory and practice are compared. Sometimes the practice supports understanding what has been learnt in theory. Theoretical knowledge is applied to practice. It is considered why the theory does not always come true in

practice. Sometimes the issues encountered in practice are verified in literature. In later stages of practice, previous experiences make situations easier to handle. Practice periods also taught to understand that it is not possible for nurses to be prepared for everything but it is necessary to use intuition.

The seventh stage: constructing the general network

In this study it appeared that it is not possible to construct only one general network but it is necessary to construct network types: four general network types were formed. The student whom I have used as an example of the analysis process belongs to general network type 1.

An Example

The General Type 1

The general experienced *clinical learning portrayal in the light of critical incidents* is organised around relationships with patients. The student has an intention to share the feelings of patients and to show compassion for the patient's well-being and offer empathy to them. She puts the patient at the centre of the care, nursing being patient oriented. The student experiences a lot of emotions while working in different placements, for example encountering death evokes emotions. It is educative to work in different environments though it may sometimes cause concern. It is necessary to practice new skills that are not yet possessed. The quality of the relationship between the student and the mentor and the mentor's attitude and skills are critical to the student's learning. The student appreciates the detailed feedback received and it is crucial for her. The whole staff, when acting professionally, works as a role-model. The student is confident and self-aware and able to take transforming action by challenging the practice situations. Occasionally, the role of the student hinders actions at placements. She is able to organise her own learning in order to achieve her goals. She is also able to exert control in her environment in order to meet her learning needs. She uses assertive strategies in dealing with challenging situations. The student is gradually able to move towards independent competence identifying what is appropriate at her level during different practice periods. Responsibility and accountability are essential in her behaviour and are emphasised at the occurrence of error. The student is able to establish meaningful and realistic links between theory and practice. Throughout the practice periods the student is reflecting on her own learning and issues faced in the placements. She also sees that nursing requires life-long learning. She is gradually building up a holistic picture of nursing and a wider perspective of health care; similarly she understands the significance of nursing in the society. She is also developing insight into her own nursing philosophy. The student is generally content with her practice experiences.

8 Results of the study

8.1 The individual experienced clinical learning portrayals

The individual part of the method produced idiographic knowledge and the results of the first part are presented as individual descriptions of students' experiences of clinical learning or as *individual experienced clinical learning portrayals* as they are called in this study. These portrayals describe in what unique ways the eight nursing students experienced their clinical learning.

Student 1: Individual experienced clinical learning portrayal

She values the mentor's ability to be a good supervisor. She finds it important that the mentor is able to support the student especially in difficult situations. The mentor works as a role-model but can also neglect the student. It is important to her to discuss her actions with her mentor Often she is also afterwards discussing nursing situations with her mentor or other nurses. She appreciates the feedback given by staff. She finds feedback especially important in challenging situations. She feels that feedback from staff and mentors help her to develop her self-confidence.

The staff's action is significant for her learning. Staff, while working professionally, is a role model to her. In these situations their work is patient-centred. She admires staff's professionalism – which does not exclude emotions – and ability to deal with difficult situations. There are also opposite situations where staff is working unprofessionally and she is confused not knowing what to do. The staff can also have a negative attitude towards students or they are not willing to supervise students and she finds this to be unfair.

It is important and rewarding to have own patients. She appreciates her ability to create a good relationship with patients. The appreciation is mutual. Feedback given by patients or relatives is rewarding. It gives her the feeling of success. Sometimes she is confused by the behaviour of patients or relatives. Afterwards, she is reflecting on these issues.

She is working independently, doing procedures she is able to carry out on her own, when her mentoring nurse is not available. Sometimes working alone causes frightening situations, but at the same time these situations can be rewarding when she finds she is able to work independently or in the best possible way. She is happy while having an opportunity to do a new challenging procedure. When making a mistake she is shocked but able to behave reliably. While feeling that her skills are not good enough to carry out successfully a certain procedure, she arranges so that she is able to

practice doing it. Once, she succeeds to carry out the procedure which her mentor failed to do, and she has a feeling of success. She feels that she is able to apply theoretical knowledge learned at school in different situations in hospital and is wondering why the professionals do not always work according to these principles.

Afterwards, she is thinking about the events in which she has been involved, and staff's actions as well. She is considering if her actions have been reasonable in those situations. She also checks some issues in literature. She wants to discuss challenging and difficult situations with her mentoring nurse. She is dealing with ethical issues as well. In the middle of her studies there is an episode where she considers her own learning and other students' learning opportunities as well; as a result of her successful learning of a skill, she realises that it would be necessary for other students to have a similar opportunity to practice the skill that needs constant rehearsal.

During her first practice period, she is impressed when her mentoring nurse seems to trust her already on the first day of a practice period by letting her to carry out a task that she found to be challenging taking into account her noviciate. Later, during her placements she feels that her previous experience helps her to deal with patient education and also cope in different kinds of challenging situations with patients.

She considers her feelings towards different kinds of patients. She is confused sometimes when meeting 'different' clients. She is thinking of patients and her own actions in different situations sometimes at home, too. She is empathising with patients and sometimes feeling strong emotions without reason. Especially her own patients make her feel different kinds of emotions from empathy and joy to sorrow and anxiety, Also situations where patients are recovering or feeling better make her happy and the situations where patients are uncomfortable or are not treated properly make also her unhappy or worried. Sometimes staff is involved in these situations ignoring the patient and she feels inadequate in these events.

She illustrates her different kinds of learning experiences. She describes her own qualities; how she finds that she is able to teach patients efficiently for better future and how it is important to behave naturally with different kinds of clients. She also finds it important to be responsible in situations where a mistake has taken place. She considers the actions of staff; how one person may have a strong effect on the atmosphere of the working place and how staff sometimes has a negative attitude towards students and students are not respected as work mates. She decides that in future her attitude towards students would not be negative. Also patients' and relatives' behaviour make her consider these issues afterwards and this reflection helps her understand situations better. She also learns that nurses meet challenging situations in their work and it is not always possible to be prepared to everything but sometimes one has to trust on intuition.

She compares theoretical knowledge and practice situations: there is an incident where she describes how she learned what a theoretical concept means in practice. After one episode she states that the issues learned at school do not always come true in practice. She also learns to understand a certain illness only after meeting a patient with this illness though she had studied the disease already at school. Towards the end of her studies, she feels that she is quite capable of dealing with difficult situations with the patients. At the same time she learns that she still worries a lot about patients also at home. There is also a situation where she feels that the role of student hinders her to discuss with the nurse about her actions. Afterwards she is reflecting on the student's role in practice placements.

Student 2: Individual experienced clinical learning portrayal

At the initial stage of her studies, encountering death is significant to her. When she is taking care of a dying patient, she considers the care afterwards and feels that she succeeded well in her work and concludes that it is not difficult to please and support patients and that the quality of life is important. This time she is anxious of her actions but she is certain that she will succeed better in similar situations in the future. In her opinion, it is important that patients are pleased with the care she gives. Another time, after laying out a deceased with a nurse she is thinking about death and finds it to be a big mystery. The incident reminds her of the value of life. She also feels that it is her duty as a nurse to offer good care for the critically ill patients. When she, during another practice period, moves a deceased from the ward to the morgue with a porter she is anxious because she feels that the atmosphere is strange or even frightening.

She is thinking about ethical issues while taking care of patients and observing situations in the wards. She is empathising with patients and states that the quality of care is important. While she is taking care of the patient who is seriously damaged after trying to commit a suicide she feels empathy towards the patient and is examining her own feelings towards the patient who has caused his damage by himself and why to treat him if he wants to die. She concludes that she will treat these kinds of patients with her best ability and make the best of nurse-patient relationship. Quite at the end of her studies, she is also thinking of ethical questions while working in a psychiatric ward; she concludes that all the discussions with psychiatric patients include ethical questions.

In her own actions, she is worried when meeting new situations or new diseases. At the beginning of her studies, before encountering a cancer patient, she is worried because she has never seen a cancer patient before. She is describing cancer by making references to her textbook. She is even more afraid of the situation when she sees that the patient's relatives are present because she does not want to show her uncertainty. Her mentor supports her

in this situation. She was able to carry out the procedure and is describing it in detail also by using her textbook as a reference.

In a care situation, she is observing the patient and her non-verbal communication and concludes that she has succeeded to make something for the good of the patient. She is also considering her own actions during and after the events. She is taking care of a patient and because of the foreign language misunderstands the patient and thinks that he is disoriented or demented. Later, the problem is solved and she realises how easy it is to conclude that when a person is old she is also confused or demented. She is reflecting the event later and states that she recommends other students not to think that being old means automatically being confused. This situation taught her this issue. She is also worried when she was going to make a minor mistake while taking care of patients. A mistake is avoided because she checks the issue from her mentoring nurse who corrects her. However, she is worried about the situation and decides to behave so as not to do the same mistake again.

Towards the end of her studies, she is thinking about her own actions on the psychiatric ward and finds interesting that patients ask her opinions about their care and trust her. She finds that discussing with psychiatric patients always includes ethical questions. She finds it very important to have professional relationship with patients. She describes also a situation where she is the only one among the staff on whom her own patient trusts.

She describes her own learning related to events. While working in home care, she states that previously nursing was perceived as a care that takes place in hospital but nowadays it is seen much more widely. She feels that she experienced this new way of nursing in home care. She knows that it is important to be able not to be too much involved in patients' emotions and situations but she finds that it is impossible in home nursing where a nurse can work with the same patients for many years. She feels that people working in home care really have a calling for that job. She enjoys working there.

Before starting her practice period in school health service she is not very motivated to do it, because she thinks it would be monotonous. After the initial stage, she experiences that her mentor is skilful and that the work is interesting. She gets an insight of a new field of nursing. She realises that nursing is a wide field. Similarly, during her mental health nursing practice her attitude towards mental health care changes. She is not afraid of psychiatric patients any more. She is also thinking that people in general should have more knowledge about mental health problems.

She is also considering actions of staff. She is observing her mentoring nurse and it is significant for her that a mentor is a good supervisor and a skilful nurse as well. She finds the support of the mentor to be important especially in challenging and new situations. There are a few episodes where she is observing the work of doctors. In a placement when she is observing

a doctor in his work she feels that he does not take into account a client's needs and wishes and she feels that the patient is disappointed. When she is considering the issue, she suggests that doctors should consider individuals' needs with more understanding. She also suggests some nursing courses for doctors. Another time, she is observing a medical procedure which is carried out to a small child, who is very upset and restless. In spite of this fear of the patient, the procedure is completed. She is wondering, and also asks the staff, why they did not calm down the boy before starting the procedure. The other professionals answered that he is behaving like this every time. She feels that it is the health care professionals' duty to sort out the reason for the child's behaviour. She decides that next time in the similar situation she will do a full nursing history to sort out the reasons for patients' fears.

Student 3: Individual experienced clinical learning portrayal

It is significant to her to enter a new place or work in a new environment. These episodes include working with visually impaired clients, with a seriously ill patient who needs different kinds of equipment, in neonatal intensive care unit, in a night shift and also working abroad in different kinds of surroundings. She is often anxious in these situations but manages with the support of her mentoring nurses. She finds it meaningful to carry out nursing procedures for the first time; these include for example giving injection and taking care of a small baby in neonatal intensive care unit. She is attending medical procedures and finds them interesting. She appreciates especially doctors' instructive attitude. During the procedures, she is empathising with patients.

She is also interested in acquiring information about diseases that are new to her. At the beginning of her studies, she makes a few minor mistakes while working in wards; after having done a minor mistake with medications, she is relieved that a nurse noticed the event and she decides that she does not let similar mistakes happen any more. She has also an accident that included a risk of infection. In this situation, she is first scared but is supported by her mentoring nurse. Encountering death is significant to her; she finds it very touching to be present in taking care of a dying patient.

She has experiences where she is disappointed with her mentoring nurses' actions when these discuss her studying by themselves not involving her in the discussion in first place. These events also aroused her. However, she has also experiences where she appreciates her mentor and the support received from her. There are situations where she is worried about her coping in taking care of patients but with the support of her mentor she learns to take care of the patients and this makes her pleased. Also in a situation where she hurts herself and is worried about her own health she is supported by her mentor. In opposite situations, she feels that her mentor is neglecting her while working for the first day with her. She displays also an episode where she feels that the nurse does not take into account a client's individuality.

Sometimes she is also disappointed with her teacher who does not support her in difficult situations. She has an experience where she feels that her teacher after misunderstanding her statement behaves unprofessionally. This causes a lot of distress to her. Another time she feels that she needs support from her teacher and experiences that she does not get any support. While observing medical procedures she finds doctors' actions to be supportive and instructive towards her. In opposite events, she disapproves a doctor's communication as indiscreet. When working abroad she is impressed by a new field of health care and by professionals' work there.

She is empathising with patients in different kinds of situations. The feeling of empathy takes place when she is observing medical procedures or examinations, when a patient is told having a serious disease, when she is taking care of a small baby in a neonatal intensive care unit, and when visiting an old lady at her home which she found humble. Sometimes feeling empathy includes also other feelings like being alert of infectious disease or trying to think rationally so as not to be too touched. She feels that interaction with patients is mutual and rewarding both to the patients and to her as well. She receives positive feedback from patients.

Her meaningful experiences deal with her emotions as well. These feelings vary in different situations. She is worried about herself in the situation where she is afraid of the risk of an infectious disease after an error or when her patient is suffering from an infectious disease. She is also having nightmares when the ward is busy and she is worried about her ability to deal with the situations there. She is also worried how she is dealing with the patients in situations that are new to her. She is amazed at the circumstances where people may live. She experiences also amusing situations in wards where she works. She is describing an amusing event that happenes to her with a patient partly because of the foreign language. In another situation she and also the staff finds the behaviour of a patient to be amusing. While empathising with patients she sometimes feels inadequate and hopes to be able to do more for patients. After encountering death, she is thinking of her own death. She has also feelings of disappointment and anger when she finds her mentoring nurse's and her teacher's behaviour to be unfair towards her or when she experiences that the mentor is neglecting her.

She often checks the issues learned in practice in her textbook and includes descriptive knowledge about the disease or issue in her descriptions of critical incidents. While learning new nursing skills she feels that these will be useful in her work in future. She learns from her mistake and decides that she would not do the same mistake any more. While observing her mentor she experiences that she does not take into account her patients' individuality and is able to observe also the clients' individual traits. Her experiences abroad are meaningful to her – she feels that difficult environments and situations abroad helps her to grow as a person.

Student 4: Individual experienced clinical learning portrayal

She states that sometimes it is not easy to find a single important incident beyond others, but sometimes it is clear that a certain issue is a meaningful event.

Throughout her practice periods, it is meaningful and challenging for her to carry out nursing procedures for the first time, to see new events or procedures for the first time or to be in new situations/nursing environments for the first time. She feels excited when going for the first time to a new environment. At the same time she finds it to be instructive. She is also interested in working in the environments that include a lot of different kinds of equipment. While working in home nursing with her mentor she is taking care of a patient at her home. She is impressed by the modern technique that is planned to support the care of a disabled man.

She feels that she needs instruction in new procedures but is then able and motivated to manage on her own. According to her, these procedures are often simple but significant to her. These meaningful nursing procedures include different kinds of patient teaching situations, assisting in labour, bandaging an amputated leg, giving an injection, giving a shower, carrying out an admission interview and different kinds of medical procedures. Sometimes these experiences are also dealing with death; she describes in detail an event where she for the first time is involved in resuscitations. There are three resuscitations in all and every patient dies. She writes that the first resuscitation had the greatest impact on her but the whole event is unforgettable. In this situation she feels empathy towards another student; she describes how this student was also in the resuscitation room at the beginning of the event but she was afraid of the situation and had left the room.

Her own actions include different kinds of emotions. She is proud when succeeding to teach another student to do a nursing procedure or to teach patients as well. Sometimes she feels uncertainty while doing procedures, especially if she carries them out for the first times. Success in carrying out procedures builds her self-confidence. She describes that while doing a procedure she tries to recall issues learned at school. She also feels that procedures are not difficult if they have been practised at school. She also describes that the symptoms of a certain disease are just similar as learned at school. In doing procedures she also learns anatomy and physiology of human being. She is able to work independently and she has own patients. She finds it important to be present when her patient needs support. She also feels to be trusted while taking care of the patients on her own. Different issues make situations even more challenging, for example taking care of the patient who is in pain.

She finds it important to get feedback. She is getting positive feedback from staff and patients as well. She finds it rewarding because it makes her feel that she has succeeded in her job. She is thinking that the feeling of achievement

and appreciation remind her of the reasons of wanting to become a nurse. She is very proud of herself when the doctor praises her about her courage to correct him. She appreciates also a certificate which she receives about her action in one of her placements. She is also proud of a job offer that she gets from the ward where she is practising – she feels that the staff appreciates her effort and actions.

She appreciates the feedback received from patients and their relatives as well. There are many kinds of feedback: a hug given by a small child, flowers given by a patient, verbal feedback received from a deceased's relative and from her own patient who experienced her support being important while hearing bad news about his disease, and sometimes feedback is interpreted in patients' non-verbal communication. She appreciates the feedback because it gives her feeling of success and being trusted. Sometimes she has also mixed feelings about the positive feedback because she is empathizing with patients whose situation is worse than her own.

She appreciates other professional's actions. Once, when she is participating in an operation and observing a doctor's actions, she feels that the doctor is taking her into account and teaching her. In these situations she learns also anatomy. Another time she is allowed to do a medical procedure by herself with the support of a doctor. She appreciates the doctor's contribution to her learning. While working one day with a social worker and learning how these professionals support clients, she learned to appreciate social workers' actions. She appreciates multi-professional team work. Sometimes she has mixed feelings of health professionals' actions; once she is wondering why doctors had not told the truth about the prognosis to a patient already earlier. During a home visit she feels that a nurse is not telling the whole truth to the patient. However, she appreciates these situations as learning experiences.

She is empathising with patients in different kinds of situations. She has empathic feelings towards a patient after he has succeeded to do a procedure that she just taught to him, and also in the situation where she has an opportunity to tell the patient good news. Sometimes feeling empathy also includes other feelings like in a situation where a doctor tells her patient about the bad prognosis. At that moment she is anxious to leave the room and get to the world where there are no diseases or worries at all. She also feels empathy in a situation where she suddenly has a feeling that a deceased's relative is now their client, and she and her mentor are supporting him.

Throughout her practice periods, she is considering and reflecting on patients' feelings and experiences. While thinking about her own actions with patients, she feels that an instruction 'do the issue in the way you would like it to be done to yourself', which she had got from a nurse, is a good principle. She is thinking that the life is unpredictable and unfair and that she understands this better after a certain experience with her patient. She also feels to be lucky being healthy when at the same time her patient is seriously ill. She is

also reflecting on that perhaps a certain serious disease changes one's attitude towards life because she has similar experiences in different places about the good atmosphere among these patients. Quite in the middle of her studies during a practice period she is discussing with a deceased's relative. She is considering that in spite of the fact that she has met many dead persons she only now suddenly realises that a person's health, illness and death affect the whole family. She writes that she certainly has studied this issue and knows that it should be mastered by the nurse, but that moment she realises it very clearly.

Her learning experiences in practice include learning different kinds of procedures, and anatomy and physiology as well. They include also learning of oneself, like in the situation where she recieves positive feedback from the staff and the patients at the end of her practice period. She finds this rewarding and it makes her feel that she has succeeded in her job. She writes that these kinds of moments which include the feeling of achievement and appreciation, remind her about the reasons why she wants to become a nurse. It is important to her to be able to discuss her experiences afterwards with staff – sometimes this discussion corrects mistaken ideas.

She also describs an event which took place during her exchange visit. The incident happenes in her free time. She was amazed that no one was seriously hurt in a situation where a crowd of people were in danger. She was amazed because on TV she had seen that panic can spread in a crowd and cause damage. She also describes an event where she is just an observer and she has time to think about herself. She is reflecting on and describing her personality in detail. During her last practice period she finds that there is a kind of ethical dilemma between her personal civil self and her professional self when she is trying to sort out what to think about a patient's strange behaviour. She is able to behave professionally in this situation with the patient.

Student 5: Individual experienced clinical learning portrayal

She displays a lot of experiences where she is struggling to deliver care in her practice placements and facing misfortunes. These episodes occur especially at the beginning of her studies.

During her initial practice period, she is describing events where she is working on her own and feels that she is not succeeding in her actions. During her first practice period she feels that she has had several critical incidents already during the first three days: she experiences the beginning of practice to be very challenging to her.

Actions, in which she feels that she has not succeeded, include making minor mistakes, having difficulty with the language while working abroad, not succeeding to carry out a nursing procedure, not remembering how a procedure had been taught at school, finding out that she had carried out a

nursing procedure in the wrong way on the previous day, and being not able to be present in certain nursing situations because she cannot bear certain odours. However, she has also experiences of success. She is pleased when she succeeds to take care of a patient in the situation that she finds to be very challenging. She has positive feelings also in a situation which she is able to manage because of her previous experience abroad.

At the beginning of studies encountering death is one of the events that awaken different kinds of emotions in her. Seeing a dead person who has physical changes in her body has a great impact on her. She is thinking of death afterwards and gets support from her student colleague. When she meets a dying person for the first time in her life, she recognises that the patient will die though the nurse does tell her that. She describes the signs of a dying person to be similar to those learned at school. She is reflecting on her own feelings and finds it odd that she does not feel any fear or sadness.

Towards the end of her studies, she has more positive experiences about her actions. Still, sometimes she has feelings of failure. She is proud while she is working abroad and finds that she is able to manage though she encounters a lot of challenging situations. She is also happy while succeeding in carrying out nursing procedures and feeling that she is good at them. She has also experiences where she feels that she has learned certain procedures when she has had an opportunity to practice them in the ward. However, there is an event where she is exhausted when she does not manage independently in a situation with a patient. She experiences a certain field of health care to be a critical incident as a whole to her because she finds it to be monotonous.

Throughout the practice periods, she has feelings of inadequacy in many situations. Sometimes these feelings are connected with the language; when she is working abroad she is worried about her language skills in nursing environments with patients. She is also frustrated when she is allocated to discuss with a patient and doing a nursing procedure to the patients with whom she has no common language.

Throughout her practice periods, she is empathising with patients. During the first practice period she shows compassion and concern for a dying patient and describes her willingness to give the patient some comfort. She is also empathising with a deceased because she knows that she suffered before her death. She feels empathy towards the deceased's relatives as well. She is displaying concern about patients also in challenging situations. Later in her studies, she feels empathy in relationships with her own patients or with the patients she is taking care of independently. She is taking care of the baby who has been abused by her father. She is studying more about the issue in her textbook. During her exchange visit abroad, she is taking care of a Finnish man and feels empathy towards him. The faith of the man touches her deeply and she is worrying about his condition still at home. Toward the end of her studies she shows concern for a young girl because

she reminded her at the same age: she had had similar experiences herself. In another situation, she displays relief and satisfaction when a patient's health condition improves.

At the beginning of her studies, she has experiences where she feels that staff in the ward does not support her and her studying. Once she is allocated to do other issues than she had planned for that day and she feels that the challenging task that was allocated to her was a punishment. She feels that she needed help in a situation that she found difficult but did not get any help from other nurses. In the middle of her studies, she has an experience where she is left to take care independently of a patient and in this situation she feels that she is dealing well with the patient and her care. She has a few incidents about mentors' actions. During her first practice period, she has an experience where she needs support from her mentor and feels that she is neglected. Towards the end of her studies, she has a mentor whom she appreciates. In the middle of, and towards the end of her studies when she is working abroad as an exchange student, she has many experiences where she feels that health care personnel are behaving unprofessionally. These incidents deal with communication and ethics. During the same periods her reflection is focusing on the quality of the health care and nursing.

Throughout her practice periods, she describes events where she wants to check in her textbook issues that she encounters in practice; she finds the signs and the symptoms of a dying person to be similar to those learned at school; and while taking care of a baby, she checks the needs of the infant in a textbook. In her documented incidents she does not analyse these events in detail, instead she only states that she used a textbook to ascertain the issues.

She states that she wants 'to treat other people as you want to be treated'. This principle causes anxiety to her because she is afraid of causing pain to patients when doing certain procedures. After receiving an opportunity to practice this skill every day during one of her practice periods, she feels that she is comfortable in doing that and she feels that her attitude towards the procedure changed; she is not any more afraid of carrying out it.

Sometimes she is reflecting on her actions afterwards. In the middle of her studies there is a situation where she is taking care of a patient from a different culture and she finds out how important it is to be culture sensitive. Her own experiences in a different culture as an exchange student helped her to realise the situation. She is thinking about the reciprocity of the interaction in another nursing situation where she is taking care of an infant and feels that the interaction is mutual though the baby is not able to talk. She is also reflecting health care professionals' work in general, and finds that it is always important to take precautions in certain situations.

Student 6: Individual experienced clinical learning portrayal

Nearly all the incidents in which she describes her own action deal with patients of whom she is taking care. She is enjoying of taking care of her own patients. She loves to work with patients and has emphatic feelings towards them.

During her initial period in the ward there is a situation where she is working on her own taking care of the patient whose care she finds to be challenging, she approaches the nurse in order to get support. Afterwards she is considering the event which she found to be challenging. She is empathising with the patient in spite of her challenging behaviour. She is thinking how hard it is for the patient to be totally dependent on other people. Even in the situation where she disagrees with the nurse on a child's need for painkillers she acts as the child's advocate and insists on the medication. She interprets about the child's non-verbal behaviour that she is certainly in pain.

Quite in the middle of her education she has experiences of inadequacy associated with patients' care. She is disappointed with her own actions in a situation where she feels that she is not able to support the patient sufficiently when the staff do not take the patient's feelings into account. She has also feelings of inadequacy associated with her own actions after a patient's discharge when she finds that she possibly did not take into account all the matters in the patient's care.

She shows compassion and concern for patients' well-being. There are certain factors that especially arouse her positive emotions towards patients. During her first practice period, after a situation which she finds to be problematic she is setting herself into the patient's situation and perceives the situation from the patient's view and this makes the situation easy to understand and accept. Also getting to know patients better enhances the feeling of empathy. Towards the end of her education, she feels empathy also in the situation where she feels that the patient is not supported enough by either the staff or the family. In a situation where she feels that a nurse is annoyed about a patient, she shows concern for the patient's well-being but because of her role as a student she feels that she is not able to 'resist' the nurse. She also had warm feelings toward a patient whose life has been very hard and towards a patient who resembles one of her friends. She feels that some patients have helped her to grow as a human being.

She is also pleased when she learns new procedures. Quite at the beginning of her studies there is an episode where she does not succeed in doing a procedure but next day she is able to carry out the same procedure and this makes her satisfied. Later on during the course, she was a bit worried about doing a nursing procedure in a situation where she finds the patient's behaviour challenging. She succeeds well in the situation and she feels that it is important to learn to work with all kinds of patients as a nurse.

While she is working with her mentor and doing nursing procedures that cause pain to patients, she finds these events to be significant because she is able to keep her emotions under control and concentrate on patients and procedures. Towards the end of her practice periods there is an episode where she feels that she goes to discuss with a psychiatric patient with 'old tools' and forgets to be professional. However, she receives positive feedback from the patient. Encountering death for the first time is also significant to her, but not at all frightening. However, this situation includes exceptional procedures that frighten her.

She has positive experiences about her mentors both at the beginning and at the end of her studies. During her first practice period, she appreciates her mentor's professionalism and hopes that one day she could act in the same way. She tries to emulate the behaviour of her mentor who is encouraging, and finds that it is not easy. At the end of her studies she has an excellent mentor as well. She finds her to be both an excellent supervisor and a nurse. She feels that she can discuss all the issues with her. Sometimes the mentor also works as a role model for her. In a placement, while discussing with her mentor she realises that in future she would like to work independently and promote health in order to raise the public health level. Receiving positive feedback from her mentor throughout the practice period makes her highly satisfied. Also when she receives a lot of positive feedback from the whole staff she finds it very rewarding and helpful for her learning. However, she feels that she has still much to learn in order to be a good nurse.

She has a few experiences where she feels that staff does not support the patient or does not explain procedures to the patient or have inappropriate attitudes towards the patient. In these situations, she is empathising with patients. She has also an experience where she feels excluded and ignored because some nurses in the ward do not appreciate students as part of the team. At the same time she feels that some nurses are very supportive and appreciate students as equals. She has also experiences where she appreciates the staff in the ward. She thinks that they are supportive professionals, who are able to grow and learn all the time.

She illustrates that her critical incidents are very day to day experiences which do not seem to be special to anybody else. However, these incidents have an impact on her. She describes her critical incidents not to be any dramatic spectacles but more or less quiet incidents which happen more in between her ears than in the outer world. She states that it suits her style of learning and even existing. She continues that she likes to analyse situations and tries to think what people experience and why. She adds that some of her critical incidents deal with understanding individuality and variety of life, not making any false generalisations. She also states that she would have had even more critical incidents than she had documented.

When she is reflecting on her own learning she is dealing with the issues of ethical questions, people's rights, quality of care, her own life, life in general, nursing perspective and her own actions.

She is considering nursing and its quality. Quite at the beginning of her studies, during a practice period she feels that she has gained an insight into the nurses' role. She feels that nurses have to have a wide knowledge base in order to be able to give good nursing care. There are also other experiences that help her to widen her perspective of nursing; during a practice period where she has an opportunity to follow a patient all the way through his nursing process helps her to deepen her view of nursing. Also a study visit to a different health care unit helps her to see other aspects of nursing.

Already during her first practice period she is thinking about how nursing could offer good quality care for the elderly. She feels that it cannot be only taking care of patients' physical needs but every procedure should have an inner meaning, not just routine. She finds it to be very educative to her when she realises that all these old people of whom she is taking care, have once been young like she now and they all have their own history behind them. This idea helps her to see their individuality. She is also thinking about the values and resources in the Finnish society. She is also considering the care of dying people; she feels that this field of nursing should be developed. Later, in the situation where the patient is not taught about the procedure she feels that teaching is one of the very important responsibilities of a nurse.

Some events make her to think about ethical questions in nursing and health care. During her first placement, she is considering the meaning of life and how students and nurses have to develop their skills in meeting the elderly people's needs. She states that the beginning of life has been more under research and interest; and to the end of life should be paid more attention as well. Later, in a resuscitation situation she is thinking about people's rights to live and die. She is considering the staff's decision making and its difficulty. Towards the end of her course, there is also a situation where she feels that student's role restricts her to act as a patient's advocate. About this event she learns that she should identify herself with herself and not letting other nurses' behaviour affect herself in a negative way.

She is reflecting on her own actions in different situations. Sometimes she uses theoretical knowledge to ascertain the issues encountered in practice. When she disagrees with the nurse about the patient's need for painkillers, she reasons her point, in addition to the patient's behaviour, with theoretical knowledge. In this situation she feels that in nursing, in addition to knowledge, a sensitive heart is needed. There are also other situations where she is comparing issues learned at school with the practice. Sometimes she is disappointed that issues learned at school do not come true in practice. There are also opposite experiences. She learns that a certain nursing method is totally different from what her previous understanding of it was. She finds it

to be much more versatile. This makes her think about her idea about good in life. She is reflecting on if her conception of it is too narrow.

She has a few critical incidents concerning pain. In these situations she is positively surprised at herself because she is able to behave professionally in these challenging situations. Sometimes when she finds that she did not take into account all possible issues in patients' care she is reflecting on her own actions afterwards and decides that she had not any previous experience about those issues and that she was acting according to the skills she possessed at that time. Sometimes the events in the wards, especially at the beginning of her studies, make her to think about her own family and her own life and growth.

Communication with patients is important to her throughout her practice periods. She experiences that patients have taught her much. There is an experience where she is doing her last shift in a ward and she is feeling many kinds of emotions; she feels very touched; she feels that she has succeeded to support patients but she feels also that she has received even more from patients. She feels privileged when she has got an opportunity to work in that ward. She states that 'you can see the most important things only with your heart'.

Student 7: Individual experienced clinical learning portrayal

She finds it interesting to observe new nursing or medical examinations and procedures. She is also keen on carrying out different kinds of technical nursing procedures and she is pleased when she finds that she learns new nursing skills very quickly. When she is doing nursing procedures for the first time she finds it to be exciting but she gets quickly used to doing procedures so that carrying out them does not cause any anxiety but pleasure. Sometimes, when she feels that her mentor is not supervising her she is working on her own and finds that she is able to work independently and receives support from other staff. Once when she commits a minor mistake with a patient's medication she is worried about it. She discusses the error with her mentor and finds it very helpful.

It is significant for her to work in a new kind of health care setting. She experiences that at the beginning of any practice period one has to learn all the routines of the new placement. Once she feels that she is not motivated to practice in a certain kind of placement but after starting to practice there she finds it very interesting and is very motivated to work there.

Throughout the practice periods her working is very patient-centred: she finds it very important and educating to have own patients with whom she is able to work as independently as possible. She especially appreciates her natural relationships with patients. She experiences that she is able to see the results of the care and also the whole nursing process in these relationships.

She feels that she is able to create confidential relationships with her patients and to work as their advocate in helping them to make their own decisions. She feels that it is important to respect patients' will in all the care situations and to support them, for example during examinations and in other difficult situations. She feels that she is able to support patients; also in situations where, in her opinion, staff is ignoring patients' psychological needs. It is also important to explain all the procedures to the patients. She finds it important for patients to be aware of their care. She also displays that she is responsible for the good quality of care. She appreciates the feedback received from her patients. She finds it important to receive also verbal feedback though she feels that she is also able to interpret non-verbal feedback from patients' behaviour and gestures. She appreciates the feedback that she receives from her mentors and other staff as well.

During her first practice period she feels that the most remarkable issue that she learns is to take care of dying patients and also how to take care of a deceased. She encounters death also later during her studies and finds encountering dying people to be very touching especially when patients are young.

She is usually pleased with her own actions and often this is verified by the feedback from patients, relatives and the staff as well. She feels that she is also able to interpret patients' non-verbal feedback. Sometimes she feels that the student's role hinders her to act as the patient's advocate in the situations where she does not agree with the staff. She feels empathy towards patients especially after listening to their life experiences or after understanding reasons of their behaviour. She tries to support patients especially when she finds that they are scared or worried.

She has both positive and negative experiences about her mentoring nurses. Sometimes she has a mentor whom she finds to be a very good supervisor and also an expert in nursing. She experiences that this mentor is able to supervise and support her in spite of the busy work environment. The mentor allows her to practice all nursing skills and also to work independently. She is also observing one of her mentor's interaction with the clients and appreciates her actions and finds it very instructive to her. Another time she feels that her mentor is totally ignoring her and she is very disappointed. Sometimes she has a different mentor nearly every day but she does not find this to distract her studying. There is also a minor issue that could, in her opinion, develop mentor-student relationship: she hopes that nurses would call students by their names. This comes to her mind when, in one ward, all the patients call her by her name and not as student. She finds this to be very nice.

Other staff may also be significant for her studying and learning. There are a few situations where she feels that staff is neglecting the patient psychologically during the examination. Once she feels that the nurse's behaviour towards her and another student is unfair and she mentions this to the nurse as well.

In another situation she finds the staff's work to be very professional and well organised: it is her first day in a new placement and immediately she finds their organisation of work to be very patient-centred

She is thinking about documenting her critical incidents; she feels that she has encountered more significant events but is documenting only part of them. Throughout her practice periods she is reflecting her own learning. The events that make her to reflect her own learning include encountering death, relationships with patients and especially with her own patients and the quality of care.

In the situations where she encounters dying people and death she is considering the nurse's role in these situations and she finds the task very challenging. She concludes that it is very important to have skills to be present and listen to the patients. Sometimes, when an event has been very touching and she feels empathy towards the patient, she is thinking of the event afterwards for many times. Some events, where she encounters death, make her to think about her own life and her family. She concludes that it is easier to empathise with patients if you think about you and your own family in the same situation. She feels that often families have more difficulties in accepting the death than the patient herself.

Another time, when issues that she encountered during her practice period make her reflect about her own family, she feels that her studies helps her to deal with the private life situations as well. Some events in the ward make her to think about the life in general and what are the most important issues in life. Quite at the beginning of her studies while practising in the elderly ward she feels that she understand that the elderly have the living experience and wisdom that she would like to possess one day.

Sometimes the events in the ward make her to consider Finnish health and social care in general; she is considering that drugs and alcohol are a big problem among the youngsters. She is studying the issue further in scientific articles and leaflets. During one of her practice periods, she finds that there are a lot of different kinds of problems in families. She is thinking about the situation in the society in general and considering how health care professionals could support families.

When she is taking care of her own patients she experiences that she learns a lot of different viewpoints of human body – physical, psychological, social and spiritual. She often considers holism in nursing and in taking care of patients. She feels that often health care professionals concentrate on patients' physiological needs and forget psychological, social and spiritual needs. She repeatedly states that taking care of patients has taught her very clearly that it is important to take care also of patients' social and spiritual needs.

Sometimes if the patient is not able to talk about her life and disease, she finds it very useful to get acquainted with the patient's record in order to be

able to support her. There are also situations where she feels that she is able to apply the theory that she has learned at school. She finds it very helpful to see in practice events or diseases that have been studied at school. She recognises that practice periods give her a wider perspective of nursing.

Learning technical skills is also important to her throughout her practice periods. At the beginning it is even more significant. Making a minor mistake teaches her to be more careful.

Student 8: Individual experienced clinical learning portrayal

She finds working in new placements to be exciting and interesting. She values seeing different kinds of fields of health care and nursing. She finds learning to carry out nursing procedures to be important. She is pleased when she learns to do a new nursing procedure after having an opportunity to practice it. Another time while she is experiencing that the staff do not take the patient sufficiently into account in carrying out a nursing procedure, she decides to try to do the procedure by using a patient-centred method and finds that it works very well. Once she is very pleased when she, at the same time as she is carrying out a nursing procedure, is able to teach it to other nurses who were not familiar with it. Another time, when she is carrying out a nursing procedure and is close of doing a minor mistake, she is annoyed because she has usually succeeded well and now she has problems in doing the same procedure. Towards the end of her studies while working independently, she forgets to do a procedure that belongs to the nursing process and she is very embarrassed in doing so. In the situation she finds the doctor's attitude to be very supportive in spite of her mistake.

She feels empathy towards patients. During her first practice period she has empathic feelings towards a dying patient and she is pleased while being able to support her. Later on during her studies, when she is taking care of a dying patient with her mentoring nurse, she expresses a sense of helplessness and frustration because the patient is painful in spite of the pain killers and their efforts to alleviate the pain. Another time she is taking care of the patient whose behaviour she finds to be challenging. In this situation, she feels that it is important to take the whole family into account in health care. Towards the end of her studies she is pleased with her long nurse-patient relationship; she meets the same patient whom she had already met during her previous practice period. When she is independently taking care of her own patients, she is enjoying because she has the feeling of being trusted both by patients and staff. In a placement when taking care of children and working with her mentoring nurse, she is considering her own feelings as a nurse and a woman. She feels that she is able to work professionally.

It is important to her to sort out issues that are not clear to her or that bother her. Already at the beginning of her studies she is able to discuss with a patient about the issue that bothered her in their relationship. Towards the

end of her studies there is an event where she is discussing with the staff the issue that concerns her. Similarly, she is considering and discussing with a nurse a nursing procedure in order to sort out reasons for the staff's actions while they were carrying out it.

She is experiencing that the health care setting where she is entering for the first time, is shocking because it is so different from her previous placements. Also when she is visiting a new health care environment – a psychiatric hospital – she finds the surroundings to be frightening. She feels ashamed about her own feelings.

She feels that it is important to get feedback from patients. In early stage of her studies, she sometimes feels that it is the best issue during her practice period. Towards the end of her studies during a practice period she finds that she has not received any feedback from patients during the period. She is reflecting on how important the feedback from patients is to her. She feels that as a student she is so used to assessing her own actions that she expects others to be ready to evaluate her as well. She is happy when she receives positive feedback from her own patient and her mentor as well. She feels that after the school she will have a short break in evaluating herself but after a break she restarts evaluating herself in order to develop herself and her work.

She finds it important to have patients of her own. She is happy that as a student she has more time to patients than the permanent staff. She appreciates listening as an important nursing method and feels that the patients have taught this to her.

Her experiences about her mentoring nurses are mostly positive. At the beginning of her studies she is in a situation which she finds to be challenging. She is thinking if her actions have been appropriate in this situation and is pleased with the support provided by her mentor. She finds the support remarkable for her. Later on during her practice periods, she is satisfied with her mentor when she is supervising her by calm and understanding way letting her to resolve problems first by herself before giving advice. She feels that she is able to practice skills in a proper way. She concludes that she learned a lot about her mentor's teaching style. She is also pleased when she is able to discuss with her mentor and to receive support from her after having experienced an emotionally challenging situation. Towards the end of her studies she has an experience where she feels that her mentor has taught her to trust on herself. However, she has also a few negative experiences about her mentors. Quite in the middle of her studies, during a practice period she is disappointed with her mentor's action while she hears only at the end of her practice period that she has made a mistake in carrying out a nursing procedure. She feels that it is unfair to say the issue at the end of the period because she thinks that it would have been necessary for her learning to receive the feedback right away in the situation. In another placement, she

feels disappointed when a nurse does not supervise her in a proper way. In this situation she decides to manage on her own. There is also another event related to evaluation; she is disappointed with the mentors because she is not able to arrange the feedback meeting with the staff in spite of her efforts. She considers that it is necessary to be allowed to discuss progress at the end of the practice period. Quite at the end of her studies she has also an experience where she is disappointed with her mentor because she has feeling of being neglected and not valued because she is a student. This time she has an opportunity to share her feelings, concerning a challenging event, with her student colleague and she finds this helpful. There are also other episodes where she mentions the support received from her student colleagues and the staff being important when she experiences that she does not receive support from her own supervisor.

She has experiences where she appreciates staff's professional behaviour in a difficult situation. Sometimes she is afterwards considering staff's actions in the situations that in her opinion included ethical questions and is agreeing with them. She also appreciates the unit where staff acknowledges her to be one of the team members. She does not think this to be self-evident when concerning students. During a practice period she appreciates especially the health care professionals' team-work that she considers to be excellent. She is also thinking about the doctors' and nurses' relationship and equality in health care and especially in the ward where she is practising at that moment. She feels that they should be equal professionals but always the issue is not like that. She feels that in the ward some nurses are like doctors' servants. She has also an experience where she feels that while doing an examination the staff does not adequately take care of a patient's psychological needs.

Incidents that make her to reflect her own learning include death, ethical questions, unintentional errors, quality of care and student evaluation.

She is reflecting on the significance of an event that she has described as her critical incident and states that at the beginning of studies there are a lot of situations where a student feel emotions of inadequacy, especially when the issues deal with dying patients. Similarly, she states that often her critical incidents are minor events but remarkable to her. She is often reflecting on the issues that include ethical questions. In these situations she is also discussing with her mentor. She finds this to be very helpful and educating. She is considering that nursing is holistic; one has to take care of the patients as human beings, taking into account all sides of a person. She is also considering patients' right of making decisions concerning their health. She finds it important that nurses do not condemn people for their choices or behaviour. She finds respecting all kinds of persons to be important in nursing. She feels that the nurses in the ward act as role models to her. She herself also wants to perform well; she is thinking of an event where she was close to make a minor mistake. She is reflecting on possible consequences if the mistake had happened. She concludes that she certainly learned to be

more careful in similar situations in future. Accountability is also displayed in an episode that occurrs during her first practice period; in a situation where she feels that the patient is disappointed with her actions, she is checking the issue in a textbook and is reflecting on her own actions.

Applying theoretical knowledge in practice takes also place when she is, after a practice period, considering both theoretical and practical skills that she learned in a new environment. She is using theoretical knowledge to support her experiences.

Towards the end of her studies, she is considering the social and health care system and the quality of care. She hopes that her generation would be active in social policy and would be able to develop conditions especially for the elderly.

8.2 The general experienced clinical learning portrayal types

The second part of the method included moving on from individual knowledge toward general knowledge. The result of the general part of the method is the final general meaning network types where four *general clinical learning portrayal types* were constructed. These types describe how the phenomenon of clinical learning presents itself in four different ways.

The first type: Assertive, goal-oriented, patient-centred, reflective learner

The general experienced *clinical learning portrayal in the light of critical incidents* is organised around relationships with patients. The student has an intention to share the feelings of patients and to show compassion for the patient's well-being and offer empathy to them. She puts the patient at the centre of the care, nursing being patient oriented. The student experiences a lot of emotions while working in different placements, for example encountering death evokes emotions. It is educative to work in different environments though it may sometimes cause concern. It is necessary to practice new skills that are not yet possessed. The quality of the relationship between the student and the mentor and the mentor's attitude and skills are critical to the student's learning. The student appreciates the detailed feedback received and it is crucial for her. The whole staff, when acting professionally, works as a role-model. The student is confident and self-aware and able to take transforming action by challenging the practice situations. Occasionally, the

role of the student hinders actions at placements. She is able to organise her own learning in order to achieve her goals; she is also able to exert control in her environment in order to meet her learning needs. She uses assertive strategies in dealing with challenging situations. The student is gradually able to move towards independent competence identifying what is appropriate at her level during different practice periods. Responsibility and accountability are essential in her behaviour and are emphasised at the occurrence of error. The student is able to establish meaningful and realistic links between theory and practice. Throughout the practice periods the student is reflecting on her own learning and issues faced in the placements. She also sees that nursing requires life-long learning. She is gradually building up a holistic picture of nursing and a wider perspective of health care; similarly she understands the significance of nursing in the society. She is also developing insight into her own nursing philosophy. The student is generally content with her practice experiences. (Students: 1, 6, 8).

The second type: Confident, technically and environmentally oriented, reflective learner

The general experienced *clinical learning portrayal in the light of critical incidents* is organised around new environments, different kinds of placement settings and acquiring new skills; the emphasis of practising the variety of techniques being in the initial stages. Encountering new clinical experiences is important to her. Likewise, the student has an intention to share the feelings of patients and to show concern and compassion for the patient's well-being. She views the patient holistically. The student experiences a lot of emotions while working in different placements, for example being involved with the death of patient evokes emotions. The key element in the relationship between student and mentor is the collaborative nature of the interaction between them and working in partnership and as legitimated member of the team. The whole staff, when acting professionally, works as a role-model. The student is initiative and able to exchange thoughts with staff in challenging situations and is able to share openly also negative aspects and concerns with staff. The student is open to new learning opportunities and motivated to engage in new activities. She is able to take charge of and control her learning, and is reflecting on her accomplishments. Occasionally, the role of student hinders actions at placements. The student is gradually able to move towards independent competence within her level of skills and knowledge during different practice periods. Opportunities of working independently and taking responsibility enhance self-esteem and self-confidence. The

student appreciates the detailed feedback received and it is crucial for the development of her self-confidence. The student is able to establish meaningful and realistic links between theory and practice. Throughout the practice periods the student is reflecting on her own learning and issues faced in the placements; she is reflecting on both her personal and professional development. She is gradually building up a broadened vision of nursing and a wider perspective of health care; similarly her perspective broadens from health care to include the society. The student is generally pleased with her practice experiences. (Students: 4, 7).

The third type: Complacent, practically oriented learner

The general experienced *clinical learning portrayal in the light of critical incidents* is organised around the quality of care and the quality of her own actions as a student and a future nurse; focus being on self at initial stages and moving towards a greater focus on patient as the education progresses. The relationships with patients are significant though they also include challenges. She is committed to delivering high quality care to patients. The student experiences a lot of emotions while working in different placements, for example, facing death evokes emotions throughout the course. It is educative to work in different environments though it may sometimes cause concern. She has a strong motivation to achieve new competencies; it is important to train and learn new skills. Sometimes she feels insecure about her ability to function professionally. The quality of the relationship between the student and the mentor and the mentor's attitude and skills are important to the student's learning. The student appreciates the feedback received. The whole staff, when acting professionally, works as a role-model. Throughout the practice periods she is having a sense of responsibility and it is essential in her behaviour and is emphasised at the occurrence of an error. The student is able to establish descriptive links between theory and practice. Throughout the practice periods the student is considering her own learning and issues faced in the placements. She is gaining in confidence in her learning and her own abilities towards the end of the course. She is gradually able to find new perspectives in nursing and building up a holistic picture of nursing. The student is generally satisfied with her practice experiences. (Students: 2).

The fourth type: Vulnerable, timid, non-reflective learner

The general experienced *clinical learning portrayal in the light of critical incidents* is organised around the challenges encountered in placements. The

challenges are related to the student's own actions, environment, staff and patients as well. On the one hand, she is focused on her own behaviour and judging her own actions. On the other hand, she is focusing on the staff's behaviour and sometimes feeling being disrespected. The student feels often insecure about her ability to function in the professional role. Similarly, she experiences lacking control over her learning in clinical placements; she has difficulties in taking initiative and being self-reliant. Unanticipated events cause distress and frustration. She experiences that student status causes role conflicts and powerlessness to change circumstances that she experiences not to be promoting her learning. The relationships with patients are significant though they also include a lot of challenges. The student experiences a lot of emotions while working in different placements, for example, encountering death evokes emotions. It is educative to work in different environments though it also causes concern. It is important to learn new skills. The quality of the relationship between the student and the mentor and the mentor's attitude and skills are important to the student's learning. The student appreciates the feedback received. The whole staff, when acting professionally, works as a role-model. The student is able to establish descriptive links between theory and practice. She is also considering her own learning and issues faced in the placements. Throughout the practice periods the student is facing challenges which cause anxiety and feelings of inadequacy. (Students: 3, 5).

Both *the individual experienced clinical learning portrayals* and *the general experienced clinical learning portrayal types* are discussed in detail in the following chapter where the discussion between the results of this study and previous knowledge about clinical learning is displayed.

9 Dialogue between empirical and theoretical knowledge about nursing students' experiences in clinical learning

Here, my aim is to discuss the empirical knowledge, the nursing students' experiences in clinical learning, in the light of previous research and literature of the phenomenon of clinical learning. Based on the students' experiences in their critical incidents, three constituents of situatedness that were common to all general types were identified: *Participation, Self in Different Roles,* and *Relationships* (Figure 2). These constituents of situatedness are those components of the clinical learning to which the experiential meanings expressed by the nursing students are related.

Constituents of Situatedness

Participation	Self in Different Roles	Relationships
Level of Participation	*Student Role*	*Self - Mentor / Staff*
Setting	*Role of Professional*	*Self - Patient*
Membership of Team	*Role of Patient's*	*Self - Student*
Practising Procedures	*Advocate*	*Self - Teacher*
Possibility of Mistakes		

Figure 2. The constituents of situatedness

The three constituents of situatedness mentioned above are common to all four general experienced clinical learning portrayal types. The differences between the portrayals are displayed through meaning relations that are displayed as four pairs of concepts, which thus demonstrate differences in the students' learning experiences in clinical settings. These pairs of concepts are termed modes of clinical learning (Figure 3). The modes of clinical learning include: **complacency** vs. **apprehensiveness** about clinical learning, **assertiveness** vs. **vulnerability** in clinical learning, **confidence** vs. **lack of confidence** in own actions and **competence** vs. **inadequacy** in clinical experiences.

In addition to these four pairs of concepts, the students differed in relation to their demonstration of **self-regulation** and **reflection**. Concepts of self-regulation and reflection, at least to some extent, explain the differences in

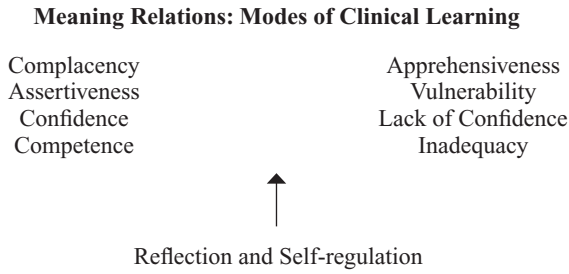

Figure 3. The modes of clinical learning.

the students' experiences that are described through the four pairs of concepts described above.

In the dialogue between empirical knowledge gained in the current study and previous knowledge, I use both the individual and the general experienced clinical learning portrayal types. In addition to this, I constantly returned to individual critical incidents in order to be convinced about the validity of my conclusions.

In drawing conclusions about the students' reflection on their learning, I used the model of Mezirow where reflective thinking is divided into three categories of content, process (the lower, less critical level) and premise reflection (Mezirow 1991, 104; 2000, 20–21). Only the last of these may lead to transformational learning. First, reflection of the content is thinking about the actual experience itself. Secondly, reflection of the process is thinking about the strategies of the problem solving: how the experience should be thought about. Thirdly, reflection of premises (prerequisite) includes reflection and exploration of prolonged, socially structured assumptions, beliefs and values related to the experience or the problem: "our becoming aware of *why* we perceive, think, feel, or act as we do…" (Mezirow 1991, 108; see also Ruohotie 2000b, 194.)

In addition to analysing reflection and self-regulation, I used the model developed by Raeithel (1983; according to Engeström, 2001, 25–26; see also Kivistö 2003, 156). In this model, the types of reflection are divided into three categories. First, original "centration" or self-reflection means concentrating on oneself or performance of oneself in a given task or social situation; secondly, "decentration" or problem reflection means directing outwards, to a shared task or problem; and thirdly, "recentration" or decentralised reflection means that attention is directed to a common task

or action in order to solve it: 'I' is perceived as a part of a collective and attention is focused both outwards – to the task and context – and inwards – to the internal dynamics of the collective.

Consequently, both the constituents of situatedness that are common for the portrayal types and the meaning relations - the modes of clinical learning - that differentiate the portrayal types have been inductively formulated from the research material as the result of the phenomenological analysis, whereas the analysis of reflection and self-regulation is based on the deductive reasoning from the basis of previous models and theories.

9.1 Participation

Participation was one of the constituents of situatedness in clinical learning. The aspects that were identified in the students' experiences concerning **participation** were *level of participation, setting, membership of team, practising procedures* and *possibility of mistakes.*

It appears from the students' accounts that participation in clinical learning is coloured by emotions. Encountering new people and facing new environments and different kinds of procedures may cause confusion, anxiety and even fear. On the other hand, the events on the clinical settings may be rewarding experiences and the students have a lot of positive emotions; feeling of success and self-confidence. Often both positive and negative feelings are related to relationships in the wards and other health care settings, either with patients or staff. There are also situations in patients' care where students feel that they have to be able to keep their emotions under control and be able to act professionally (see also Smith 1998).

Findings of previous studies support the finding that participation in clinical environment includes many emotions. Oermann & Garvin (2002) state that while most of the graduates experienced positive emotions in beginning practice, their anxiety in caring for patients and with new clinical experiences were evident findings in their study. Within the stresses that the students reported most frequently were feeling unsure and incompetent. In Nolan's (1998) study, the new setting brought with it feeling of fear and anxiety, which in turn affected the students' responses to their learning environment. The researcher states that this finding strengthens the argument for exposing the student to fewer clinical settings in the programme and maximising the length of individual placements in order to maximise learning time. Sometimes events in wards may evoke memories of past traumatic experiences creating problematic situations (Jarvis & Gibson 1997, 31). This was also the case in

the current study; some events or patients in wards reminded students of their own previous experiences and raised many emotions. Thus, it is important that students have opportunities to share their feelings with mentors or other professionals.

It is also identified that the general clinical learning portrayal type one and two students are aware of their emotions and they are able to control and utilise the information involved in emotions. Consequently, they seem to be able to utilise their emotions in the self-regulation process (cf. Näätänen et al. 1995, 65; see also Saariluoma 2001, 30). Instead, it seems that especially type four students are not able to acknowledge their emotions and the significance of them in learning. It is important that students learn to acknowledge their emotions and are able to deal with them. This is especially important within health care students in professional education because they work with human beings related to issues of health and disease in their future work. (see also Ora-Hyytiäinen 2004, 121.) According to the results of this study, it is important to study and consider further the meaning of emotions in learning and professional learning, and especially in clinical learning.

9.1.1 Level of participation

Level of participation describes the variety of levels of students participating in practice placements. In this study, it was identified that being allowed to take responsibility and to work independently at the level of one's competence were significant to the students. Similarly, it was important to them to have opportunities to practice different tasks and procedures in clinical learning situations. The significance students gave to these factors has also been described in other studies (Löfmark & Wikblad 2001; Nolan 1998; see also Mäkisalo 1998, 104). As acceptance increased, the students in Nolan's (1998) study sought an increase in independence and wanted to be more self-directed in their work and learning. The more actively these students participated in patient care, the more confident they became. Feelings of inadequacy have much to do with the attitude and practices of staff. By valuing and giving students the opportunity to demonstrate their ability to function as nurses the staff display acceptance of the students. This in turn develops the students' self-confidence, which encourages further participation and skill development. (Nolan 1998.)

Similarly, as in Baillie's (1993) study, all the students in this study made reference to their level of participation in their placements. Sometimes the students were content with an observation role, accepting the limitations of their competence, but at times an observation role was felt to be insufficient.

The students preferred being able to participate and appreciated it for learning. They did feel that they also learn from observation, particularly by observing expert professionals or when seeing procedures for the first time. Knight, Moule and Desbottes (2000) identified the value of active observation in learning skills. In addition, Burnard (1992) found, when investigating experiential learning, that the students while describing their actions in clinical settings identified both 'doing' aspect and 'seeing' aspect in learning. It appeared that they were able to learn also by observing.

In this study, especially the students of the general portrayal type one seemed to be able to control their participation in clinical learning. They seemed to be able to work on an appropriate level of challenges (cf. Brown & Palinscar 1989) and acknowledge their level of competence: they sought for support when needed but they were also able to work independently if the mentor was not available or if they felt that they could manage on their own. They felt that working independently enhanced their self-confidence and was rewarding. They seemed to retain control in self-directed learning and were able to identify their particular learning needs (cf. Lyons 1999). Hallett (1997) had similar findings. According to her findings, students valued opportunities to practice nursing for themselves and the increasing involvement and responsibility was described as a confidence building exercise. Similarly, Löfmark and Wikblad (2001) identified that at the end of the education the students appreciated the responsibility that was allowed to them. Independence contributed to deeper contact with patients and provided the students an opportunity for decision-making.

Social participation seems to enable learners to engage in meaningful acitivities. In this study, only the student in the individual experienced clinical learning portrayal five has meanings related to work allocation for students. She experienced that she as a learner is subordinate in relation to the community of clinical practice (cf. Wenger 1998, 263): She experienced that assigned tasks were sometimes inappropriate and hindering the planned learning experiences. In a previous study (Chun-Heung & French 1997), because of a shortage of work force, students found that they had to take a greater share of the workload, having less time to learn. Similarly, in the same study the ward climate was found both busy and toilsome by the students. The students found that they were too busy and too tired to learn during their practice period. Cahill (1996) had similar findings. In her study students experienced that teaching and learning activities were perceived as activities which took place after the 'work' (patient care) had been completed. Learning and patient care were thus viewed separately. Similarly, Löfmark and Wikblad (2001) found that stress and lack of time were experienced by

the students during the whole clinical practice as obstructing for learning. These kinds of issues seemed not to be of great concern for the students in the current study.

Cognitive apprenticeship model (Brown, Collins & Duguid 1989; see also Collins et al. 1989, 454–460; Cope, Cuthbertson and Stoddart 2000; Tynjälä 1999a, 140–142) includes strategies, which can be employed to support novices as they develop their competence. This model may be very useful in supervising and mentoring students in clinical placements. The strategies include modelling, coaching, scaffolding, fading, articulation, reflection and exploration. Modelling involves the demonstration of an action by the expert, whilst drawing attention to the key features of the successful completion of the activity. A key characteristic of cognitive apprenticeship is that experts make their situational knowledge explicit as they supervise the learner. Coaching includes giving feedback on the learner's performance including scaffolding and fading by which novices are supported in the completion of tasks which they would be unable to achieve without help. Reid (1993) emphasises that coaching involves creating a balance between challenge and support that is appropriate for each individual. As students become more competent and confident, the expert withdraws (fades) the support (scaffolding) in such a way as to transfer the responsibility for the task to the learner. As novices' confidence and competence increase, they can be encouraged to use advanced strategies, such as articulation, reflection and exploration. Articulation means that students make explicit their understanding of the task or situation. Reflection means that the student compares her own competence with that of the nurse. Exploration means considering alternative approaches to problem that they face in practice placements. This model may be useful in supervising students in practice (e.g. Cope et al. 2000). Thus, by assessing learning need and by providing relevant opportunities to gain skills and knowledge through participation in activities the student's learning can be scaffolded through her personal ZPD and thus support her professional development (e. g. Spouse 2001; see also Collins et al. 1989).

Some of the strategies of supervision described above are identified in the students' experiences in this study. For example, students have experiences where they move from the role of an observer to work unsupervised. Often, the students felt that it was useful to observe, for example, a new nursing procedure before carrying out it by themselves. However, they usually appreciated the opportunity to carry out nursing procedures, first by the support of a nurse, and gradually moving to manage it independently. Students seem to appreciate the supervisor's calm and understanding way of teaching. It was also found out that a teaching style, where a supervisor lets the student

resolve problems first and gives advice only when needed, is appreciated. Especially, the students in the general type one and two seemed to be able to regulate their level of independence. It is evident that they identified their knowledge and skills and chose their learning mode related to their competence in a certain stage. Similarly, if their mentors were not available, they seemed to find means to act appropriately, for example by choosing learning opportunities that they were able to carry out independently. Gray and Smith (2000) also describe this process where the mentor is important throughout the practice period but where students are gradually distancing themselves from their mentor. Similarly, as in this study, they identified that this movement is related to students' self-confidence and their familiarity with the actions in the ward.

Cope and others (2000) identified that the support provided by the placement community, in their study, was often described in terms which fit the cognitive apprenticeship model. Mentors who modelled good practice and who provided appropriate but progressively withdrawn support coached learners. Cope and others (2000) add that students need professional support which is appropriate to their competence and which provides them appropriate scaffolding to allow them to try out activities which are within the limits of their current competence. However, fading is necessary in order for students to develop towards independent competence. The results by Cope and others (2000) suggested that most mentors are likely to be performing that type of support implicitly. The authors recommend that it would be helpful if mentors were aware of the types of strategy available to them to enhance student learning, many of which they may already be using. In Nolan's (1998) study, the students sought an increase in independence after they felt that the staff accepted them. The more actively the students participated in patient care, the more confident they became.

9.1.2 Setting

It is identified that learning in clinical placements is influenced in addition to personal also setting-related components. The structures and dynamics of different working environments affect student learning (cf. Fuhrer 1993, 179–180; Rogoff 1984, 1–3). In this study, it was identified that especially the first day in a new clinical setting was often significant. It is evident that the first day in any placement can be anxiety-provoking. This anxiety seemed to be particularly prevailing in psychiatric placements. (see also Phillips, Davies & Neary 1996b.) On the one hand, the students enjoyed entering new placements but, on the other hand, it aroused anxiety. The presence of a

mentor to provide emotional support and a gentle introduction to the different and often anxious-provoking experiences available to students is crucial to the students' well-being and learning potential in a variety of difficult circumstances, but particularly the relatively 'unknown' environments of mental health. In all areas, however, the mentor could set up well planned, meaningful learning experiences for a student or, alternatively, merely allocate a student a set of tasks. (Phillips et al. 1996b.) In this study, especially the general type two students focused on different environments in their learning and the significance of setting was emphasised in their learning process.

9.1.3 Membership of team

In this study, it was identified that the students had a desire to be accepted as one of the team members of the health care team in the ward. Feeling accepted contributed to their feeling of being reliable and supported the development of their self-esteem. Joining the membership of a nursing community and a team was an important consideration for students (see also Alavi, Cooke & Crowe 1997; Koskinen & Silén-Lipponen 2001). Phillips and others (1996b) point out that students' beliefs of fitting into the ward team enhance their learning in clinical settings. In his study, both mentors and students regretted the shortness of the allocation period of students to clinical placements. Despite this, students adapted themselves quickly to the wards. In her study exploring students' clinical experiences, Nolan (1998) identified a theme which she named 'I don't belong'. This theme reflected the difficulties which students experienced in entering the new environment of clinical practice. It is evident, as also Candy and Crebert (1991, 582) suggest, that it requires adaptation of the student to change from learning as an individual at school to performing as a member of a team in practice placement. Consequently, it is important that students have experiences of teamwork already during their education because teamwork is an essential feature of caring nursing practice (see also Asworth & Morrison 1991, 258). According to the results of this study, it seems evident that being an active participant in the practice of social community of nursing is important in the development of professional identity of nursing students (cf. Wenger 1998, 4-5, 11).

9.1.4 Practising procedures

It appears from the students' accounts that learning through working methods and established practice (cf. Hakkarainen & Järvelä 1999, 156) was of great importance for their learning; carrying out nursing procedures, especially

for the first time, is a significant manifestation of participation. The skills included different kinds of actions, varying from simple nursing procedures to more complicated technical skills. The students described an action as significant, for example, in a situation where they carried out the action for the first time in an authentic situation. Often these events included either positive or negative feelings: fear, satisfaction or dissatisfaction with their own actions or feeling of success or pride of their own actions. In addition to practical skills, the students also described the importance of taking into account patients' emotional and social needs, and the skills needed in such situations. Similarly, the junior students in Corlett's (2000) study were concerned with learning practical skills, which, as they experienced would, enable them to survive in the clinical practice. Cooke (1996) and Veräjänkorva (1996) had similar findings of students' perceptions about the importance of skills. Löfmark & Wikblad (2001) explored students' clinical learning at the end of their education and the students especially appreciated opportunities to practice more technical tasks.

It is natural and appropriate that students are interested in learning new nursing skills, especially in the initial stages of the nursing programme. The clinical settings provide good opportunities for learning skills. When the students have achieved the basic nursing skills they can concentrate on learning other competencies. It is also evident that learning technical skills is a necessary and important part of nursing education (see also Hallett 1997; Nieminen 2000). Benner, Tanner & Chesla (1999) have identified the same issue about practitioners. They state that when the practitioner no longer needs to focus on her own performance she is able to move her attention to the client and to the different aspects of the situation. Jaroma (2000) states the concern about students' practical skills; if they have not learned basic practical skills at school, they are not able to consider the patient if they have to concentrate on learning practical skills (see also Bjork 1995; Clark, Maben & Jones 1997b). Hämäläinen (1995) had similar findings. In her study, the second year students' own actions were more emphasised than considering patients. There were differences between students in her study. However, in the current study, the students appreciated patient-centeredness in the care and they seemed to consider patients in spite of their temporary focusing on acquiring skills. This contrasts with the Chung-Heung and French's (1997) study, in which students' practice experience was found to be rooted in the medical model. Most of the students were primarily concerned about learning technical and medical knowledge which was regarded as a 'real learning experience', whereas personalised nursing care was regarded by

many students as a monotonous task and did not represent 'real knowledge'. (Chun-Heung & French 1997.)

9.1.5 Possibility of mistakes

One of the expressions included in the concept of participation was the possibility of mistakes. Making mistakes or fear of making mistakes was present in all types of general clinical learning portrayals. Many of these events dealt with medication. Thus, it is significant to consider this issue while planning clinical learning. The students were anxious about making mistakes and if a mistake took place, they showed responsibility and seemed to learn from the event. The students did not accuse anyone or anything of their mistakes; afterwards they were reflecting on the situation and perceived it as a learning opportunity. In these situations they received support from the permanent staff. Hintikka (2002) and Oermann and Garvin (2002) also reported that one of the stressors the students experienced in their study was the fear of making mistakes. It has been suggested in previous studies (Meurier, Vincent & Parmar 1997; Meurier 2000) that health care professionals can learn from their errors, especially when they are able to discuss them with their colleagues within a supportive environment. However, according to research findings there is a natural reluctance on the part of staff to report or discuss their errors, because of fear of disciplinary proceedings or loss of professional image. In order to improve the quality of care and clinical safety, it is imperative that all unfavourable incidents to patients are evaluated systematically in order to learn from the events. (Meurier 2000.)

Consequently, it is significant that the students in this study were willing to share their experiences of making mistakes, and that they showed responsibility for their actions. Mistakes, though not desirable, may be used as sources of deeper learning (Strohschein et al. 2002, 169) through reflection. It was identified in this study that though the experience of making a mistake was an undesirable event students experienced it as an educative experience through reflection.

Arndt (1994) conducted a qualitative study of nurses' experiences with medication errors. The focus of the study was on the meaning the experience of having made a medication error has for a nurse. The administration of medication provides a setting of common nursing experience. The giving of medication is considered an everyday nursing activity and a highly responsible task. Therefore the perception of nurses' professional identity may be closely linked with the administration of medication. Mistakes in this area take on an existential meaning, are they serious ones, harming patients, or be they

negligible ones. It is not surprising that nurses speak of 'being devastated' after having made a medication error. (Arndt 1994.) The data of Arndt's (1994) study suggested that nurses are aware of their responsibilities towards their patients and towards each others' well-being. Nurses understood themselves as being subject to the rules of drug administration and to the procedures which followed the occurrence of mistakes. Responsibility and accountability were the main points addressed in this context. In the first modality, nurses identified with their role as being responsible for the welfare of patients and of being accountable for their actions. In the event of a medication error nurses demonstrated willingness to own up to mistakes, even at the cost of submitting themselves as well as colleagues to the disciplinary consequences. (Arndt 1994.)

The characteristics that were typical for registered nurses after the medication error in Arndt's (1994) study were also identified in the nursing students' descriptions in the current study. The students described that they were distressed after perceiving that the mistake had taken place and were responsible afterwards.

To sum, it was identified that social participation enables students to engage in meaningful activities. However, it seems that the ideal of situated learning, a mutual developmental process between communities and learners (cf. Wenger 1998, 263), rarely occurs in students' clinical learning. Both mentors and learners perceive learning to belong to students: the opportunities of shared learning experiences are rarely acknowledged.

9.2 Self in different roles

Many aspects of the students' experiences about the self in different roles in the clinical environment were identified. The roles *were the role of student*, *the role of professional* and *the role of patient's advocate.*

9.2.1 Student role

The students' experiences included references to the student's role in clinical settings. The students in the general clinical learning portrayal types one, two and three seemed to be generally satisfied with their role as a student in the clinical settings. They seemed to be able to adjust their actions to the existing situations, for example to work independently if needed. They seemed to be involved in and committed to their own learning by showing assertiveness in clinical settings; they were able to seek learning opportunities that they felt

were necessary for their learning. It seems that when the student participates responsibly in the learning process learning is facilitated (Johns 2000, 54).

In contrast, the students in the general clinical learning portrayal type four seemed to be vulnerable and were not able in the same scale as other students to control their actions and learning. This non-assertiveness seemed to cause anxiety, frustration and feeling of inadequacy. These students felt sometimes subordinate to nurses and powerless to influence the events in wards and their own learning. These students seemed to blame external conditions, for example the mentor's behaviour, for their unsuccessful learning in some situations. Landeen, Byrne and Brown (1995) had also findings that some students had experiences where they felt lacking control over their learning and that made them anxious. Also Pilhammar Anderson (1995) states that according to her experience as a nurse teacher, some students experience the ward setting negatively, whilst others see their clinical learning in the same setting, in a positive light and take a chance to grow as persons and professionals. In her study students experienced that they had to adapt themselves to existing conditions and avoid criticising them while being in practice settings. Riley-Doucet and Wilson (1997) found out that when students direct their own learning and are able to identify their learning needs, then their skills related to self-responsibility, autonomy and accountability are evident in their clinical learning. Kolb (1984) states that the way one processes the possibilities of new events determines the range of choices and decisions she sees. The choices and decisions one make, to some extent, determine the events she lives through and these events have effect on our future choices.

In this study, the students had also experiences that the role of student sometimes was an obstacle to their actions in practice. This took place, for example, when they were acting as a patient's advocate and felt that they could not 'resist' permanent staff's decisions. There were also opposite examples: the general type one students in some situations were able to question permanent staff's decisions and discuss with nurses about issues and ask reasoning for staff's actions. Students also felt that the student's role sometimes hindered them from being a part of a team in wards. The general type four students had experiences that they were allocated tasks that were inappropriate for their learning and they were not always able to work according to their self-set goals. It seemed that they were not always actively involved in their learning but sometimes they were passively drawn in situations that they experienced to be inappropriate or challenging.

9.2.2 Role of professional

It was identified that the role of professional was important for the students in spite of the fact that they were students and learning a profession. When the learners are attending to authentic situations in clinical placements they are on their way in development towards professional expertise: the students considered the role of professional. It was identified that they emulate the behaviour of the professional and compare and analyse their own action with that of professional. They keep it important to be able to behave professionally, for example, in challenging situations. Especially type one students seem to emphasise the importance of professional role already from the beginning of the education. They are willing to take responsibility, for example, of their own patients already from the beginning. However, they are able to recognise their competence and regulate their actions related to it

9.2.3 Role of patient advocate

One of the roles the students possess during their clinical learning is the role of patient advocate. This is perceived to be an important role from the initial stages throughout the education. The students seem to appreciate the role of the patient advocate and it is important for their professional development. However, sometimes patients and their behaviour raise also fear and anxiety of not being too touched and also feelings of inadequacy. The results of this study show that feelings of inadequacy related to patients take place when the student feels that she is not able to act as a patient's advocate or to help a patient. Sometimes students feel that the student's role hinders acting as the patient's advocate. However, acting as the patients' advocate appeared in the students' accounts and seemed to be significant. Day and others (1995) state that in their study, fourth year students perceived it important to identify clients' beliefs and values in order to act in an advocacy role. Especially towards the end of their studies, students sometimes felt powerless to act and lacked confidence because of their student role. According to previous studies, students have strong feelings of helplessness, anger, disbelief and frustration, for example, regarding their role as patients' advocates (Beck 1997; Fagerberg & Ekman 1997; Kelly 1998; Kosowski 1995; Seed 1994).

9.3 Relationships

Relationships was one of the constituents of situatedness in clinical learning. The component of relationships included following: *self – mentor / staff, self - patient, self – peer and self – teacher relationships.* Thus, the relationships on practice placements are identified to be of great importance for the students' clinical learning.

9.3.1 Self – mentor / staff relationship

Usually, the students of this study had a named nurse who supervised and assessed them in health care settings. In addition to this, all the personnel are liable to participate in students' teaching and supervising. In this study, many of the students' experiences deal with the relationship between the student and her mentor. Issues that arise in the students' experiences related to the relationship of self – mentor / staff are mentors' and other personnel's *attitudes* towards students, mentors' *pedagogical skills*, *feedback* received from staff and the mentor as a *role-model*.

Many previous studies (Baillie 1993; Campbell, Larrivee, Field, Day & Reutter 1994; Dunn & Burnett 1995, Dunn & Hansford 1997; Earnshaw 1994; Jackson & Mannix 2001; Koskinen & Silén-Lipponen 2001; Löfmark & Wikblad's 2001; Mannila 1998; Mäkisalo 1998, 103; Seppä & Westergård 1998; Strohschein et al. 2002; Stutsky & Spence Laschinger 1995; Williams & Webb 1994; Wright 1990) show that students' relationships with the professionals with whom they are placed are very influential in learning. Similarly, previous research (e.g. Phillips, Davies & Neary 1996ab) clearly highlights the positive influence that mentorship can have on student learning in clinical placements, as well as the constraints which may inhibit a mentor from carrying out her mentoring responsibilities to the best effect.

Attitude

The mentor's attitude toward the student was crucial for her learning; positive and supporting attitude created an encouraging learning environment. Similarly, if the student felt that the mentor neglected her or treated her superciliously the student was frustrated and felt that the negative attitude hindered her learning. Issues related to attitudes may be minor issues but important to students; one such is calling students by their names, and not just a student. Staff's attitudes towards students are also considered, and identified how one person may have a strong effect on the atmosphere of

the working place and how staff sometimes may have a negative attitude towards students and students are not respected as work mates. Similarly, in previous studies, mentors' role has been identified to be of great importance on students' learning. Cahill (1996) reported that a major feature of the students' accounts of their experiences about mentors, in her study, was the emphasis they placed on the nurses' attitudes toward them. Nolan (1998) suggests that when students do not feel accepted learning cannot proceed as 'fitting in' takes up most of their time and energy (see also Dunn & Hansford 1997; Hintikka 2002). Similarly, Jackson and Mannix (2001) when examining first year students' clinical experiences found that the students desperately wanted to be accepted by hospital nurses. In Löfmark and Wikblad's (2001) study about the interaction between students and mentors, some important factors were experienced as obstacles, such as a feeling that supervisors did not rely on them, that they were not taken seriously, or that they were met with irritation and lack of interest. In the study by Campbell and others (1994) students in the first two years of the programme often felt unsupported by nurses. Because students felt vulnerable and inadequate due to lack of experience, feedback from staff was critical to the students' feeling of self-confidence.

The initial stage of the nursing programme, as well as the orientation stage of each practice placement is identified to be of great importance for students. The attitudes of permanent staff in the initial stages may have effect on students' learning during the whole practice period or even throughout their programme. This was also one of the most important conclusions in Oermann and Garvin's (2002) study about stresses and challenges for new graduates in hospitals where the importance of the interactions and communications that occur during orientation was identified. Cahill (1996) states that there were differences among students in their interpretations about clinical learning and it seemed to lie with the measure of support that was both perceived and received by each student.

Consequently, the role of the mentor and the whole nursing personnel is crucial for students' learning in clinical environments. Jackson and Mannix (2001) examined student nurses' insights into the role of clinical nursing staff in the planned clinical experience of undergraduate nursing students. Their results suggested that clinical learning is the result of interactions between students and clinical nurses, in that the attitudes and behaviours of nurses employed at the clinical placement site were revealed as crucial variables for students. The respondents in their study perceived clinicians as central to the perceived success or otherwise of the clinical placement.

Mahat (1996) reported that interpersonal relationships arise as the most frequently reported stressful events in the clinical settings. Timmins and Kaliszer (2002) reported similar findings. They state that the experience of difficulty with interpersonal relationships with the ward staff is likely to affect the students' overall perception of the placement. (see also Cahill 1996.) In their opinion, this is an area that requires closer attention. Clinical placements by their very nature confront students with many stressors. Supportive relationships with staff in the ward need to be developed to lessen the impact of stressful situations and to help students to deal with them. It is suggested that continuous education of staff in student-related matters is needed.

Cahill (1996) conducted a study where she sought to find out what nursing students thought about mentorship. Cahill states that a major feature of the students' accounts of their experiences was the emphasis they placed on the nurses' attitudes towards them. The students appreciated consistency, genuineness and respect as positive mentor characteristics. A major source of dissatisfaction amongst the students was the lack of contact with their mentors; working on opposite shifts was a commonly mentioned point. The students did not receive enough feedback either. The perceived lack of openness of staff further increased anxiety in the students. (Cahill 1996.) In this study, the students reported rare experiences concerning the lack of presence of their mentor. This may be because they all are usually assigned a mentor and an associate mentor and it is recommended that they would work on the same shifts with their mentors.

McLaughlin (1997) studied students' attitudes towards mentally ill patients. After the placement students were asked to evaluate their clinical experience. The students reflected not only on their contact with patients but also on their contact with clinical supervisors. The representative sample of students' comments suggested that, not only contact with patients, but also contact with all clinical supervisors had an impact on students' attitudes. The study found out that a small number of students completed their placement with negative attitudes. However, the qualitative evidence in the study suggests that some students would have enjoyed the placement more but due to the attitudes of a few clinical supervisors their experience was negative. Nonetheless, students' negative comments were directed towards these clinical supervisors rather than towards the patients.

Earlier research (Wong & Lee 2000) suggests that the attitude of the ward personnel may even be crucial for students' decisions to continue their studies. In Wong and Lee's study about nurses' early experiences in practice approximately two-thirds of the events concerned the interpersonal

relationship between the informants and other nursing colleagues. Half of the nurses-related incidents were positive experiences, and the other half were negative ones. These incidents were primarily associated with the learning environment in the wards. These events seemed to have contributed to the intention of the informants to stay or leave nursing. On the contrary, the negative incidents were related to a non-conducive learning environment. Very often, the informants were insulted openly in front of other people. These negative experiences made them consider resigning from nursing.

Pedagogical skills

Though the attitude towards the students is identified as a key feature of a good mentor there are a lot of qualities that are perceived as characteristics of a good mentor. In this study, being a good supervisor and a professional nurse were identified as the qualities of good mentor. A good mentor supports the student, the support is especially important in challenging situations. Thus, it is important that the mentor is easily approachable. The mentor has to be able to discuss regularly with the student and to give continuous feedback of the student's performance. It seems also important for the students that the mentor is a person who works professionally. Gray and Smith (2000) examined the qualities of an effective mentor from the student's perspective. In their study all students experienced what they felt was a good mentor in at least one of their placements. Students describe good mentors as approachable, confident in their own ability, good communicators, professional, organised, enthusiastic, friendly, possessing a sense of humour, caring patient, and understanding. All these characteristics have been highlighted in previous studies (Cahill 1996; Phillips et al. 1996ab; Spouse 1996). Additional characteristics cited in Gray and Smith's (2000) study were that good mentors are invariably keen on and enthusiastic about their job, yet realistic in their expectations. Negative characteristics of mentors or other staff are related to negative attitudes towards students. In Lindop's (1999) and Mahat's (1996) studies demeaning experiences and unfriendly atmosphere in the wards were reported as stress factors.

Teaching skills of the mentors, who were experienced as positive, were appreciated by the students. They felt that these mentors facilitated their learning by planning (see also Watson 1999; Chun-Heung and French 1997) and organising learning opportunities to them, supporting them in challenging situations and allowing them enough independence. 'Best' teaching skills described by the students in the study by Phillips and others (1996b) centred on communication skills, demonstration of hands-on nursing care, and management of the care environment. Instructors were identified

as crucial in shaping students' attitudes to nursing. Campbell and others (1994) identified that the most influential instructors experienced by the students were those who encouraged students to believe in themselves and in what they were doing. Instructors who allowed students time to learn and conveyed this to students facilitated learning.

Oerman and Garvin (2002) suggest that the mentor serves as the expert with whom the student can consult and ask questions. The mentor should also be aware of the typical stresses students face in beginning practice – new situations and procedures, not feeling competent, difficulties in managing increasing responsibilities and workload, and concern about making mistakes. Rather than viewing the new student as someone who is not competent for practice in the placement, the mentor should plan patient assignments and learning activities that enable the student to develop the competencies that are lacking. Because students enter practice with varying levels of competencies and different types of clinical experiences, the mentor's responsibility is to assess the present level of knowledge and skills of the student. (see also Jackson & Mannix 2001.) This provides the basis for planning assignments that expand the student's competence and allow the student to practice essential skills (Oerman & Garvin 2002). Spouse (2001) recommends that by using regular debriefing sessions to review the level of the student's learning, the mentor and the student can plan new opportunities to acquire professional knowledge. The importance of the mentors as facilitators in learning is acknowledged in many other previous studies (e.g. Campbell et al.1994). The teaching orientation and the attitude of the nurses towards students determine how students evaluate the quality of the practice experience (Chun-Heung & French 1997). It is important that mentors have skills both to support and challenge students (seee also Merriam & Heuer 1996, 254).

Role-model

In this study, the students often referred to the role mentors and other nurses have in role-modelling. The students observed carefully both their mentors and the whole staff in the wards. They describe situations where they appreciate health care professionals' expertise, their ability to deal with challenging situations, their professional attitude and multi-professional team-work. There are also events where they are confused or anxious about nurses' or other professionals' behaviour or attitude, for example, in the situations where they experience that staff is ignoring patients' needs. The study conducted by Wong and Lee (2000) also demonstrates that a conducive clinical learning environment refers to good relationships and positive role models (see also Campbell et al. 1994; Spouse 2001; Watson 1999; Wilkes & Wallis 1998).

However, it seems that also events where students experience staff's behaviour to be unprofessional are often educative experiences because they lead students to reflect on situations and professional work.

In this study, students tried to imitate nurses whose behaviour and actions they experienced as positive. Campbell and others (1994) identified that the students divided the characteristics exhibited by mentors into two main categories: those that were conducive to learning or 'positive' characteristics, and those that hindered learning or 'negative' characteristics. Students believed that instructors who were rigid did not allow independence and thus inhibited learning. Instructors who were identified as outstanding role models were viewed as the major vehicles for the transmission of knowledge. The importance of learning from the expertise shown by clinical instructors was evident in her study. The students tried to emulate the behaviour of instructors who were organised, encouraging, outgoing, had good relationships with students, patients and staff, and who practiced nursing in an ideal and caring manner. They also tried to incorporate the behaviours of several 'good' role models when they were carrying out nursing tasks. Nurses who were viewed as poor role models were avoided by the students as much as possible. (Campbell et al. 1994.) This avoidance of 'poor' mentors was also identified in the current study.

Feedback

The results of this study show that students need constant feedback from their mentors and other staff. Receiving feedback supports their self-confidence and enhances motivation. The students appreciated situation-related feedback. Similar findings have been identified in previous studies. In Luukka's (1998) study students did not receive enough feedback without asking for it. This was one of the areas the students wanted to improve. Löfmark and Wikblad (2001) identified that feedback and opportunities to practice were emphasised by the students both as obstructing when missing and facilitating when present. In the current study, the continuous feedback seemed to be of great importance also to self-directive and confident students (general type one and two students) throughout the practice period.

Neary (2000) studied students' and their assessors' experiences about assessing clinical competence. In her study, students described their assessors as being assertive, keeping control over what they 'do and cannot do' in a 'nice' way, respecting them as 'people' not just 'another student'. Students revealed that they preferred to be assessed on their day-to-day nursing care delivery and not just on the set learning objectives which were agreed by educators. Neary (2000) states that it seems logical to argue that feedback

on performance resulting from both intended and unintended outcomes and adequate time for reflection upon them helps the student to develop to full potential. The more immediate this feedback and reflection is, the greater is the possibility to learn and gain confidence and autonomy (see also Burnard & Chapman 1990, 112).

Neary (2000) adds that students need the opportunity to learn from skilled practitioners who are experts in responding and reacting effectively to the unintended and unexpected outcomes they face each day in their clinical placements and such a process would seem to enhance the opportunity for formative assessment. What is important in this context is not only the frequency of the feedback and reflection but its nature and quality. Mahara (1998) confirms that clinical evaluation processes as a teaching-learning strategy are an essential part of clinical learning.

Similarly, the significance of feedback was identified by Beck (1996) in her study about students' experiences about the elderly. Sudden and unexpected changes in elderly patients' emotional and cognitive status presented difficult challenges for students. While taking care of the elderly patients, communication problems were a major barrier for students to overcome. They received little or no feedback regarding their actions. Due to lack of feedback, students found that they had to rely upon themselves to evaluate the effectiveness of their own nursing care. Gray and Smith's (2000) study revealed that students experienced that good mentors integrate feedback when teaching students but students complained that it can be difficult to get their mentor to give them constructive criticism.

In this study, the students did not point out to any anxiousness related to continuous feedback and assessment, as is the case in some previous studies. However, the importance of the assessment discussion at the end of the practice placement was identified as important. Neary (2001) reported that students acknowledged their exposure to stress caused by continuous assessment but assessors did not. Students considered that time should always be allowed to discuss progress during and at the end of practical experience. As part of their preparation some students suggested that a pre-allocation visit to the practice placement might advice them and their assessors to identify their learning needs and to agree on the learning outcomes which relate to patients' nursing needs.

Consequently, the achievement of the full benefits of planned clinical experience is dependent largely on the nature of interactions between students and clinical nurses. The findings of the current study (see also Jackson & Mannix 2001) position nurses as central to students' experiences of clinical learning, as well as the development of appropriate professional performance

and general role modelling. The findings suggest that students value the support and supervision received from their mentors and other staff.

Phillips and others (1996a) clarified in their study some specific issues concerning the definition of the terms mentor and mentorship, for example the selection of a mentor. The selection for mentorship was simply determined by being on duty when students were allocated to their work place. There was also a large element of turn-taking in mentor selection. There was no evidence of any formal system of assessing individual practitioner skills prior to their selection for mentorship. (Phillips et al. 1996b.)

9.3.2 Self – patient relationship

Based on the results of this study, a relationship with the patient is significant for students. Patients are a significant part of students' clinical learning throughout their practice placements. This is supported by the results of previous studies (Chun-Heung & French 1997; Day et al. 1995; Johnson 1994; Landeen et al. 1995; Lundberg & Boonprasabhai 2001; Parviainen 1999; see also Myller & Venejärvi 1998; Veräjänkorva 1996; Zhang, Luk, Arthur & Wong 2001). In this study, the issues that were identified in the students' experiences concerning patients were the *quality of patient - student relationship* that included patient centeredness in nursing and being able to see things from patients' view, and valuing student-patient relationship as an *educative experience*. Relationships with patients include a lot of emotions (see also Turunen 1997). The relationships are characterised by feelings of empathy, respect towards patients and feeling of success. Relationships may also include anxiousness, confusion and feeling of inadequacy. Landeen and others (1995; see also Vallo 1995) had similar findings concerning relationships between patients and students; the relationship is significant for students' learning.

It was identified that there were differences between students related to encountering patients and taking care of them. The general type students one and two seemed to experience, even in the initial stages of their clinical learning, that they have responsibility for patients' well-being and that they have to do their best in taking care of the patients that were allocated to them and their mentors. They describe, even during the first practice period, how they tried to perceive the situation from the patient's view in order to enable them to understand the situation better. This was especially important in the situations that they experienced as challenging. These students experienced that patients helped them to grow as human beings. It is significant that students perceive the importance of student-patient relationship already when

growing towards professional practitioners. Johns (2000) has suggested that each caring encounter is an opportunity for the practitioner's growth and that reflection gives the practitioner access to this growth opportunity (see also Lundberg & Boonprasabhai 2001). The results of the current study show that because of their reflective skills these students are able to move forward. They have also experiences with patients where patients' behaviour makes them anxious, frustrated or feel helpless but they seem to be able to cope with these situations: they use different kinds of means to deal with these challenging issues depending on the matter. They discuss with their mentors, sometimes they discuss with the patient. They acquire more knowledge about the issue and reflect on the issue afterwards. Usually they conclude that these challenging events were educative. Similarly, in the study of Landeen and others (1995) students analysed the situations occurred in wards; those analyses focused on their own or patients' behaviours. These analyses tended to take place later in their clinical experience.

In contrast, the general type four students encounter a lot of challenging situations with patients. However, these students also feel empathy towards patients and describe events where they feel compassion towards patients, for example, when they are observing medical procedures or examinations or when patients are otherwise in challenging situations. These students do not reflect their emotions related to the patients. Because of this, it is not possible to identify further their learning related to relationships with patients.

It was identified that though the focus of learning varied slightly between the students in the different general portrayal types and during different practice placements, emphasis being on learning technical skills at the initial stages of the education, the patient-centeredness seemed to be present in the students' experiences throughout the education. Instead, Raij (2000) when exploring nursing students' clinical experiences and especially how they acquire knowledge in clinical environments and what are their learning strategies, found four different learning paths within the student group: modelling on nurses - , focusing on interventions - , focusing on patients' experiences - and investigating - , and they all led to holistic nursing care. Raij concludes that all the students achieved the needed competencies but in a different way. Thus, the students in her study had different focus during their placements. This was not identified in this study – as stated above; there were practice periods in which students' experiences focused more, for example, on technical skills or environment but it was not a stable focus throughout the periods.

The results of this study highlight that students perceive patients central in their clinical learning (see also Twinn 1995) being one of the focuses of

their learning throughout their practice periods. They value patient-nursing relationship and holism in nursing. They experienced relationships with patients to be educative. It was also noticed that they showed empathy and compassion to patients and valued patient-centred care. This is a significant feature of their action because in their future work as nurses one of the most important attributes for good nursing care perceives patients as central (see also Janhonen 1992). For example, Zhang and others (2001) examined nursing competencies described by registered nurses in the light of critical incidents. The results indicate that interpersonal understanding is the most important characteristic for good nursing performance. (see also Pask 1995, 194.)

This finding is congruent with Clark, Maben and Jones's (1997a) study where both students and newly qualified nurses strived for a new way of working putting the patient at the centre of care. They suggest that this may be the result of education that emphasises a more professional model and is carried out in a higher education institution. There are similar research findings also in Finland. Manninen (1998) explored nursing students' perceptions of nursing as they progressed through their education and found that students perceived taking care of the patients' well being as the primary goal of professional nursing.

Quality of relationship

Empathising and understanding patients is manifested in students' descriptions of the situations where patients tried to carry out their everyday chores; it manifested also in situations which affected a patient's whole life, for example, when a doctor told a patient about her serious illness. Students' empathy was manifested in descriptions of their feelings and in descriptions about concrete actions in those situations and in discussions included in the descriptions. There are feelings of empathy towards patients especially when understanding their experience, encountering challenging situations, observing procedures, and when experiencing that permanent staff ignores patients. Sometimes strong emotions are related to certain situations, like saying goodbye to own patients (see also Landeen et al. 1995), or feeling of loss after patients' deaths. It is important that students are able to feel empathy because if they learn to understand how patients are feeling, they can more effectively meet their needs (Baillie 1996; see also Reynolds and Scott 2000).

Wilkes & Wallis (1998) studied nursing students' experiences of professional nurse caring. According to their study, first-year students illustrated their lived experiences of caring with reference to incidents which, even if they related to the clinical setting, referred to friends, family or client as family. This was

very evident when they were expressing compassion, communication and comfort. The researchers noticed that over the duration of their course the students developed and there was a change of emphasis in the components of caring but to different degrees. Thus, there were individual differences in students as was the case also in this study.

Beck (1996) conducted a phenomenological study to describe the meaning of nursing students' experiences in caring for cognitively impaired elderly people. Students experienced a lot of emotions while caring for the impaired elderly patients. Emotions included nervousness, fear and frustration – it was difficult to predict their patients' reactions or behaviour and this caused the feelings mentioned. They also experienced sadness. Empathy also occurred in the students especially as they got to know their patients. Respect and dignity for elderly people was a critical component of nursing students' care. (Beck 1996.)

Suikkala and Leino-Kilpi (2001) conducted a literature review in order to examine the nursing student - patient relationship in relation to students' learning process, and to seek a deeper understanding of the nature of this relationship. They conclude that the professional relationship between nurse and patient is an important aspect of nursing, and one that should be addressed in education. The relationship between student and patient offers the student and the patient valuable experiences of caring, especially in situations where the student and the patient can act together to solve the patient's problems. This was the students' experience also in this study; they especially appreciated the opportunity to have own patients. (see also Munnukka 1997.) They experienced that thus they had an opportunity to see the whole nursing process and give holistic care by taking into account all needs of patients. Day and others (1995) had similar findings about the students of the third year.

Relationship as educative experience

In this study, students experienced that the relationships with patients are rewarding and educative also in challenging situations. In creating a professional relationship to meet the patient's needs, students need to become aware of their own feelings and reactions, especially in new or challenging situations (Suikkala & Leino-Kilpi 2001). Also in Johnson's (1994) and Kosowski's (1995) studies, students reported that they need to become aware of their own feelings in order to create a helping relationship. The relationship creates caring experiences that teach nursing students about clients' health experiences. Students also learn to deal with situations in ways that focus on the individual (Morgan & Sanggaran 1997; Parviainen 1999).

The results of this study show that the students felt that the relationships with patients supported their self-confidence and self-esteem. Also Beck (1992, 1993a, 1993b and 1997) suggests that personal growth and increased confidence and self-esteem are positive consequences of students' experiences with patients and that it leads to rely more on one's own competencies.

Students also describe that they tried to look at issues from their patient's view and this helped them to understand situations better and more in depth. These results were similar to those in the study of Landeen and others (1995) who explored issues that students face in psychiatric settings. In their study, students often perceived life through the eyes of the client, through an emotional connection, or through a perceived stigma, all demonstrating identification with clients. Also Kosowski (1995) has obtained similar findings in her study.

It is also evident that certain patients or patient groups arouse even more emotions in students. For example, children as patients arouse more emotions than adult patients. Seed (1994) and Cooke (1996) have similar findings. Taking care of dying or seriously ill patients may be very touching for students (see also Cooke 1996). Similarly, taking care of psychiatric patients may be especially challenging (see also Cooke 1996). Also Landeen and others (1995) and McLaughlin (1997) found that encountering mentally ill patients include many challenges for students. Students may also possess stereotypical images about certain patient groups, for example, cancer patients and mentally ill patients in this study. Landeen and others (1995) also state that several students, in their study, found that they had had false preconceptions of psychiatric clients before their practice period. Ganong and Manderino (1987) and Klisch (1990) had also findings that patient diagnosis can lead students to stereotype patients. Personal experience with patients usually changes students' attitudes towards them (Klisch 1990), but the change can be either positive or negative (McLaughlin 1997). This change in attitudes was evident also in the current study. However, the change was always positive or students experienced the change as positive.

Feedback from patients

Receiving feedback is important for students. They appreciate the feedback received from patients. The support received from patients was versatile: verbal and non-verbal, sometimes even concrete presents. The feedback from patients was sometimes experienced as the most important issue in clinical learning. This importance of feedback received from patients, is supported by previous studies (King, Arnold & Wolanin 1986; Löfmark & Wikblad 2001). Patients are also usually willing to participate in the process of

assessing student performance. They also feel positive about giving feedback to students (Morgan & Sanggaran 1997).

It was found out that students need support from their mentors and other staff in relationships with patients. Support is desirable especially in the initial stages of education and in challenging situations throughout the practice periods. Nurse role models and the provision of support from the staff are necessary when learning professional relationships with patients, especially in challenging or difficult situations (Johnson 1994; Parathian & Taylor 1993; see also Franks, Watts & Fabricius 1994). Without supervision, students can find it difficult to face, for example, psychosocial problems of patients (Franks et al. 1994).

Encountering death

Encountering death and facing dying patients were identified in all individual experienced clinical learning portrayals. Thus, it is definitely a significant factor to be taken into account in students' clinical learning. There were a lot of emotions involved in the events where the students encountered death, especially for the first time. Facing death evoked anxiety, compassion, helplessness and sadness. Facing dying patients included many kinds of situations from cancer patients and elderly patients to acute resuscitation situations. These events made the students to think about either their own death or death of their family members (see also Smith 1998). Afterwards, they also reflected nurses' responsibility in these situations, the meaning of life in general and ethical questions related to the events. They also understood that death and dying belong to nursing and death is a part of life.

The significance of encountering death for nursing students has also been identified in previous studies (e.g. Munnukka 1996; Nurminen 1995). Both Lindop (1991) and Timmins and Kaliszer (2002), when examining stress factors of nursing students, reported that being involved in the death of a patient was a meaningful stress factor. Similarly, Hintikka (2002) found that before the first practice periods students were afraid of encountering death and dying patients. Wong and Lee (2000) conducted a phenomenological study about early nursing experiences in Hong Kong. This study endeavoured to reveal the early lived nursing experience amongst a group of nurses in Hong Kong. Findings revealed that incidents associated with death and dying, and clinical learning embracing interpersonal relations and professional development, were the most memorable events. Facing death was the most often cited critical incident by the informants. They varied from unsuccessful resuscitation, sudden death, patients dying at a very young age to suffering endured at the end stage of life. The emotions that were often experienced were fear, sadness,

frustration, helplessness and anxiety. However, the interaction with and caring for dying patients can be a rewarding experience, and these encounters make the nurse consider the issues of life and death. The informants recognised that dealing with the issues of life and death was an integral part of daily nursing practice. They regarded themselves as the key persons in caring for these patients and their relatives. They understood that they could not control life, but as nurses, they could provide psychological support to the dying and the relatives of the dead. However, they often expressed a sense of helplessness, frustration, uselessness and even guilt when encountering these situations. Moreover, as revealed in Wong and Lee's study, it seems that students are not provided with the support they need for coping with experiences related to death and dying.

Death and dying are issues that are encountered by nurses in the hospital setting almost every day. According to Wong and Lee (2000), nurses need to be empowered to deal with dying patients and bereaved relatives. Many researchers (Hurtig & Stewin 1990; Beck 1997; O'Gorman 1998) urge that nurses should be helped to overcome the fear in dealing with death and dying in clinical situations already during education. The evidence on the effects of education on death and dying appears unconvincing (Hurtig & Stewin 1990; Copp 1994).

According to Beck (1997) the nursing students' death anxiety actually stems from their feelings of personal inadequacy and limited clinical experience in caring for dying patients and not from the anxiety of facing one's one death. Wong and Lee (2000) suggest that nurse educators need to place more emphasis on the positive and rewarding aspects of caring for terminally ill patients. Moreover, Wong and Lee (2000) point out that the adoption of reflective learning in enhancing nurses' competence in facing death is of particular relevance. This is because the nature of problems regarding death and dying encountered in the day-to-day clinical setting is diverse. The management of death and dying cannot be learned from reading textbooks. The importance of teaching and learning the care of dying patients is acknowledged to be one area that needs development also in the Finnish nursing education (Jaroma 2000, 132; see also Räisänen 2002, 63).

Consequently, different kinds of teaching and learning methods should be planned in order to educate nursing students to encounter death and dying. Deeny, Johnson, Boore, Leyden and McCaughan (2001) used the combination of drama and group discussion in teaching nursing students to cope with dying patients. Students in their study considered the method very effective. The authors recommend using drama for achieving learning in the affective domain. Mok, Lee and Wong (2002) studied how nurses can be helped when

caring for dying patients by using a problem-based learning. Nurses in their study initially expressed helplessness and powerlessness in facing dying patients. Through sharing these experiences with others, and discovering that they all felt and responded in similar ways, they found that they were not alone in experiencing these feelings. They found comfort in knowing that others have encountered similar experiences, which helped them to decrease their feelings of helplessness. Accepting death as part of the life process and finding meaning in death also helped in changing the attitude of the nurses towards dying. Findings in their study also showed that by thinking about one's own death and their views of good death helped the nurses to be more sensitive to patients' needs and concerns. (Mok et al. 2002.)

The process of dying and the eventuality of death affect individuals personally, socially and psychologically and are interwoven with all social systems, not the least the health care profession. It is thus difficult for the health care professionals to relinquish their innate feelings, fears and personal attitudes towards death when caring for the dying and confronting death in the course of work. (Copp 1994.) Copp (1994) suggests that there is need to ask questions in relation to how we can best enable nurses to learn the specific knowledge and skills of palliative care: for instance handling difficult issues, being knowledgeable about therapeutics, responding sensitively to choices made by patients that may challenge the inherent values and beliefs of the individual nurse, and an ability to remain with the patient during those occasions when dying is difficult and expressed in ways that may not be so familiar. She highlights that until nurses learn to confront their own feelings about death, it will remain difficult for them not to distance socially or avoid patients who are dying. (see also Hurtig & Stewin 1990.)

Hurtig & Stewin (1990) suggest that brief death education programmes can promote personal death awareness in nursing students and therefore seem a worthwhile addition to nursing curricula. It is also evident that there are differences among students according to the education and support needed. They recommend that death education classes may be divided into groups according to personal death experiences. The inexperienced group could begin to learn about death through experiential methods using death awareness exercises to help them encounter the thought of death. A more cognitive, didactic approach could be taken with the death experienced students. Students with unresolved thoughts and feelings about death, arising from past bereavements, may be identified and referred for individualised help if needed. Consequently, it seems that reflecting issues related to death and dying may enhance students' abilities to encounter death and deal with the issues aroused from facing dying patients. The students in this study

seemed to be able to cope with death-related issues though they aroused many emotions in them.

Having skills in encountering death is also important because often nurses are the professionals left to deal with patients' grief and anger, and it is therefore critical that they are aware of issues related to death and dying and health and healing (O'Gorman 1998). O'Gorman (1998) believes that before nurses can help people to overcome the fear of death and to optimise their lives, it is essential to examine the traditions of other cultures as well as personal experiences and coping mechanisms, before an understanding of other people's fears and beliefs concerning death and dying can be reached. Difficulty in facing death has been identified also in the studies of registered professionals. Burns and Harm (1993) aimed to determine the types of clinical events perceived as critical by emergency nurses. The result was that death of a child was listed most often.

9.3.3 Self – peer relationship

In this study, the support received from other students was rarely identified. There were a few accounts where students described support received from other students. Similarly, accounts where they described how they supported their student colleagues were rare. Similarly, in Löfmark and Wikblad's (2001) study the students did not comment on having any experience of this. They state that it might have been regarded as too natural to comment on. However, Campbell and others (1994) concluded that it was evident from the data that the students also viewed each other as a valuable resource in the clinical area. There were three dimensions in the support received from student peers: facilitating learning, providing emotional support, and assisting with physical tasks. (see also Luukka 1998.) Similarly, in Cooke and Moyle's (2002) study of students' evaluation of problem-based learning, the effectiveness of teamwork in increasing learning opportunities was raised by the students. The support and encouragement provided by other students and other group members, and the sense of responsibility to the group were positive features for the students. Koh (2002a; 2002b) examined the students' perceptions of practice-based teaching and discovered that some participants, who experienced anxiety about their practise, expressed a need to be supported by other students. The rare accounts related to peers may be due to the used data gathering method. However, it is important to develop teaching and learning methods that support using peers as a support group in learning.

9.3.4 Self – teacher relationship

In this study, only the student in the individual experienced clinical learning portrayal three has meanings related to the teacher. She experienced that she did not receive support from the teacher. Confidentiality and equality are important in the teacher-student relationship (e.g. Holmia 2001) as in other human relationships. Nelson and McSherry (2002) found in their study about teachers' role that they were facilitating student learning through discussion of current practical experience in both university and clinical settings. Linking theory to practice through reflective activities was found to be a major role for nurse teachers. Forrest, Brown and Pollock (1996) identified that the teacher should give support to both students and staff in the clinical areas. Koh (2002a) identified that students expect their link teachers to show interest in them, to teach them and to support them to deal with problems as also was the expectation of the student in his study. Leino-Kilpi (1992) identified student-teacher relationships generally positive and constructive while investigating students' clinical evaluation.

9.4 Modes of clinical learning

As displayed above on the basis of the results of this study, all the students had three constituents of situatedness included in their experiences of clinical learning in the light of their critical incidents. These constituents are *participation*, *self in different roles*, and *relationships*. However, the focus of experiences in the light of critical incidents slightly varied between the general portrayal types. The general portrayal types one and two reminded each other in many relations but the focus of learning differed; type two students were more focused on their own actions and environment, especially at the initial stages of the education, whereas type one students' focus was on patients and relationships with patients throughout the programme. However, also type two students experienced the relationships with patients and patients' well-being to be important.

The differences between the students' portrayals are displayed through meaning relations, four pairs of concepts, that are called modes of clinical learning, and which thus demonstrate differences in the students' learning experiences in clinical settings. These pairs of concepts are: *complacency* vs. *apprehensiveness* about clinical learning; *assertiveness* vs. *vulnerability* in clinical learning; *confidence* vs. *lack of confidence* in own actions; *competence* vs. *inadequacy* in clinical experiences. In addition to these four modes of

learning, a difference between the portrayals was identified also in the students' *self-regulation* and *reflective skills*. The ability to reflectivity and self-regulation seems to have affected the students' experiences and modes of learning.

The results show that the students of this study experience clinical learning differently. They all are unique learners. The students' mode of learning in clinical settings differs. Boud and others (1993, 10–11) formulate this difference of experiencing events as attuning to certain aspects. They point out that the learner's personal history affects the way in which she experiences and what she acknowledges as experience. Each experience is influenced by the unique past of the student. She is attuned to some aspects of the world and not to others. This orientation influences what she focuses on and what she responds to. The learner attaches her own meanings to events. (Boud et al. 1993.)

This unique way of focusing and experiencing clinical learning is evident in the student nurses' experiences about clinical learning. Boud and others (1993) use the term *the learner's personal foundation of experience* to describe learners' way to construct their experience. By this term, they point out to the cumulative effect of learner's personal and cultural history – the influences of the events in their lives that have helped them form the way they are now and their responses to the world. Everyone is predisposed to learn in particular ways or in response to particular situations. Learners approach each event with a set of expectations that attune them to some outcomes and be less sensitive to others. This intent may have little or nothing to do with the expectations of the planner of the event. This predisposition to learn in particular ways seemed to be present in the experiences of students of this study. This tendency of students to learn and respond in a particular way seems to be quite permanent throughout the nursing programme in clinical placements.

Complacency vs. **apprehensiveness** about clinical learning

The students' general experience about clinical learning differed. Consequently, the pair of concepts of complacency vs. apprehensiveness describes the students' general experience about clinical learning. It is evident – and natural – that during every practice period each student has both positive and negative experiences in her clinical learning. However, it is identified that the students of general types one, two and three seemed to be generally satisfied with their clinical experiences and clinical learning as a whole. Instead, the students of general type four were identified to have feelings of

anxiety and apprehensiveness throughout their practice periods. Type four students seem to encounter continuosly challenges that they are not able to control or regulate and this causes them feelings of distress and powerlessness. It seems that negative feelings lead them to focus on stressful situations instead of learning (cf. Moskowitz 2001, 314-319). Consequently, it would be important to support students to address their feelings in order to enable learning (cf. Merriam & Caffarella 1999, 226).

Boud and others (1993, 15) suggest that there are two key sources of influence that have an effect on every learning situation: past experience and the role of others in the present. Students always carry with them their own socio-emotional context. The present context can act to reinforce or counterbalance this. Positive qualities of the present, such as support or trust of others, may help overcome negative influences. Condition of threat or lack of confidence in the student are often adversative to new initiatives and have tendency to reinforce negative images of the learner. This leads to the situation where learning experiences depend on whether the environment is perceived as positive or negative. (Boud et al. 1993, 15.) According to the results of this study, it is important to develop means to support students in clinical settings in order for them to feel security.

Assertiveness vs. **vulnerability** in clinical learning

The pair of concepts of assertiveness vs. vulnerability describes the students' experiences related to learning in clinical environments. The general type one and two students seemed to be assertive in their learning. They were able to learn according to their plans and goals. They seemed to be able to adapt their actions to different and changing situations in the ward – they were able to adjust their goals and choice of learning strategies if interpersonal or contextual factors changed (cf. Zimmermann 2000, 16-18). If they experienced that situations included challenges or problems they were able to solve them, for example by discussing with their mentors or other staff or arranging situations in other ways so that they were able to study and learn. It was identified that they were persistent in their efforts to achieve a set goal. Similarly, the general type three student seemed to show assertiveness to some extent; sometimes, vulnerability was identified in her actions.

Instead, the general type four students seemed to be vulnerable in their learning. Their experiences lead continuously to the situations where they feel vulnerable and this causes fear, anxiety, and frustration. They meet obstacles in their learning and it seems that they are not able to move forward in their learning process. For example, it seems that they are not able to adjust or

change their goals related to contextual factors (cf. Zimmermann 2000, 16-18). These results are congruent with Raij's (2000) findings. In her study, she found that more analytical students seemed to be able to deal with negative experiences and just leave them whilst students that were more sensitive suffered more from them. Similarly, she identified that in taking initiative students differed, as was also the case in this study.

It is important to notice that vulnerable students need a lot of support in their clinical learning process: learners who are working in the upper limits of their competence are especially vulnerable and the surrounding that is negative or feeding anxiety may decrease the learner's learning opportunities, whereas the encouragement based on emotions support the learner to share her worries and problems, and creates a safety zone where the learner may be able to learn (cf. Hakkarainen et al. 2004, 208–209).

The capacity to exercise control over one's own thought processes, motivation and action, is a distinctively human characteristic. Because judgements and actions are partly self-determined, people can affect change in themselves and their situations through their own efforts. (Bandura 1989; see also Dunn & Hansford 1997.) It seems that some students (type one and two) in this study were able to affect change in the situations that they encountered and some students (type four) were incapable of doing it. It seemed that this was related to their experience about their abilities that may be highlighted with Bandura's (1989) idea about the concept of personal agency. Among the mechanisms of personal agency, none is more central or all encompassing than people's beliefs about their capabilities to exercise control over events that affect their lives. Self-efficacy beliefs affect thought patterns that may be self-aiding or self-hindering. The stronger persons' perceived self-efficiency or self-confidence, the higher the goals they set for themselves and the firmer their commitment to them. (see Bandura 1989; see also Ruohotie 1994, 22–23.) On the one hand, self-efficacy belief, which refers to judgements of one's one competence in particular actions, influences what tasks students attempt, the kind and amount of studying they do and the proficiencies they acquire. On the other hand, exercising personal control in learning strengthens experience of one's capabilities. (Bandura 1986; 1989.) Weiner's (1979) attribution theory assumes that what motivates students' behaviour is the attributions or explanations students give for their failures or successes. These characteristics or attributions, as they are called, influence students' behaviour, performance and motivation. According to the theories of self-efficacy and attribution, students who regard themselves as competent and in control and who generally attribute their success and failures to their

own effort are satisfied with their learning and development. This seems evident in the experiences of the students in this study.

Those students whose assertiveness was evident (type one and two) were able to organise their learning according to the set goals. For example, one student who was not satisfied with her competence with a nursing skill, arranged with the support of her mentor so that she could go to another unit to practice this skill. It was identified that her set goals guided her actions and she had motivation to solve problems and find solutions that were not planned in her study programme. She was able to use her cognitive and metacognitive strategies to change learning situations appropriate for her learning (cf. Pintrich & McKeachie 2000, 44). Instead, those students who were vulnerable (type four) seemed to 'resign to their fate.' This then caused them anxiety, frustration and dissatisfaction. Bandura (1989) points out that people's self-efficacy belief determine their level of motivation, and this is reflected in how much effort they will put forth in an endeavour and how long they will persist in the face of obstacle. The stronger is the belief in their capabilities, the greater and more persistent are their efforts.

There is a growing body of evidence that human attainments and positive well-being require an optimistic sense of personal efficacy. This is because ordinary social realities are covered with difficulties (Bandura 1989), and this is very true in clinical placements where nursing students are practising. People's beliefs in their capabilities affect how much stress and depression they experience in threatening or challenging situations, as well as their level of motivation. People who believe they can exercise control over potential threats do not call up apprehensive cognitions and, therefore, are not troubled by them. However, those who believe they cannot manage potential threats experience high levels of stress and anxiety. They tend to dwell on their coping deficiencies and view many aspects of their environment as filled with danger. (Bandura 1989.) This effect of belief or lack of belief in one's capabilities was identified in the experiences of the students in this study.

Confidence vs. **lack of confidence** in own actions

The pair of concepts of confidence vs. lack of confidence is closely linked with the concepts of assertiveness vs. vulnerability. However, there is a different perspective to clinical learning between these pairs of concepts: whereas the concepts of assertiveness vs. vulnerability describe the students' relation to their learning in clinical settings, confidence vs. lack of confidence is related to the students' whole action.

The students in this study varied in relation to their confidence in their own actions. The general type one and two students were identified as confident. It was identified that most of the time they seemed to rely on themselves and to be able to adapt their actions to each situation or event. The general type three student seemed to be somewhere between confidence and lack of confidence. In some situations she seemed to be confident but especially at the beginning of education she seemed to have situations where she did not rely on herself and her abilities. However, she seemed to cope with the situations and find solutions to them. Instead, the general type four students were identified to suffer from lack of confidence in themselves throughout the practice periods.

One of the most powerful issues that influence learning from experience is identified to be the learner's confidence and self-esteem; unless learners believe themselves capable, they will be continually vulnerable in what they do. The way in which the learner interprets experience is intimately connected with how she sees herself. This has an effect in learning because engagement with learning tasks is related to belief in success (Boud et al. 1993, 15). Self-efficacy means confidence in one's own abilities (e.g. Ruohotie 1994, 37), and this was clearly highlighted in the students' experiences in this study.

Feeling of **competence** vs. feeling of **inadequacy** in clinical experiences

The pair of concepts - feeling of competence vs. feeling of inadequacy – refers to the students' experience about their professional development and professional competence. In the course of nursing education, the demands of learning increase also in clinical learning. Thus, the professional competence of the nursing student develops gradually. Consequently, the student should be able to set her learning objectives in relation to the stage of education.

Although, during their clinical placements all the students experienced both feelings of competence and feelings of inadequacy, it was evident that they differed in relation to which feeling was prevalent. It is evident in their critical incidents and consequently in the general experienced clinical learning portrayals that the students of general type one, two and three had general feeling of competence in their experiences in spite of occasional feelings of inadequacy. It has been suggested (e.g. Pintrich & McKeachie 2000, 35) that the belief on one's own possibilities to influence, leads to high expectation of performance and probably to persistence in studying and to feelings of competence which was identified in the experiences of these students. Especially type one and two students seemed to be able to proportion their skills to their stage of study: they were able to regulate their

objectives related to their competence in different stages of their education. They seemed to be able to elaborate their needs and construct a plan to achieve the set goals (cf. Lemos 1999, 473).

Instead, the students of the general type four had prevailing feeling of inadequacy in their clinical learning. Rauste-von Wright and von Wright (1996, 101) suggest that it is typical for the learner with poor self-esteem to focus her attention to the issues that are critical from the viewpoint of her self-confidence. It is also suggested that learners who have a low sense of efficacy when faced with difficult tasks, dwell on their personal deficiencies and on the obstacles they will encounter (Bandura 1993, 144). Bandura (1997, 3-5) also suggests that if the learner does not believe her abilities, she easily gives up the task when encountering setbacks and limits thus her abilities to receivepositive feedback. These issues seemed to be the case with type four students.

9.5 Self-regulation and reflectivity

It appears from the students' accounts that all the students were reflecting on their experiences and learning in their critical incidents throughout their practice periods. However, the results of this study show that the students differed in relation to their ability to demonstrate reflective skills and self-regulation in their clinical learning. It seems that some students are using high levels of reflection and others low levels: the students of general type one and two were identified to have high-levels of reflection including premise reflection, whereas the students of the third and fourth general type have low levels of reflection, being mostly descriptive content reflection, throughout their clinical learning periods. Thus, it is also identified that the level of reflection is quite unchangeable throughout the nursing programme. As previously stated, the students' experiences also differed in other respects: four modes of clinical learning were identified in their learning experiences: complacency vs. apprehensiveness about clinical learning; assertiveness vs. vulnerability in clinical learning; confidence vs. lack of confidence in own actions; feeling of competence vs. feeling of inadequacy in clinical experiences.

It seems that reflection is not self-evident in clinical learning; some students lack skills of reflection on higher levels. However, the students in this study do reflect on their learning and assess their performance, skills, knowledge and attitudes. It was evident that students' reflection involved the characteristics of experiential learning defined by Malinen (2000, 85); it seems that reflection was often engendered by a need for a better understanding

caused by a second-order experience. For example, a student experienced something new and compared a new experience or gained knowledge with her previous experience or knowledge, and felt that her perception of the issue changed as the result of her reflection. Similarly, Smith (1998) found that there is some evidence, in her study where she explored students throughout their nursing programme, of reassessment of old perspectives so that some ideas and views may be rejected, whilst others are retained. However, a weakness of her study was that it failed to differentiate between students and so it cannot be concluded if all the participants developed in the same way.

Leino-Kilpi (1992) identified, in her study about students' clinical evaluation, that the focus of students' self-evaluation was nursing activities and ways of acting. They did not assess their knowledge, goals or personality. Landeen and others (1995) suggest that the process of keeping a reflective journal is a learned skill. In their study, it took several weeks for most students to be able to reflect on their experiences rather than to report the event. Richardson and Maltby (1995) also identified that nursing students' reflectivity was heavily weighted towards the lower levels of reflectivity. Wong and others (1995) assessed the level of post-registration nursing students' reflection from reflective journals. They classified the students into three groups: non-reflectors, reflectors and critical reflectors. The non-reflectors showed no evidence of the reflective elements in their journals. The reflectors, the largest group, were able to identify relationships between prior knowledge and feelings with new knowledge and feelings. The critical reflectors had attained reflection at the level of validation, appropriation and outcome of reflection.

In this study, the general portrayal type students one and two consider in their reflection ethical questions (see also Shields 1995), for example, human beings' rights, 'different' patients, unintentional errors, patients' experiences and feelings, quality of care, their own and their families' life, life in general, nursing perspective, social policy, and their own emotions, actions, qualities and learning. They consider their critical incidents and feel that there would have been more significant events than they have recorded. They also point out that their incidents are often minor events but significant for them. Especially at the initial stages of clinical learning, students consider their own and their families' life when encountering significant events in the wards. Towards the end of education, they seem to consider their personal and professional development. Their reflections include considering patients' emotions and experiences and nursing as a profession, for example that nursing should be holistic. They also experience that their view of nursing has widened in the course of practice periods. Towards the end of their practice periods, they are pondering the health care system of Finland; this consideration includes

reflections on the care of the elderly, the care of adolescents, the care of alcohol and drug abusers, and the quality of health care. The learning and development, which occurred as the result of reflection, seems to be both professional and personal.

Type one and two students' reflection include a lot of content refection, which is thinking about the actual experience itself. Their reflection includes also the process refection, which is thinking about the strategies of the problem solving. Moreover, their reflection seems to include, to some extent, also premise reflection, which is reflection and exploration of prolonged, socially structured assumptions, beliefs and values related to the experience or the problem. (cf. Mezirow 1991, 108; see also Ruohotie 2000b, 194.) It is identified that type one and two students' reflection may lead to perspective transformation, for example, when they describe their experiences and growth after certain experiences and reflection followed.

The general type three and four students' reflections are mostly descriptive and may be mainly classified to be content reflection. However, throughout their practice periods they are considering events on the wards. They consider their own actions and actions of staff. Staffs' actions are considered especially in the situations where their actions are experienced to be inadequate or unprofessional. The general type three student has experiences where she feels that experiences in the ward has changed her attitude related to nursing as a profession and also her attitude towards patients in some situations which refers to high level, premise, reflection. However, this student was an exception among the students because the number of critical incidents was low (14) and this may influence the results. It seems that she may be able to reflect on higher levels; there are a few accounts supporting this idea but because of scant documentation, it cannot be identified.

Thus, in this study all the students showed some skills of reflection, though the level of reflection varied. In previous studies about students ability to reflect (e.g. Richardson & Maltby 1995; Eklund 2000), it has been found that most of the reflection occurs in the lower levels of reflectivity. Only a small number of students have demonstrated higher levels of reflectivity. Green (2002) identified in her study of students' evaluation of their moving and handling education, that some students reached the higher levels of reflectivity, and thus critical consciousness. Some students in her study were able to change their practice behaviour from a passive to an assertive one as the result of critical reflection.

The results of this study highlight that the students who were reflecting on their experiences on higher levels were more assertive and confident in their clinical learning. Their feeling of competence was evident; similarly,

they were satisfied with their clinical learning in general. Self-awareness is one of the prerequisites for critical reflection. A person is not able to change her behaviour or actions if she is not able to reflect on her own thoughts, actions and learning. In order to be able to gain new understanding and to be able to change behaviour, an individual has to be aware of her thoughts and actions (e.g. Ojanen 1996; 1993, 128). It was identified that some students (type one and two) were able to reach the highest levels of reflection, which is described as emancipation because they seemed to understand at least some aspects of the personal, social, economic and political contexts of their work (see also James & Clarke 1994). Mezirow (2000) describes this as perspective transformation, a process of becoming critically aware of one's assumptions. Achieving this perspective transformation was evident, for example in the students' reflections about the effect of social policy on patients' and their families' well-being, the aspects of the elderly care or the abuse of drugs and alcohol in the society, different ethical aspects and different perspectives of the nursing field. This was also evident in their considerations of how clinical learning experiences influenced their own development and even career choices as nurses. However, according to research (e.g. Glaze 2002) it is not easy to achieve the critical enquiry that it necessary for this kind of reflection. Many studies have identified that even qualified nurses mainly reflect on at lower levels (Powell 1989; Richardson & Maltby 1995; Teekman 2000).

It is identified that learning to reflect and learning from those reflections is a very individual process (Hull & Redfern 1996). Boud and others (1994b, 19) state that the capacity to reflect is developed to different stages in different people and it may be this ability, which characterises those who learn effectively from experience. It seems that, in this study, those students who had no ability to reflect thoroughly their thoughts and actions have experiences of inadequacy, vulnerability, lack of competence, and general apprehension for their clinical learning. Thus, it is important to educators and mentors to be able to recognise students who need more help and support in order to be able to reflect on their actions, beliefs and emotions and, through reflection, to develop their clinical learning and competency. Paterson (1994) identified that students who do not value the self in learning require sensitive and gentle challenge from the teacher to support them in the process of self-awareness, which is the prerequisite for reflection. Students who are able to reflect on lower levels require more support from mentors and teachers than students who have better reflective skills. (see also Cooper 2000, 518.) Jarvis (1992) suggests that at least two issues are needed to have reflective practice. First, the individual needs the ability to reflection. Students need educators

to support them in order to develop skills of reflection and skills to manage their own learning (see also Ahtiainen 2000). Secondly, there must be time and place for reflection (see also Ojanen 1996, 57; Matthew Maich, Brown & Royle 2000). It is also important that educators and mentors understand the relationship between theory and practice and can assist students to learn in practice.

It seems that the general type three and four students lack meta-cognitive awareness and ablities to high levels of reflection, which are characteristics of constructivist learning, and a prerequisite for self-regulation in learning. Cust (1995; see also Bereiter & Scardamalia 1989, 376) suggests that meta-cognitive awareness and reflection on activities that are usually performed mindlessly enables students to learn from experience and to apply the learning to new situations. In this study, it was identified that some of the students (type one and two) were able to self-regulation: they were able to organise and plan their actions and learning in clinical placements, and others (type three, type four) were not. Likewise, Daly (2001) when exploring critical thinking in student reasoning processes concluded that in instances where participants demonstrated higher levels of reasoning there was evidence to suggest that meta-cognitive strategies may contribute to this ability.

In this study, it was also indentified that those students who possess good reflective skills are also aware of their emotions and are able to regulate and utilise also emotions in their self-regulation process. They seemed also to acknowledge the interpersonal functions of emotion. (cf. Goleman 1995, 42–44.) For example, type one student while irritated of her mentor's behaviour, decided to work independently at that moment and was later able to discuss with the mentor and solve the problem. Thus, her negative emotions did not restrict her learning when she was able to regulate them.

It has also been identified in previous studies that all students are not able to reflect on high levels during their education. Only a few studies highlight the development of reflective skills throughout the nurse education. Smith (1998) conducted a study where she investigated the ways in which nursing students reflected practice as they progressed through a 3-year programme. She states that there was evidence that students moved from acceptance of information to the questioning attitude but she states that a weakness of her study was that it failed to differentiate between participants. Liimatainen, Poskiparta, Karhila and Sjögren (2001) explored the development of reflective learning of nursing students in the context of health counselling and promotion during a 3-year nursing education programme. In their study, half of the students reached the level of critical consciousness and the others remained at the level of consciousness in their reflection. Most of the previous studies

describe shorter periods of education. However, it is evident that students' reflective skills differ; most of students' reflection seems to occur on lower levels. For example, Kivelä and Janhonen (1996) identified that there were differences in nursing students' competence and personal characteristics related to encountering patients and to participating care, after their first practice period. Some of the students were not able to consider the whole situation; instead, they were working according to the routines. On the other hand, some of the students were able to take into account the patients' individual needs. The findings of their study revealed that the level of the students' reflection and critical thinking was low.

Cust (1995) highlights that educators have used different kinds of teaching and learning methods in order to develop high level thinking and reflective engagement of students in learning. Examples of these are problem-based learning (e.g. Cooke & Moyle 2002), using narratives (e.g. Andrews et al. 2001; Cooper 2000), collaborative learning (e.g. Tossavainen 1996), and different kinds of methods that use writing (e.g. Brown 2002; Lyons 1999; November 1996). However, part of the students respond either passively or negatively to these methods (Cust 1995; see also Langer 2002). Jasper (1999) emphasises the importance of the student's personal attitude toward reflection. It seems that in reflecting experiences many prerequisites and attributes are needed, at least self-awareness, insight and acceptance of personal actions in order to achieve full benefits (Jasper 1999).

It is also highlighted in previous studies that learning reflective skills takes time (e.g Jarvis 1992; Landeen et al. 1992; Paterson 1994; Teekman 2000). This includes two aspects; time to reflect is needed during every clinical period, even on a daily basis; and it takes a long time to develop as a reflective practitioner and it requires active involvement. In addition, previous learning experiences influence learning in clinical situations. Platzer, Blake and Ashford (2000) state that the previous educational experience of students may influence on their ability to engage in self-regulating learning and reflection. Ojanen (2000a, 93) suggests that often either excessive assurance or inability to endure insecurity hinders reflection. She adds that reflective skills neither develop automatically nor by teaching. Learning to reflect means that the learner has to find and be able to develop the exploring side of herself: she has to be able to perceive what is happening in herself (Ojanen 2000a, 84). It is even possible that not all people learn to reflect at all or at least it is very difficult (Ojanen 2000a, 81) or they are unwilling to accept the active role that is needed in reflection (Durgahee 1998, 160). Ojanen (2000a, 81) suggests that when the individual accepts the meaning of reflection she is ready to reflect. She argues that the person has to have a

certain kind of aptitude to this kind of thinking and learning. Ojanen (2000a, 113) displays reasons for inability to reflect which could be versatile: previous learning experiences or other experiences where the individual has learned to undervalue the meaning and importance of her experience as a source of learning. Their previous experiences may have affected their ability to express themselves, document their experiences or think critically.

It is suggested that achievement of deeper levels of reflection usually require that written accounts, critical incidents or journals, in some way, be dialogic. It is necessary that there is a person who assists the student to uncover usual ways of thinking and doing (Henderson, Berlin, Freeman & Fuller 2002; Pierson 1998; see also Johns 1994, 122; Järvinen, Koivisto & Poikela 2000, 88). In this study, it may be suggested that the students did not have an opportunity for sufficient dialogue and sharing throughout their clinical practice. They did have the opportunity to discuss with their mentors or teachers but it often presumed the student's initiative. Workshops and seminars were also arranged but they were not regularly arranged throughout the course but depended on the teachers. It has been identified that sharing with others is important in reflection because it may allow students to contribute different perspectives and to suggest possible alternative actions (Heath 1998; see also Benner 2000, 300; Brookfield 1986, 136). Boud and Walker (1993, 81) emphasise the importance of sharing experiences and receiving feedback in order to become aware of possible inadequacies in one's own ability to work with experience. Sharing may also help in working through a common experience.

It is also important to point out that most of the students' reflection in this study was self-reflection, concentrating on their own performance. This was the case especially with type three and four students. Type one and two students' reflection included also "decentration" or problem reflection: directing to a shared task or problem. Instead, there was identified only a few hints of "recentration" or decentralised reflection which means directing to a common task or action in order to solve it together, in the experiences of type one students. (cf. Raeithel 1983 according to Engeström, 2001, 25–26.) Consequently, it is important to develop teaching and learning methods also in nursing education, and especially in clinical learning, towards the idea of shared expertise. It is natural that at the beginning of their education, students are concentrating on their own performance and it is important that they learn self-reflective skills. But it is also important that in the course of their education they develop towards expertise, an important aspect of which is shared expertise: an ability to solve problems together with other professionals. This would be an important skill to learn and practice during

education. This is a challenge for educators: how to support both students and their mentors to develop this kind of dialectical learning process (cf. Hakkarainen et al. 2002, 461-462; Launis & Engeström 1999, 64).

9.6. Development towards professional expertise

The students in this study seem to be commencing to construct their own nursing theory, which is necessary in order to be able to develop towards professional expertise. It also seems that those students who possess metacognitive and self-regulative knowledge, which is an essential part of expertise knowledge, are more advanced in their professional development compared to the students who lack meta-cognitive awareness. However, it is important to point out that there may be also other factors, for example, previous personal and professional experiences, age and many other issues, which were not analysed in this study and which may be contributing to the development towards professional expertise.

In this study, the students seemed to be able to synthesise theory and their practical experiences. All the students had experiences where they perceived that the theoretical knowledge learned at school helped them to learn in practice situations. They had also experiences where they felt that encountering in practice the issues that had been studied in the classroom supported and enhanced their learning. They had also learning experiences where their conceptions of an issue changed. The general type one students had also experiences were they felt that the issues learned at school did not always come true in practice – these issues dealt with human relationships. They felt that they had learned appropriate knowledge about human relationships and were confused about staff's inability to act according these professional codes. In congruence with this study, Smith (1998) identified in her longitudinal study that students' reflection involved the integration of practice experience and academic knowledge and that students moved from acceptance of information to questioning and analysing.

The results of this study highlight that practice situations activated students to revise, validate and confirm their knowledge in literature. It seems that students started to construct the command of both declarative and practical knowledge. McCaugherty (1991; see also Leinhardt et al. 1995, 403-404) suggests that students should be educated to 'test' textbooks and classroom descriptions of nursing against actual ward practice and not accept the knowledge as such. The students in this study seemed to be able to test the theory in practice situations and vice versa. They also consulted staff, for

example nurses and doctors. Thus in this study, the students did not seem to be experiencing a gap between theory and practice which has often been found in previous studies. For example, in Corlett's (2000) study, nurse teachers, clinical preceptors and students, felt that a theory-practice gap does exist. In her study, students felt that this gap was huge while teachers found it fairly narrow. The problem was not always seen as a lack of knowledge, but as a difficulty in applying it to practice situations. In her study, students gave more credence to what they experienced in practice when they saw that the theory taught at school was out of date or idealised. (Corlett 2000.) Also Vanhanen and Janhonen (2000a; 2000b; see also Green & Holloway 1996) identified that students described contradictions between the theory and practice of nursing and between the ideal nursing and clinical practices. Hallett (1997; see also Eklund-Myrskog 2000) found that it was very difficult for students to impose theories learned at school upon their practice. Instead, the practice itself was made meaningful by careful observation and reflection. Only after this process did the theory learned at school became meaningful. Students in this study had similar experiences where they felt that facing a patient or an event in practice widened their perspectives or enhanced understanding. It is evident, as also Eraut (1994, 27-29) suggests that the learner's understanding of concepts is expanded or altered by each example of its use or encounter.

In nursing education, the theory-practice link has always been identified as problematic. The most discussed problem has been the theory-practice gap, by which writers usually refer to students' inability to apply theoretical knowledge in practice situations. However, recently it has been identified that competence in nursing requires versatile knowledge (e.g. Johns 1995) and that theory and practice do not exist in isolation (e.g. Rafferty, Allcock & Lathlean 1996); instead, formal theory and knowledge generated out of practice should carry equal value in education. Rolfe (2002; see also Vermunt 1995) suggests that reflective education should be concerned with learning how to learn, with transferable skills and with lifelong learning. The education should equip students with the skills to develop their own professional expertise. Rolfe (2002) suggests that in the first stage the student should acquire concrete experience of nursing. In the second stage, she should be facilitated to reflect on her practice and begin the difficult task of turning experience into concrete knowledge and theory. Here he emphasises a theory specific to a particular student in a given situation. Thirdly, the student should be supported to see her specific experiential knowledge in relation to general propositional knowledge and theory. Thus, clinical environments are places for both generating new personal knowledge and testing out theory.

(Rolfe 2002.) Similarly, Jarvis (1999; 2000; see also Kim 1999) suggests that practice is the basis not only of the learner's reflective learning, but also the foundation on which she constructs her own theory. He adds that more emphasis should be placed on mentors' and other facilitators' roles in this process which is highlighted also by the results of this study.

Indeed, according to the results, it is identified, at least to some extent, that students are evaluating both theoretical and practical knowledge and commencing to construct their own nursing theory. It seems that they do not experience the theory-practice gap. This may be the result of the change in teaching and learning methods, which have changed towards a more student-centred approach. Especially, the study programme of the students of this study emphasised experiential and socio-constructivist learning, including a lot of written assignments, group and individual work, seminars and discussions. Thus, the education programme provided the students with many opportunities to reflect on their own experiences and to share them with others.

It is identified that there are individual differences in the students' performance and the students of this study seem to be in different stages of their development towards professional expertise. This development may be explored, for example, in the light of Benner's (1984, 20-36) classification of the five levels on competency in clinical nursing practice: novice, advanced beginner, competent, proficient and expert. The classification cannot be applied as such to the nursing students because it is developed within the investigation of qualified nurses. However, the classification may be useful also in exploring the development of students taking into account that during their clinical learning they are supported by their mentors and the student is not expected to take the responsibility of a qualified nurse.

In applying Benner's model to the students of this study, the general type four student may be classified as a beginner whose action is rule-governed, inflexible and limited. The general type three student may be classified as an advanced beginner. Beginners and advanced beginners need support in clinical settings, for example, they need support and help in setting priorities. The general type two student is moving from an advanced beginner towards a competent nurse who has a feeling of competence, the ability to focus on essential issues and cope in clinical environments. In addition, conscious deliberate planning is characteristic of this level. Similarly, the general type one student represents a competent performer also possessing some characteristics of a proficient performer. These are, for example, understanding of a situation as a whole, being able to solve problems and being aware of how plans need to be modified in response to certain events.

Professional expertise takes time to develop; according to Benner (1984, 186) new nurses are usually at the advanced beginner levels in most clnical areas, and the development towards professional expertise presumes many years work experience as a qualified nurse. Consequently, it is necessary to take into account that the nursing students of this study were not even graduated at the end of the data gathering of this research: they had still a half year study ahead.

10 Discussion

10.1 Credibility of the study

In reflecting and analysing the credibility of this study, I use the criteria that Perttula (1995c; 1998, 164–169) has presented as the appropriate criteria in analysing studies where phenomenological methods have been used. The criteria emphasise the importance of the research process as a whole, and the importance of the analysis of the basic structure of the phenomenon under research. Moreover, van Manen (1990, 11) states that phenomenology claims to be scientific in a broad sense: it is systematic, explicit, self-critical, and intersubjective study of its subject matter, lived experience. It is systematic in that it uses disciplinary methods planned for phenomenological study. Phenomenological research is explicit in that it attempts to articulate the structures of meaning embedded in lived experience. Phenomenology is self-critical because it continually examines its own goals and methods. Phenomenology is intersubjective in that the human science researcher needs the other, for example the reader, in order to develop a dialogic relation with the phenomenon, and thus validate the phenomenon. (van Manen 1990, 11-12.)

The coherence of research process

The coherence of the research process means that there has to be a logical connection between the basic structure of the phenomenon under research, collection of research material, theoretical approach, and method of analysis and mode of reporting (Perttula 1995c; 1998). I chose a phenomenological method and more precisely an existential-phenomenological method as an approach for the empirical part of my study because I was interested in individual and unique experiences of students. As a nurse teacher, I have always been interested in clinical learning maybe because it has always seemed a challenging learning environment.

I conducted my master's thesis in nursing science on nursing students' experiences of clinical learning (Mikkonen & Pitkänen 1988). The study was quantitative. Later on, I carried out my laudatur thesis in education science and it was a starting point for this study. In that study, I explored nursing students' experiences during their first practice period (Mikkonen 1999). The approach was qualitative and the method of analysis was phenomenological, adapted from Colaizzi (1978). Afterwards I reflected on that though

I received an overview about students' experiences I did not catch each individual's unique experiences because the analysis produces prevailing themes about the phenomenon under research, as do many other qualitative and phenomenological methods. However, throughout my teaching career I have been interested in students' different learning modes and their unique ways of studying, learning and experiencing: some students seem to be successful and happy with their experiences while others seem to struggle with their studies throughout the education programme. This led me to think about how to support these students. Practice placements as learning environments are usually even more challenging for students than the classroom. Thus, I knew that I wanted to concentrate on exploring especially individual students' unique experiences in clinical learning.

It is also stated that the dimension of the learner construing her world view has not been the focus of research and it needs to be investigated because what the learner is attempting is unique, not generalisable (see Candy 1991, 446). I also agree with van Manen (1990, 2) that pedagogy requires a phenomenological sensitivity to lived experience – I had a desire to learn more about my students as individual learners, I wanted to capture the learners' realities and lifeworlds. Van Manen (1990, 2) also suggests that the method the researcher chooses ought to maintain harmony with the deep interest that makes an individual an educator. Already before the initiation of this research, my conception of man was holistic and I had considered it during my nursing and teaching career. However, during this research process, my personal conception of human being has developed and grown profounder. I agree with Mäki-Opas (1993, 28) that working with people is continuous drafting one's own conception of human being in a two-way encounter.

I also considered other than phenomenological approaches. In the first place, I was certain that I could catch the phenomenon only by using qualitative methods, which have been demonstrated to be appropriate when studying people's experiences: given my interest in how learners experience clinical learning, I was led naturally toward choosing qualitative approach.

First, I thought that an evident choice is a phenomenological approach but when considering methods they seemed to produce themes as a result and I felt that individual experiences 'dissolve' by using these methods. Then, I considered phenomenography and explored it and concluded that it may be a good alternative method, which has been used in exploring learning in general and in nurse education (Raij 2000). I also considered action research because there are characteristics of action research in my study: at the same time as I was a researcher, I was also a group leader and a teacher of the students who were participants in this study. Other teachers of my work place

were also involved in this study via their planning and teaching output to the group. The study also led to develop teaching and learning methods in our polytechnic, and for example, critical incident method is now used as a learning method in clinical learning. However, I perceived that the perspective of action research does not provide understanding of individual and uniqe dimensions of learning (cf. Kolkka 2001, 29).

Thus, after considering other approaches, I found Perttula's (1998) study about young men's experiences about their lives, and I found that his method produces both idiographic knowledge, maintaining individuals' unique experiences, which I identified to be necessary, and general knowledge about the phenomenon under research. I also agree with van Manen (1990, 2) that pedagogy is the activity of teaching and educating students, that requires constant practical acting in concrete situations and relations. And phenomenological methodology is meant to serve the practical aims of pedagogy. (van Manen 1990, 2.) It was necessary for me that doing research was not separate from teaching or 'living with students' (see also Perttula 1999). Accordingly, as Mäki-Opas (1993, 175) points out, the framework of existential phenomenology, in which investigating and teaching get intertwined, justifies the fact that the researcher - participant relation and the educator - learner relation are considered analogous and are mutually intertwined.

However, considering retrospectively my research process, and especially the report, I acknowledge that the result is not coherent in every respect. The methodology of phenomenology requires a dialectical going back and forth among various levels of questioning that the methodology includes; writing is often a complex process of rewriting – "re-thinking, re-flecting, re-cognizing" (van Manen 1990, 131) – I recognise this process in my study when aiming to capture the fullness of the experience of lifeworld. I also agree with van Manen (1990, 155) that research and theorising themselves may be perceived as pedagogic forms of life and therefore inseparable from it.

Writing and rewriting of this study included also rewriting of the theorectical framework of the study after the completion of analysis of the empirical results. As I mentioned in the introduction section, the main part of the theoretical framework of this study has been written only after the empirical part of the study was completed. After completing the analysis, in order to develop understanding of the findings and professional learning and clinical learning as part of it, I considered learning theories more in-depth. Thus, theoretical and empirical part of this research has been structured in a dialectical process. The broad theoretical framework was mostly conducted after the empirical analysis was completed in order to deepen understanding

of clinical learning. Consequently, this caused that the mode of reporting is not in congruence with the phenomenological approach.

Congruence of phenomenology and socio-constructivist and experiential learning perspectives

I also wanted a method that would recognise both cognitive components and socio-cultural influences and would be in harmony with experiential and socio-constructivist learning approach, and which would value the learner as definer of her own reality (see Johnson 1994, 1153; see also Laine 2001, 122). Consistency in the use of the methodology is one issue regarding rigour in phenomenological research. As previously discussed, phenomenology is rooted in the world view that reality is not separate from individual experience and thus respects the inner reality generated by the individual. It is therefore incongruent with the objectives of rational empiricism (e.g. Rose et al. 1995, 1126) similarly as constructionism. They both have their background in the broad movement away from an empiricist and atomistic account of meaning and knowledge. Phenomenology and social constructionism share the following features: they consider human action as meaningful, they demonstrate an ethical commitment in the form of respect for and commitment to life world, and they emphasise the contribution of human subjectivity (i.e. intention) to knowledge. (Schwandt 2000, 193, 196.)

Constructivism, as a learning approach, is concerned with how individuals construct knowledge from their experiences, mental structures, and beliefs that are used to interpret objects and events. The individual's personal world is created by the mind. Thus, each individual conceives of the external world differently, based upon the unique set of experiences with the world. (e.g. Jonassen 1991, 29.) Learned content is coloured by emotions and motives, and according to constructivist learning approach the change of the dimension of emotional experience is often more important than the change of the knowledge content. This process of change may lead to the development of personality and thus constructivism may be perceived as a holistic theory of human learning process. (see Saariluoma 2001, 30.) Both holistic learning perspective, based on socio-constructivism and experiential learning, and existential-pheneomenology emphasise the individual's way of experiencing the world. Moreover, socio-constructivist perspective focuses on the situatedness of human beings; thus covering only the social aspect of situatedness, which could be regarded the most important aspect of human situatedenss from the viewpoint of education science (cf. Perttula 1998, 18). However, I acknowledge that more thorough ontological and epistemological

analysis would be needed in deep understanding of these issues; different perspectives involve different epistemological and ontological assumptions (e.g. Packer and Goicoechea 2000, 227).

Consequently, I feel, retrospectively now when the study is completed, that if I commenced the study now, I would have courage to explore the phenomenon of clinical learning and students' professional development on relying totally on existential-phenomenological perspective. However, on the course of the study, I felt that when doing educational research, the researcher has to use "traditional" educational theories and models. As previously mentioned, after completing my licentiate study (Mikkonen 2003), I explored learning theories more in depth and wrote most of the theoretical framework of this study. On the one hand, I feel that it is important to consider and combine different learning theories when exploring professional education, and especially clinical learning, because at the moment there is no one theory that would explain or support to understand the versatility of the phenomenon under study. On the other hand, I feel that combining the different perspectives introduced in this study was a difficult task and the result is to some extent incoherent, especially related to the concepts used in this study because they come from different theories. However, I think that the learning perspectives, for example, self-regulation of learning includes aspects that are not previously thoroughly considered and explored within nursing education. Thus, this study may be an impetus for something new.

In addition, I felt that the ontological assumption about holistic view of human being was close to me representing my view on human being. My view, as a teacher, on the students has been and is holistic: I perceive students as equal human beings with their unique experiences.

Throughout the research process, that has taken over five years altogether, I have faced many challenges being aware that phenomenological approach is demanding. When commencing the analysis I had no deep understanding about the whole process but while proceeding my understanding has increased. However, I do not feel that I am an expert in phenomenological study, instead I have tried to take care that the empirical part of my study fulfils the basic criteria that are necessary for a qualitative study being existentialist-phenomenological. Retrospectively, it is nice to perceive that van Manen (1990, 8) describes my experience while he states that "we tend to get a certain satisfaction out of grasping at a conceptual or "theoretical" level the basic ideas of phenomenology, even though a real understanding of phenomenology can only be accomplished by "actively doing it."" This citation describes nicely my feelings and experiences that I tried to describe above: now when I am more familiar with the existential phenomenology, I

have a desire to start from the beginning with this study. However, there are new paths to start ahead and explore.

Reflection of the research process and description of this reflection

The researcher has to be able to justify all the choices in the different stages of the research process. The report should give the readers an opportunity to perceive the research process and the research as the whole. Especially, the analysis process should be described carefully. (Perttula 1995c; 1998.) When I described the analysis method of this study (in chapter 6) it was emphasised that a disciplinary method is required in a phenomenological research. I described the analysis process in detail in order for the reader to be able to follow the analysis and my reasoning process. I enclosed an analysis of one research participant's critical incidents to demonstrate the analysis process. However, for ethical reasons it was not possible to enclose all the critical incidents of the participant.

Of course, it is difficult or even impossible to describe bracketing and imaginative variation in detail because it is so complicated a process that I sometimes felt that it was difficult even for me, as the researcher, to acknowledge all the thought processes as a result of which the meaning relations emerged. However, I feel that I have not fully succeeded in the process of imaginative variation and the result is that the individual experienced clinical learning portrayals may be too 'detailed'.

Research material as the basis of research

The research material is the basis of the research, and it occupies the most significant position in the research process. A qualitative research process proceeds in the terms of the research material. (Perttula 1995c; 1998.) In this study, the research material was the critical incidents documented by the students about their clinical learning experiences. The descriptiveness of the research material is one basic requirement for the data in phenomenological research. The documented critical incidents were descriptive, most of them written in detail and they offered a rich material about the students' experiences of their clinical learning. However, the quality of critical incidents varied, part being thorough descriptions and reflections about students' experiences, part were more scant accounts but describing experiences though more superficially. Although, the preliminary analysis of critical incidents revealed that critical incidents recorded by the students were not always events with a clear beginning and end, as is the requirement; instead part of them were

kind of summaries of a certain incident. Also these incidents were included in the research material because they described students' experiences in clinical settings. This was similar with Cheek and O'Brien's (1997) study where respondents identified their critical incidents and the researchers found that the most appropriate basic unit was not the incident itself but "happenings" revealed by incidents that are "critical".

On the one hand, it is said that critical incidents are a valuable material for qualitative and phenomenological study because research participants are able to describe freely their experiences and thoughts. Thus, as a method of exploring learners' assumptive worlds, the critical incident technique is rooted in the phenomenological research tradition. As always in phenomenological approaches, the purpose is to enter the learner's frame of reference so that the learner's structures of understanding can be experienced and understood by the teacher or mentor, or a peer, as closely as possible to the way they are experienced by the learner. As a technique, critical incident method is idiographic rather than nomothetic – it seeks to highlight particular, concrete and contextually specific aspects of learner's experiences. Because critical incidents are accounts written by individuals about actions in their own lives they are sources of data representing learners' existential realities. (Brookfield 1990, 179–180.)

On the other hand, one basic requirement of the data of a phenomenological study is that the data should be descriptive and not include any interpretation or consideration done by the participant about her experiences. The critical incidents include, in addition to the description of the event, the analysis and reflection and it can be claimed that it does not fulfil the criteria of the data being descriptive. However, in this study, the students first described the experience or event as such and after description, they possibly reflected the event more in detail. Thus, the written accounts included the description of the experience. In the analysis of the critical incidents when forming the individual experienced clinical learning portrayals, it was possible, to some extent, to separate the description from the reflection: it may be perceived in the individual experienced learning portrayals where the issues that the students were reflecting are at the end of the portrayal. However, it was not possible to totally differentiate the description from reflection in the anlaysis.

It may be claimed that describing students' experiences through critical events that are just 'passing moments' in their clinical learning does not offer the real picture of students' experiences. However, these incidents describe students' experiences in clinical settings during two and a half years, nearly throughout their nursing education. In addition, they describe events that they have experienced to be important or significant to themselves. The

students were also provided with the guidelines how to document incidents. This structure for journal and critical incident writing has been found to be important (Hannigan 2001).

Jones (1995) described memory-related problems caused by the time lag between an incident and the commencement of reflection-on-action. Parker and others (1994) also recommend that incidents should be recorded as close as possible to the time of occurrence. In this study, these memory-related problems were reduced by asking the students to document incidents right after they had taken place or at least on a weekly basis. Most of them recorded incidents right after the event but some of them used to document incidents at the end of each practice period. The time lag was not too long even in these cases. It is also acknowledged that grading written journals or other written accounts may have an effect on the content of writing. The documented critical incidents, in this study, were also part of the students' education programme and thus part of their learning process. However, these documented incidents were not graded as such. Students used the incidents as material for their assignment writing which in turn were graded.

In addition to time and grading related problems, there may also be problems with the content of students' writing. Greenwood (1993) has displayed this concern, and claims that reflection, unless it is demonstrated immediately following an action and in the presence of nurse teachers who have shared the relevant clinical experiences with students, there is a real risk that students will articulate the issues they assume nurse teachers will want to hear and that are appropriate for assessment. (Greenwood 1993.) This was identified in the study by Landeen and others (1995) where a few students seemed to write in their journals what they thought the teachers and mentors wanted to hear instead of true reflection of their own clinical learning. I did not recognise such problems in this study. I had a confidential relationship with the students and I think that they were able to document their true experiences. Also the versatility of the recorded critical incidents shows that the students wrote about experiences that they felt were significant. However, it is important to be aware of issues surrounding power within relationships between teachers as researches and the students as participants of the study (Green & Holloway 1997, 1018). Often, in the studies that use critical incidents as data, participants are asked to document both positive and negative incidents, for example one of each. In this study, the students were asked to document critical incidents but it was not defined in advance that they should be positive and/or negative. This enabled that the real experience about clinical learning was captured.

One issue that may have influence on the findings of this study is the fact that the students were writing about their experiences in English that is not their native language. However, they were allowed to use also Finnish if they felt it necessary. At the beginning of the programme (during the first practice period) some of the participants used Finnish when documenting their critical incidents. After the first period, all the students used English, only occasionally some of them recorded incidents in Finnish. The descriptions of the critical incidents sometimes included a few stray words in Finnish; students used Finnish concepts if they did not know the concept in English. Thus, it can be assumed that the language has not caused any big problems and the students were able to describe their true experiences.

Context relatedness of the research process

Context refers to two issues. First, it means that the research findings are combined to the research situation. The results are related to those characteristics that are present in the research situation. Secondly, it means that the individual's meaning relations can be explored only in the wholeness of her experienced world. It is related to the idiographic nature of the research. It can be interpreted so that individuality remains in the research process as long as possible. (Perttula 1995c; 1998.)

Because one of my main aims was to capture the students' unique and individual experiences, I considered that the individual experienced learning portrayals are an important part of this study in addition to the general learning portrayal types. Therefore, I used also these individual portrayals in the dialogue between theoretical and empirical knowledge. According to von Manen (1990, 121–122), every phenomenological description is in a sense only an example, an icon that points at the "thing" which the researcher attempts to describe: a phenomenological description describes the original of which the description is only an example. If the description is phenomenologically powerful it permits to perceive the deeper significance or meaning structures of the lived experience it describes (van Manen 1990, 121–122.)

The subjectivity of the researcher

Carrying out research is much more than applying methods. Personal theories of researcher can and do influence all aspects of the research process. (Tobin & Tippins 1993, 14–18.) This means that because a human being as a researcher has internalised the values, research needs and expectation of her culture, these are inherent in her inquiring attitudes (Rauhala 1990, 57). Thus, the

researcher, as a conscious being and the subject of her research, has to reflect, analyse and report the meaning of this subjectivity in all stages of the research process. The consciousness of the researcher is a prerequisite of the research. (Perttula 1995c; 1998). Reflection of the researcher is a conscious experiencing of the self as inquirer and respondent, teacher and learner (Lincoln & Guba 2000, 183). In addition, Koch (1998) suggests that evaluation criteria can be generated within the research product itself through detailed and contextual writing and a reflexive account of the actual research process. The researcher should discuss explicitly decisions taken about the theoretical and methodological choices throughout the study. The readers should be able to travel easily through the worlds of the participants. (Koch 1998.)

I also agree with Dana and Davis (1993, 330) that researchers are learners, involved in a problem-solving endeavour in a specific context. Thus, research is not a search for a truth external to the cognising individual (Dana & Davis 1993, 330), and phenomenological study often has a transformative effect on the researcher herself – it is often itself a form of deep learning (van Manen 1990, 163). Consequently, research becomes a very subjective and personal endeavour. Emotions are an integral part of the sense-making process and should not be considered to be objectively put aside. Critical subjectivity means that the researcher is conscious of her own values, beliefs and epistemologies. (Dana & Davis 1993, 331.) I have acknowledged this significance of subjectivity in phenomenological study and tried to make it explicit throughout the research report. I experienced that this study was a learning process to me – I also experienced that the students who participated in this study and whose teacher I was for three and a half years were co-researchers in this study. We shared this learning and studying experience. The subjectivity of the researcher also includes the fact that it is not possible to eliminate the researcher's subjectivity from the research in existential phenomenology (see Rauhala 1993).

In the research there is also a danger that the voice of the researcher dominates over the voice of the subject so that a distorted view of reality emerges (Tobin & Tippins 1993, 14–18). Thus, in addition to the subjectivity of the researcher, it is important to take into account what is called inter-subjectivity; it is important that the researcher also reflects the interaction and relationship between participants and the researcher. This means, for example, that the researcher and the participants understand the concepts under investigation in the similar way. (Tynjälä 1991.) I discussed with each student at least once a term. Although the aim of these discussions was mainly educative, the aim was also to confirm that I as a researcher shared

the student's understading of her critical incidents. Moreover, I had a close relationship with the students and I feel that we shared understanding of the key concepts under study, though the concept of 'critical incident' had to be explained repeatedly. I feel also that existential-phenomenological study enabled me to study the learners' living world, not in the role of outsider, but trying to understand it together with the learner (cf. Mäki-Opas 1993, 173). In existential phenomenological research it is accepted that the subjectivity of the researcher can never be eliminated from the study, and the experience received from another person has tendency to shape in the researcher's 'situational regulation circle' into a form of her existence. Thus, the researcher is able to share the experience of participant because in a certain way she becomes 'a part 'of the participant. It is evident that human being carries shades of experience, which are captured only by another human system which is sensitive in the same way. (Rauhala 1993, 91.)

The researcher's responsibility

The researcher has to carry out all the research stages systematically. It is not possible to convey all the details of the research process so that another person could construct the study precisely as it was conducted. That is why the researcher's responsibility is a significant part of the credibility of the research. (Perttula 1995c; 1998.) I have acknowledged my responsibility as a researcher. I have conducted the empirical study in the best possible manner according to my theoretical, methodological and experiential knowledge. As previously mentioned, I acknowledge that I am not an expert in phenomenology and that is why my aim was to ascertain that the the empirical part of the study will fulfil the basic demands of phenomenological research as described in chapter four. In order to fulfil the requirements of phenomenological study I felt that I needed a strict method that I slightly modified in order to catch the phenomenon of this study. I also feel that I succeeded to broaden and deepen the analysis after receiving feedback about my licentiate thesis. Retrospectively, I am also aware that acknowledging that a disciplincary method is required in the phenomenological study, I held maybe to strictly to the analysis method and was not able to modify it according to the requirements of my study.

Similarly, as I discussed above the possible effect of the English language on the students ability to describe their experiences, it has to be taken into account that English is not my native language either, and this may be perceived as a limitation of the research. However, I have tried to be careful with the language throughout the research process and checked issues which

have been ambiguous. I also discussed with every student at least twice a year and during these discussions the student's critical incidents were the focus of the session. This sharing confirmed my understanding about the students' experiences.

Perhaps the most useful indicator of the credibility of the findings produced is when the readers of the study view the study findings and regard them as meaningful and applicable in terms of their experience (Cutcliffe & McKenna 1999). Validity can also be achieved if the reader, who is familiar with and has experienced the phenomenon, can recognise the experience after reading the description of it, and regard the study as meaningful and applicable in terms of their experience (Green 1995; see also Cutcliffe & McKenna 1999, 380).

10.2 Ethical consideration of the study

Approval from the Polytechnic and consent from the participants were obtained for the study. In addition to obtaining consent from participants at the beginning of the study, it was obtained prior to each term before material collection to ensure that students remained willing to participate in the study. All the students gave verbal consent.

All the students taking part in the study were fully informed of the purpose of the research and assured that their anonymity would be maintained during analysis and reporting of the findings. The students were reassured that the presentation of the data would not associate with any individual names to protect the students' anonymity and confidentiality. Detailed information about the students' participation in this study is not given because the group is small and therefore the individuals are easily recognisable. For the same reason, the participants were protected by referring to all participants as female. Similarly, the female case is used throughout the research report in order to protect the identity of the research participants. Furthermore, any student who did not wish to participate in the study was assured that it would not affect their role as the student in any way taking into account that documenting critical incidents was a compulsory part of their study programme. I acknowledged that there is also an issue about power within the relationship between a teacher as a researcher (see Green & Holloway 1997). However, I felt that my relationship with the students was confidential and there was not any discrepancy between these roles.

The general principles of research ethics (Yhdistetty säännöstö: Ihmisten käyttö tutkimuskohteina 1979) were taken into account throughout the research

process. In addition to the ethical concerns related to the research itself, using documented critical incidents as both a learning method and research material arouses ethical questions. According to many researchers, reflective practice and assessment of reflection and using writing as a learning method includes many legal, ethical, moral and professional issues (Carroll et al. 2002; Hargreaves 1997; Rich & Parker 1995).

Writing of reflective journals and critical incidents raises ethical questions that need consideration. Material that is emerged by the process may be problematic for the student, if not carefully facilitated (Bolton 1999). Mentors and teachers – as well as researchers -have to be careful when asking learners to analyse their beliefs in order to avoid damaging their self-esteem. Supporting learners to break out their assumptive worlds without intimidating or threatening them is not an easy task. It raises many ethical questions that the educators have to be aware and be ready to discuss and handle them. It is important that educators find ways of using critical incidents in a ways that are as accessible and non-threatening as possible. (Brookfield 1990, 178–180.) Rich and Parker (1995) identified that the use of reflection may threaten students' deep-seated coping mechanisms and increase anxiety rather than reduce it. Thus, supporting students is necessary

Although the purpose of the critical incident technique is not to identify incompetent practitioners, the use of critical incident analysis may encourage students to report, subjectively and possibly inaccurately, ineffective or incompetent behaviours of clinical staff and information on patients. The teacher is responsible to deal with these issues and to act accordingly when needed. (Carroll et al. 2002; Rich & Parker 1995.) Ethical dilemmas may include lack of care, inappropriate attitudes towards patients and relatives, conflict, truth telling and unsafe practice (Carroll et al. 2002). In addition, patients' confidential concerns are documented without their consent, as an essential element of reflective practice (Bolton 1999). However, it has to be taken into account that these ethical dilemmas will exist with or without reflection and reflection only uncover them and may thus be helpful for the students. An opportunity to document and share problematic issues may also decrease stress. (Bolton 1999, 193.)

Rich and Parker (1995; see also Mallik 1998) suggest that there should be guidelines produced to make clear how the students and teachers will resolve issues of confidentiality, patient safety and problems of poor nursing practice. In this study, all the incidents were discussed with the students if needed. Often they were able to discuss problematic issues with their mentors or other personnel in the ward; if not, then they discussed them with their teachers.

According to Rich and Parker (1995), support for both student and lecturer is an essential component of systematic, structured reflection in the classroom and the clinical areas. They advocate that structured reflection should take place in small groups, with continuity of structure and time to enable the provision of an environment of physical and psychological safety for both students and lecturers. Explicit guidelines should be produced to make clear how the students and lecturers will resolve issues of confidentiality, patient safety and problems of poor nursing practice. Similarly, Hargreaves (1997) suggests that any discussion of patient care outside the clinical area for the purpose of reflection requires a 'code of ethics' that is not currently available. The discussion of patient information within diaries and critical incidents is acceptable for learning purposes only and patient confidentiality should be maintained. In this study, confidentiality was taken into account by not using patients' names in documented incidents and discussions. Thus, confidentiality and anonymity of those who are part of the students' experiences is maintained. When sharing their experiences, students were able to receive support from their mentors and teachers.

10.3 Conclusions and recommendations

Each student in this study, as a unique individual, shared her experiences in clinical settings that were part of their lived experiences as nursing students. The students' experiences provide with valuable information for considering how to prepare students for their practice periods and how they can be supported during their learning process.

The focus of the students' experiences was identified as follows: *participation*, *self in different roles*, and *relationships*. These three constituents of situatedness were common for all four general experienced clinical learning portrayals. The differences between portrayals are displayed through the meaning relations, four pairs of concepts that are called clinical learning modes, which thus demonstrate differences in the students' learning experiences in clinical settings. These pairs of concepts are *complacency* vs. *apprehensiveness* about clinical learning; *assertiveness* vs. *vulnerability* in clinical learning; *confidence* vs. *lack of confidence* in own actions; *competence* vs. *inadequacy* in clinical experiences. The students differed also in relation to their demonstration of *self-regulation* and *reflection.* It is important to support the development of students' reflective and self-regulative skills because, as Vanhanen and Janhonen (2000a, 1061) suggest, raising students'

awareness of their personal orientations provides with an opportunity for change and development.

It was highlighted that students' *reflective and self-regulation skills* had an effect on their learning in clinical placements. Those who were able to use high levels of reflectivity and self-regulatory tools seemed to be satisfied with their learning in general. They were also more assertive and confident in their learning. Furthermore, they were identified to feel themselves competent related to their level of experience of their stage of study. In contrast, those whose reflection was on lower levels were apprehensive throughout their clinical learning periods. They were identified to be vulnerable in their actions. In addition, they continually faced feeling of apprehensiveness and inadequacy. Thus, according to the results of this study, it is important to offer students with opportunities to reflect on their clinical experiences. It is also important to support students to find time and place for reflection as clinical learning environments are hectic working places and patient care is the priority for the permanent staff (see also May & Veitch 1998). It is also necessary to develop methods for learning reflection and self-regulation skills.

It was also identified that reflection was mostly focused on self and there were only hints of decentralised reflection where the learner and the mentor share the problem and strive to solve it together. It is natural that at the beginning of their education, students are concentrating on their own performance and it is important that they learn self-reflective skills. But it is also important that in the course of their education they are able to develop their competence towards expertise, an important aspect of which is shared expertise, an ability to solve problems together with other professionals. This would be an important skill to learn and practice during education and clinical learning. It is a challenge for educators to find means and develop tools for supporting both students and their mentors' development towards dialectical learning process and shared expertise. (cf. Hakkarainen et al. 2002, 461–462; Launis & Engesröm 1999, 64.) Thus, it is important to develop teaching and learning methods that include more peer evaluation, collaboration and consultation (see also Candy & Crebert 1991, 584) in order to support learners to develop skills needed in *shared expertise*.

The results of this study highlight that it is important for educators to acknowledge students' unique learning modes and competencies and different orientations in clinical learning in order to be able to support and facilitate their learning (see also Järvinen 1996, 75). I agree with Oermann and Garvin (2002) as they suggest that students face many challenges whilst being in practice settings, for example, they need to acquire competencies for patient care and they need to learn about the nurse's role. Nurse teachers, and

nursing staff, especially those who act as *mentors*, should acknowledge their important role in facilitating learning, supporting and assessing students in clinical learning. They should be able to identify each student's individual learning needs, plan appropriate patient assignments and learning tasks to meet those needs, and support and facilitate the student in her clinical learning. Similarly, as also identified in earlier studies (Vanhanen 2000; see also Aavarinne 1993, 132; Cowan 1998; Hintikka 2002), it is important to identify different learners not only in clinical learning but also in the nursing education as a whole. Vanhanen states that it is a main challenge for educators to facilitate students in making individual study plans (see also Candy and Crebert 1991, 589; Helakorpi & Olkinuora 1997, 139).

Nurses, who act as mentors, in order to be able to facilitate the student's clinical learning, need preparation and education for the role of the mentor (see also Burns 1994, 31; Craddock 1993, 221; Dunn & Hansford 1997; Wilson-Barnett et al. 1995). In addition, mentors have conflicting demands on their time because they have to balance the time available for students with that available for patients (see also Twinn & Davies 1996). These issues are challenges for nurse educators in planning clinical learning and supporting mentors.

The students of this study did not experience a *theory- practice gap*, which usually refers to students' inability to apply theoretical knowledge in practice situations. However, recently it has been identified that competence in nursing requires versatile knowledge and it is suggested (e.g. Jarvis 1999) that practice is the basis not only of reflective learning, but also the foundation on which students and professionals construct their own theory. In this study, it is identified that at least to some extent students are evaluating both theoretical and practical knowledge and commencing to construct their own nursing theory. Clark and others (1997a) also found that students, as the course progressed, and newly qualified nurses, valued their theoretical knowledge. They state that according to their study, there is a shift towards a more patient-centred, research-based practitioner. The findings of the current study indicate that this shift may be true also in nursing education in Finland. However, further research in this area is needed. Similarly, in integrating theory and practice, the challenge is to develop learning opportunities in health care settings and develop teaching and learning methods for learning in real nursing situations.

It is evident that the clinical learning environment evokes many *emotions* in students. Though it is necessary to support students and find means, one being opportunity to reflect experiences with mentors and teachers (see also Turunen 1997, 64), to decrease students' anxiety level in clinical learning, it

is important to acknowledge that some conflicts may be expected and that they are a necessary part of learning (e.g. Henderson et al. 2002). As Boud and others (1993, 15) state emotions and feelings are key issues to both possibilities for, and barriers to, learning. If students are able to acknowledge their feelings it can enable them to redirect their attention towards issues which they have neglected. Although the significance of emotions in learning has recently been acknowledged, more research is needed related to the role of emotions in learning (see also Salmela 2004, 127-128).

The *critical incident technique* was used as a teaching and learning method within the student group that participated in this study and as a data gathering method as well. It has previously been suggested that critical incident technique is a valuable teaching and learning method in enhancing reflection. However, it is not possible to make any conclusions about its usefulness within the students of this study. It will be a topic of further study. However, it seems that documenting and analysing critical incidents during practice periods enhances students' opportunities to reflect on experiences in practice placements. Learning in real health care settings should be planned very carefully from the standpoint of learning so that students' experiences result in learning new issues. Documenting and analysing critical incidents is one way of organising and structuring learning in health care settings. Students' disclosure, in this study, about having more critical incidents than they documented reveals that clinical learning environment includes numerous opportunities for experiential learning and reflection. It is important to explore further the use of critical incident technique as a teaching and learning method.

References

Aavarinne, H. 1993. Ohjauksellisten ja opetuksellisten valmiuksien kehittyminen sairaanhoitajakoulutuksessa. Acta Universitatis Ouluensis. D Medica 263. Väitöskirja.

Ahteenmäki-Pelkonen, L. 1994. Itseohjautuvuus elinikäisessä oppimisessa. In Elinikäinen oppiminen. Vapaan sivistystyön 35. vuosikirja. Helsinki: Kansanvalistusseura, Aikuiskasvatuksen tutkimusseura, 159–172.

Ahteenmäki-Pelkonen, L. 1997. Kriittinen näkemys itseohjautuvuudesta. Systemaattinen analyysi Jack Mezirowin itseohjautuvuuskäsityksistä. Helsingin yliopiston kasvatustieteen laitoksen tutkimuksia 157.

Ahtiainen, V. 2000. Terveysalan opiskelijoiden kokemuksia saamastaan ohjauksesta oppimispäiväkirjan pitämisessä käytännön harjoittelussa. Kuopion yliopisto. Hoitotiede. Terveystieteiden opettajan koulutus. Tutkielma.

Alavi, C., Cooke, M. & Crowe M. 1997. Becoming a registered nurse. Nurse Education Today 17, 473–480.

Allery, L.A. & Owen, P.A. 1997. Why general practitioners and consultants change their clinical practice: A critical incident study. British Medical Journal 314, 870–874.

Alpert, J. J., Youngerman, J., Bresslow, J. & Kosa, J. 1973. Learning experiences during the internship year: an exploratory study of pediatric graduate education. Pediatrics 51(2), 199–205.

Ammattikorkeakoululaki 351/2003.

Anderson, J. R. 1991. The Phenomenological perspective. In J.M. Morse (Ed.) Qualitative nursing research. A contemporary dialogue. Newbury Park: Sage Publications, 25–38.

Anderson, J. R., Reder, L. M. & Simon, H. A. 1996. Situated learning and education. Educational Researcher 25(4), 5–11

Anderson, J. R., Reder, L. M. & Simon, H. A. 1997. Rejoinder: Situative versus cognitive perspective. Educational Researcher 26(1), 18–21.

Andrews, C.A., Ironside, P.M., Nosek, C., Sims, S.L., Swenson, M.M., Yeomans, C., Young, P..K. & Diekelmann, N. 2001. Enacting narrative pedagogy: The lived experiences of students and teachers. Nursing and Health Care Perspectives 22(5), 252–259.

Andrews, M. & Wallis, M. 1999. Mentorship in nursing: a literature review. Journal of Advanced Nursing 29, 201–207.

Anforth, P. 1992. Mentors, not assessors. Nurse Education Today 12, 299–302.

Antikainen, A. 1996. Merkittävät oppimiskokemukset ja valtautuminen. In A. Antikainen, & H. Huotelin (Eds.) Oppiminen ja elämänhistoria. Aikuiskasvatuksen 37. vuosikirja. Helsinki: Kansanvalistusseura ja Aikuiskasvatuksen Tutkimusseura, 251–316.

Armitage, P. & Burnard, P. 1991. Mentors or Preceptors? Narrowing the theory - practice gap. Nurse Education Today 11, 225–229.

Arndt, M. 1994. Nurses' medication errors. Journal of Advanced Nursing 19, 519–526. Asanti, R., Lehtinen, E. & Palonen, T. 2002. Työelämän muutokset ja osaamisen haasteet. In E. Lehtinen & T. Hiltunen (Eds.) Oppiminen ja opettajuus. Turun yliopiston kasvatustieteiden tiedekunnan julkaisuja B: 71. Turun opettajankoulutuslaitos, 87–108.

Asworth, P. D. 1997. The variety of qualitative research. Part two: non-positivist approaches. Nurse Education Today 17, 219–224.

Asworth, P. & Morrison, P. 1991. Problems of competence-based nurse education. Nurse Education Today 11, 256–260.

Atkins, S. & Murphy, K. 1993. Reflection; a review of the literature. Journal of Advanced Nursing 18, 1188–1192.

Atkins, S. & Williams, A. 1995. Registered nurses' experiences of mentoring undergraduate nursing students. Journal of Advanced Nursing 21, 1006–1015.

Attig, T. 1985. Existential phenomenology and applied philosophy. In W.S. Hamrick (Ed.) Phenomenology in practice and theory. Dordrecht: Martinus Nijhoff Publishers, 161–176.

Baillie, L. 1993. Factors affecting student nurses' learning in community placements: a phenomenological study. Journal of Advanced Nursing 18, 1043–1053.

Baillie, L. 1996. A phenomenological study of the nature of empathy. Journal of Advanced Nursing 24(6), 1300–1308.

Bandura, A. 1986. The explanatory and predictive scope oF self-efficacy theory. Journal of Social and Clinical Psychology 4, 359–373.

Bandura, A. 1989. Human agency in social cognitive theory. American Psychologist 44(9), 1175-1184.

Bandura, A. 1993. Perceived self-efficacy in cognitive development and functioning. Educational Psychologist 28(2), 117–148.

Bandura, A. 1997. Self-efficacy. The exercise of control. New York: Freeman and Company.

Barnett, R. 1996. Being and becoming: a student trajectory. International Journal of Lifelong Education, 15(2), 72–84.

Beairsto, B. 2000. What does it take to be a lifelong learner? In B.Beairsto & P. Ruohotie (Eds.) Empowering teachers as lifelong learners. Hämeenlinna: Research Centre for Vocational Education, 47–68.

Beck, C. T. 1992. Caring between nursing students and physically/mentally handicapped children: a phenomenological study. Journal of Nursing Education 31, 361–366.

Beck, C. T. 1993a. Caring relationship between nursing students and their patients. Nurse Educator 18, 28–32.

Beck, C. T. 1993b. Nursing students' initial experience: a phenomenological study. International Journal of Nursing studies 30, 489–497.

Beck, C. 1996. Nursing students' experiences caring for cognitively impaired elderly people. Journal of Advanced Nursing 23(5), 992–998.

Beck, C. T. 1997. Nursing students' experiences caring for dying patients. Journal of Nursing Education 36, 408–415.

Benner, P. 1984. From novice to expert: Excellence and power in clinical nursing practice. Menlo Park, California: Addison-Wesley,

Benner, P. 2000. The quest for control and the possibilities of care. In M. Wrathall & J. Malpas (Eds.) Heidegger, coping and cognitive science. Essays in Honor Hubert L. Dreyfus. Volume 2. Cambridge, Massachusetts: The Mit Press, 295–309.

Benner, P., Tanner, C. A. & Chesla, C. A. 1999. Asiantuntijuus hoitotyössä. Helsinki: WSOY.

Bereiter, C. & Scardamalia, M. 1989. Intentional learning as a goal of instruction. In L. B. Resnick (Ed.) Knowing, learning and instruction: Essays in honour of Robert Glaser. Hillsdale, NJ: Erlbaum, 361–392.

Bereiter, C. & Scardamalia, M. 1993. Surpassing ourselves. Illinois: Open Court.

Berger, P. L. & Luckmann, T. 1966/1979. The social construction of reality. Harmondsworth: Penguin Books.

Bergum, V. 1991. Being a phenomenological researcher. In Morse, J. M. (Ed.) Qualitative nursing research: a contemporary dialogue. Newbury Park: Sage publications, 55–71.

Bettencourt, A. 1993. The construction of knowledge: A radical constructivist view. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 39–50.

Billet, S. 2001. Knowing in practice: re-conceptualising vocational expertise. Learning and Instruction 11, 431–452.

Bjork, I. T. 1995. Neglected conflicts in the discipline of nursing: perceptions of the importance and value of practical skill. Journal of Advanced Nursing 22, 6–12.

Blasi, A. & Oresick, R. J. 1986. Emotions and cognitions in self-inconsistency. In D. J. Bearison & H. Zimiles (Eds.) Thought and emotions. Developmental perspectives. Hillsdale, NJ: Erlbaum, 147–165.

Boekaerts, M. 1995. Affect, emotions, and learning. In Anderson, L. W. (Ed.) International encyclopaedia of teaching and teacher education, 2nd ed. Oxford: Pergamon, 402–407.

Boekaerts, M. and Niemivirta, M. 2000. Self-regulated learning. Finding a balance between learning goals and ego-protective goals. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of Self-Regulation. San Diego, California: Academic Press, 417– 450.

Boekaerts, M., Pintrich, P. R. & Zeidner, M. 2000. Self-Regulation. An introductory overview. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of Self-Regulation. San Diego, California: Academic Press; 1–9.

Bolton, G. 1999. Reflections through the looking-glass: The story of a course of writing as a reflexive practitioner. Teaching in Higher Education 2, 193–213.

Boshuizen, H. P. A., Schmidt, H. G., Custers, E. J. F. M. & Van De Wiel, M. W. 1995. Knowledge development and restructuring in the domain of medicine: the role of theory and practice. Learning and Instruction 5, 269–289.

Boud, D., Cohen, R. & Walker, D. 1993. Introduction: Understanding learning from experience. In D. Boud, R. Cohen & D. Walker (Eds.) Using experience for learning. Buckingham: The Society for Research into Higher Education & Open University Press, 1–17.

Boud, D., Keogh, R. and Walker, D. 1994a. What is reflection in learning. In D. Boud, R. Keogh & D. Walker (Eds.) Reflection: Turning experience into learning. New York: Kogan Page, London/Nichols Publishing Company, 7–17.

Boud, D., Keogh, R. and Walker, D. 1994b. Promoting reflection in learning: a model. In D. Boud, R. Keogh & D. Walker (Eds.) Reflection: Turning experience into learning. New York: Kogan Page, London/Nichols Publishing Company, 18–40.

Boud, D. & Walker, D. 1993. Barriers to reflection on experience. In D. Boud, R.Cohen, & D. Walker (Eds.) Using experience for learning. Buckingham: SRHE and Open University Press, 73–86.

Bransford, J. D. & Vye, N. J. 1989. A perspective on cognitive research and its implications for instruction. In L. B. Resnick & L. E. Klopfer (Eds.) Towards the thinking curriculum: Current cognitive research. 1989 ASCD Yearbook. Pittsburg: Association for Supervision and Curriculum Development, 173–205.

Bromme, R. & Tillema, H. 1995. Fusing experience and theory: the structure of professional knowledge. Learning and Instruction 5, 261–267.

Brookfield, S. D. 1986.Understanding and facilitating adult learning. San Francisco: Jossey-Bass.

Brookfield, S. D. 1987. Developing critical thinkers. Challenging adults to explore alternative ways of thinking and acting. Milton Keynes: Open University Press.

Brookfield, S. 1990. Using critical incidents to explore learners' assumptions. In Mezirow, J. and Associates: Fostering critical reflection in adulthood. A guide to transformative and emancipatory learning. San Francisco, California: Jossey-Bass, 177–193.

Brookfield, S. 1993. Through the lens of learning: How the visceral experience of learning reframes teaching. In Boud, D., Cohen, R. & Walker, D. (Eds.) Using experience for learning. Buckingham: SRHE and Open University Press, 21–32.

Brookfield, S. 2000. Transformative learning as ideology critique. In Mezirow, J. & Associates. Learning as transformation. San Francisco: Jossey-Bass, 125–148.

Brookfield, S. 2002. Reassessing subjectivity, criticality, and inclusivity: Marcuse's challenge to adult education. Adult Education Quarterly 52(4), 265–280.

Brown, A. 1987. Metacognition, executive control, self-regulation and other more mysterious mechanisms. In F. E. Weinert & R. H. Kluwe (Eds.) Metacognition, motivation and understanding. Hillsdale, NJ: Erlbaum, 65–116.

Brown, A. & Campione, J. 1994. Guided discovery in a community of learners. In K. McGilly (Ed.) Classroom lessons: Integrating cognitive theory and classroom practice. Cambridge, MA: MIT Press, 229–270.

Brown, A. L. & Palinscar, A. S. 1989. Guided, cooperative learning and individual knowledge acquisition. In L. Resnick (Ed.) Knowing, learning, and instruction: Essays in Honor of Robert Glaser. Hillsdale, NJ: Erlbaum, 393–451.

Brown, J. O. 2002. Know thyself: The impact of portfolio development on adult learning. Adult Education Quarterly 52(3), 228–245.

Brown, J. S., Collins, A. & Duguid, P. 1989. Situated Cognition and the Culture of Learning. Educational Researcher 18, 32–42.

Bruner, J. 1996. The culture of education. Cambridge, MA: Harvard University Press.

Burnard, P. 1990. The student experience: adult learning and mentorship revisited. Nurse Education Today 10, 349–354.

Burnard, P. 1991. Experiential learning in action. Aldershot: Avebury.

Burnard, P. 1992. Student nurses' perceptions of experiential learning. Nurse Education Today 12, 163–173.

Burnard, P. & Chapman, C. 1990. Nurse Education: the Way Forward. London: Scutari Press.

Burns, S. 1994. Assessing reflective learning. In A. Palmer, S. Burns & C. Bulman (Eds.) Reflective Practice in Nursing. The Growth of the Professional Practitioner. Massachusetts: Blackwell Scientific Publications, 20–34.

Burns, C. & Harm, N.J. 1993. Emergency nurses' perceptions of critical incidents and stress debriefing. Journal of Emergency Nurses 19, 431–436.

Butler, D. L. & Winne, P. H. 1995. Feedback and self-regulated learning: A theoretical synthesis. Review of Educational Research 65(3), 245–281.

Byrne, M. 2001. Critical incident technique as a qualitative research method. AORN Journal 74(4), 538–539.

Cahill, H. A. 1996. A qualitative analysis of student nurses' experiences of mentorship. Journal of Advanced Nursing 24(4), 791–799.

Camiah, S. 1998. Current educational reforms in nursing in United Kingdom and their impact on the role of nursing lectures in practice: a case study approach. Nurse Education Today 18, 368–379.

Campbell, I. E., Larrivee, L., Field, P. A., Day, R. A. & Reutter, L. 1994. Learning to nurse in clinical setting. Journal of Advance Nursing 20, 1125–1131.

Candy, P. C. 1991 Self-direction for learning. A Comprehensive Guide to Theory and Practice. San Francisco: Jossey Bass.

Candy, P. C. & Crebert, R. G. 1991. Ivory tower to concrete jungle: The difficult transition from the academy to workplace as learning environments. Journal of Higher Education 62(5), 570–592.

Carroll, M., Curtis, L., Higgins, A., Nicholl, H., Redmond, R. & Timmins, F. 2002. Is there a place for reflective practice in the nursing curriculum? Nurse Education in Practice 2, 13–20.

Carver, C. S. & Scheier, M. F. 2000. On the structure of behavioral self-regulation. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of Self-Regulation. San Diego, California: Academic Press; 41–84.

Chaiklin, S. 1993. Understanding the social scientific practice of *Understanding practice*. In S. Chaiklin & J. Lave (Eds.) Understanding practice. Perspectives on activity and context. Cambridge: Cambridge University Press, 377–401.

Cheek, J. & O'Brien, B. 1997. Using critical incident technique to inform aged and extended care nursing. Western Journal of Nursing Research 5, 667–682.

Chenoweth, L. 1998. Facilitating the process of critical thinking for nursing. Nurse Education Today 18, 281–292.

Chi, M. T. H. 1987. Representing knowledge and metaknowledge: Implications for interpreting metamemory research. In F. E. Weinert & R. H. Kluwe (Eds.) Metacognition, motivation and understanding. Hillsdale, NJ: Erlbaum, 239–266.

Chun-Heung, L. & French, P. 1997. Education in Practicum: a study of the ward learning climate in Hong Kong. Journal of Advanced Nursing 26(3), 55–62.

Clark, J. M., Maben, J. & Jones, K. 1997a. Project 2000: Perceptions of the philosophy and practice of nursing: shifting perceptions – a new practitioner? Journal of Advanced Nursing 26(1), 161–168.

Clark, J. M., Maben, J. & Jones, K. 1997b. Project 2000: Perceptions of the philosophy and practice of nursing: preparation for practice. Journal of Advanced Nursing 26(2), 246–256.

Clark, M. C. 1993. Transformational Learning. In S. B. Merriam (Ed.) An update on adult learning theory. New directions for adult and continuing education, No. 57. San Francisco: Jossey Bass, 47–56.

Clark, M. & Wilson, A. 1991. Context and rationality in Mezirow's theory of transformational learning. Adult Education Quarterly 41(2), 75–91.

Cobern, W. W. 1993. Contextual constructivism: The impact of culture on the learning and teaching of science. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 51–69.

Cohen, M. Z. & Omery, A. 1994. Schools of phenomenology: Implications for research. In J. M. Morse (1994) (Ed.) Critical issues in qualitative research methods. Thousand Oaks, California: Sage, 136–156.

Colaizzi, P.F. 1978. Psychological research as the phenomenologist views it. In R. S. Valle & M. King Existential-Phenomenological Alternatives for Psychology. New York: Oxford University Press, 48–71.

Collins, A., Brown, J. & Newman, S. 1989. Cognitive apprenticeship: Teaching the crafts or reading, writing, and mathematics. In L. B. Resnick (Ed.) Knowing, learning and instruction. Hillsdale, New Jersey: Erlbaum, 453–494.

Cooke, M. 1996. Nursing students' perceptions of difficult or challenging clinical situations. Journal of Advanced Nursing 24, 1281–1287.

Cooke, M. & Moyle, K. 2002. Students' evaluation of problem-based learning. Nurse Education Today 22, 330–339.

Cooper, N. J. 2000. The use of narrative in the development of critical thinking. Nurse Education Today 20, 513–518.

Cope, P., Cuthbertson, P. & Stoddart, B. 2000. Situated learning in the practice placement. Journal of Advanced Nursing 31, 850–856.

Copp, G. 1994. Palliative care nursing education: a review of research findings. Journal of Advanced Nursing 19, 552–557.

Corlett, J. 2000. The perceptions of nurse teachers, student nurses and preceptors of the theory-practice gap in nurse education. Nurse Education Today 20, 499–505.

Corlett, J. W., Palfreyman, H. J., Staines, H. J. & Marr, H. 2003. Factors influencing theoretical knowledge and practical skill acquisition in student nurses: an empirical experiment. Nurse Education Today, 23, 183–190.

Cowan, S. 1998. The approach to learning of student nurses in the Republic of Ireland and Northern Ireland. Journal of Advanced Nursing 28(4), 899–910.

Cox, K., Bergen, A. & Norman, I. 1993. Exploring consumer views of care provided by the Macmillan nurse using the critical incident technique. Journal of Advanced Nursing 18, 408–415.

Craddock, E. 1993. Developing the facilitator role in the clinical area. Nurse Education Today 13, 217–224.

Cranton, P. 2000. Individual differences and transformative learning. In J. Mezirow et Associates. Learning as transformation. San Francisco: Jossey-Bass, 181–205.

Crotty, M. 1996. Phenomenology and nursing research. South Melbourne, Australia: Churchill Livingstone.

Cust, J. 1995. Recent cognitive perspectives on learning – implications for nurse education. Nurse Education Today 15, 280–290.

Cutcliffe, J. & McKenna, H. 1999. Establishing the credibility of qualitative research findings: the plot thickens. Journal of Advanced Nursing 30, 374–380.

Daly, W. 2001. The development of an alternative method in the assessment of critical thinking as an outcome of nursing education. Journal of Advanced Nursing 36, 120–130.

Damon, W. 1986. Affect, cognition, and self in developmental psychology. In D.J. Bearison & H. Z. Zimiles (Eds.) Thought and emotion: Developmental perspectives. Hillsdale, NJ: Erlbaum, 167–173.

Dana, T. & Davis, N. 1993. On considering constructivism for improving mathematic and science teaching and learning. In K. Tobin (Ed.) The practice of constructivism in science education. Washington, DC: American Association for the Advancement of Science Press, 325–333.

Darwin, A. 2000. Critical reflections on mentoring in work settings. Adult Education Quarterly 50(3), 197–211.

Day, R. A., Field, P.A., Campbell, I.E. & Reutter, L. 1995. Students' evolving beliefs about nursing: from entry to graduation in a four-year baccalaureate programme. Nurse Education Today 15, 357–364.

Deeny, P., Johnson, A., Boore, J, Leyden, C. & McCaughan, E. 2001. Drama as an experiential technique in learning how to cope with dying patients and their families. Teaching in Higher Education 6(1), 99–112.

Demetriou, A. 2000. Organization and development of self-understanding and self-regulation. Toward a general theory. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 209–251.

Dewey, J. 1951. Experience and education. New York: The Macmillan Company.

Dirkx, J. M. 2001. The power of feelings: Emotion, imagination, and the construction of meaning in adult learning. New Directions for Adult and Continuing Education 89, 63–72.

Donovan, J. 1990. The concept and role of mentor. Nurse Education Today 10, 294–298.

Driscoll, M. P. 1994. Psychology of learning for instruction. Needham heights, MA: Allyn and Bacon.

Dunn, S. & Burnett, P. 1995. The development of a clinical learning environement scale. Journal of Advanced Nursing 22(6), 1166-1173.

Dunn, S. & Hansford, B. 1997. Undergraduate nursing students' perceptions of their clinical learning environment. Journal of Advanced Nursing 25, 1299–1306.

Durgahee, T. 1996. Promoting reflection in post- graduate nursing: a theoretical model. Nurse Education Today 16, 419–426.

Durgahee, T. 1998. Facilitating reflection: from a sage on stage to a guide on the side. Nurse Education Today 18, 158–164.

Earnshaw, G. J. 1994. Mentorship: the students' views. Nurse Education Today 15, 274–279.

Edwards, R. 1994. 'Are you experienced?' postmodernity and experiential learning. International Journal of Lifelong Education 13(6), 423–439.

Eklund, A-L. 2000. Reflektiivinen oppiminen hoitotyön kliinisen harjoittelun ryhmätilanteissa. Terveystieteiden opettajankoulutus. Hoitotieteen laitos. Kuopion yliopisto. Opinnäytetutkielma.

Eklund-Myrskog, G. 2000. Student nurses' understanding of caring science. Nurse Education Today 20, 164–170.

Endler, N. S. & Kocovski, N. L. 2000. Self-regulation and distress in clinical psychology. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 569–599.

Engeström, Y. 1999. Situated learning at the threshold of the new millennium. In J. Bliss, R. Säljö & P. Light (Eds.) Learning sites: Social and technological resources for learning. Amsterdam: Pergamon, 249–257.

Engeström, Y. 2001. Kehittävä siirtovaikutus: mitä ja miksi? In T. Tuomi-Gröhn & Y. Engeström (Eds.) Koulun ja työn rajavyöhykkeellä. Helsinki: Helsinki University Press, 19–26.

Eraut, M. 1994. Developing professional knowledge and competence. London: The Falmer Press.

Eteläpelto, A. 1992. Tulevaisuuden asiantuntijuuden kehittämiseen. In J. Ekola (Ed.) Johdatusta ammattikorkeakoulupedagogiikkaan. WSOY, Helsinki, 19–42.

Eteläpelto, A. 1997. Asiantuntijuuden muuttuvat määritykset. In J. Kirjonen, P. Remes & A. Eteläpelto (Eds.) Muuttuva asiantuntijuus. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos, 86–102.

Fagerberg, I. & Ekman, S. L. 1997. First-year Swedish nursing students' experiences with elderly patients. Western Journal of Nursing Research 19, 177–189.

Feldmann Barrett, L. & Gross, J. J. 2001. Emotional intelligence: A process model of emotion representation and regulation. In T. J. Mayne & G. A. Bonanno Emotions. Current issues and future directions. New York: Guilford Press, 286–310.

Fenwick, T.J. 2000. Expanding conceptions of experiential learning: A review of the five contemporary perspectives on cognition. Adult Education Quarterly 50(4), 243–272.

Ferguson, K. E. & Jinks, A. M. 1994. Integrating what is taught with what is practised in the nursing curriculum: a multi-dimensional model. Journal of Advanced Nursing 20, 687–695.

Flanagan, J. 1954. The critical incident technique. Psychological Bulletin 51 (4), 327–358.

Forrest, S., Brown, N. & Pollock, L. 1996. The clinical role of the nurse teacher: an exploratory study of the nurse teacher's present and ideal role in the clinical area. Journal of Advanced Nursing 24, 1257–1264.

Fowler, J. & Chevannes, M. 1998. Evaluating the efficacy of reflective practice within the context of clinical supervision. Journal of Advanced Nursing 27, 379–382.

Franks, V., Watts, M. & Fabricius, J. 1994. Interpersonal learning in groups: an investigation. Journal of Advanced Nursing 20, 1162–1169.

Freshwater, D. & Robertson, C. 2002. Emotions and needs. Buckingham: Open University Press.

Frick, W. B. 1987. The symbolic growth experience: Paradigm for a humanistic-existential learning theory. Journal of Humanistic Psychology 27 (4), 406–423.

Frick, W. B. 1990. The symbolic growth experience: A chronicle of heuristic inquiry and a quest for synthesis. Journal of Humanistic Psychology 30 (1), 64–80.

Frijda, N. H., Kuipers, P. & ter Schure, E. 1989. Relations among emotion, appraisal, and emotional action readiness. Journal of Personality and Social Psychology 57, 212–228.

Fuhrer, U. 1993. Behavior setting analysis of situated learning: The case of newcomers. In S. Chaiklin & J. Lave (Eds.) Understanding practice. Perspectives on activity and context. Cabridge: Cambridge University Press, 179–211.

Gadamer, H.-G. 1976. Philosophical hermeneutics. (Translated and Edited by D. E. Linge). Berkeley and Los Angeles: University of California Press.

Ganong, L. H. & Manderino, M. A. 1987. Stereotyping by nurses and nursing students: a critical review of research. Research in Nursing and Health 10, 49–70.

Gerrish, C. A. 1990. An analysis of the educational role of the ward sister (implications for nurse educators). Nurse Education Today 10, 198–205.

Ghaye, T. & Lillyman, S. 1997. Learning journals and critical incidents: Reflective practice for health care professionals. Guilford and King's Lynn: Quay Books, Mark Allen.

Ghaye, T. & Lillyman, S. 2000. Reflection: Principles and practice for healthcare professionals. Guilford and King's Lynn: Quay Books, Mark Allen.

Giorgi, A. 1985a. The phenomenological psychology of learning and the verbal learning tradition. In A. Giorgi (Ed.) Phenomenology and psychological research. Pittsburgh: Duquesne University Press, 22–85.

Giorgi, A. 1985b. Sketch of a psychological phenomenological method. In A.Giorgi (Ed.) Phenomenology and psychological research. Pittsburgh: Duquesne University Press, 8–22.

Giorgi, A. 1992. Description versus Interpretation: Competing alternative strategies for qualitative research. Journal of Phenomenological Psychology 23 (2), 119–135.

Giorgi, A. 1994. A phenomenological perspective on certain qualitative research methods. Journal of Phenomenological Psychology 23 (2), 190–220.

Giorgi, A. 1997. The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. Journal of Phenomenological Psychology 2, 235–281.

Glaser, R. & Chi, M. T. H. 1988. Overview. In M. Chi, R.Glaser & M. J. Farr (Eds.) The nature of expertise. Hillsdale, NJ: Lawrence Erlbaum, xv–xxviii.

Glaserfeld von, E. 1993. Questions and answers about radical constructivism. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 23–38.

Glaze, J. 2002. Stages in coming to terms with reflection: student advanced nurse practitioners' perceptions of their reflective journeys. Journal of Advanced Nursing 37, 265–272.

Glen, S. 1994. Developing critical thinking in higher education. Nurse Education Today 15, 170-176.

Glover, P. A. 2000. 'Feedback. I listened, reflected and utilized': Third year nursing students' perceptions and use of feedback in the clinical setting. International Journal of Nursing Practice 6, 247–252.

Goleman, D. 1995. Emotional intelligence. New York: Bantam Books.

Gray, M. & Smith, L. 1999. The professional socialization of diploma higher education in nursing students (Project 2000): a longitudinal qualitative study. Journal of Advanced Nursing 29, 639–647.

Gray, M. A. & Smith, L. 2000. The qualities of an effective mentor from the student nurse's perspective: findings from a longitudinal qualitative study. Journal of Advanced Nursing 32, 1542–1549.

Green, A.J. 1995. Experiential learning and teaching – a critical evaluation of an enquiry which used phenomenological method. Nurse Education Today 15, 420–426.

Green, A. J. & Holloway, D. G. 1997. Using a phenomenological research technique to examine student nurses' understandings of experiential teaching and learning: a critical review of methodological issues. Journal of Advanced Nursing 26, 1013–1019.

Green, C. A. 2002. Reflecting on reflection: students' evaluation of their moving and handling education. Nurse Education in Practice 2, 4–12.

Greenwood, J. 1993. Some considerations concerning practice and feedback in nursing education. Journal of Advanced Nursing 18, 1999–2002.

Greenwood, J. 1998. The role of reflection in single and double loop learning. Journal of Advanced Nursing 27, 1048–1053.

Greenwood, J. 2000. Critique of the graduate nurse: an international perspective. Nurse Education Today 20, 17–23.

Grow, G. O. 1991. Teaching learners to be self-directed. Adult Education Quarterly 41(3), 125–149.

Gyllensten, G. G., Salford, A. L. & Ekdahl, C. 2000. Physical therapists' emotional expressions in interviews about factors important for interaction with patients. Physiotherapy, 86(5), 229–240.

Hagerty, B. 1986. A second look at mentors. Nursing Outlook 34(1), 16–24.

Haigh, C. 2003. An evaluation of a judgmental model of assessment for assessing clinical skills in MSc students. Nurse Education in Practice 3, 43–48.

Hakkarainen, K. & Järvelä, S. 1999. Tieto- ja viestintätekniikka asiantuntijaksi oppimisen tukena. In A. Eteläpelto & P. Tynjälä (Eds.) Oppiminen ja asiantuntijuus. Helsinki: WSOY, 241–256.

Hakkarainen, K., Lonka, K. & Lipponen, L. 2004. Tutkiva oppiminen. Järki, tunteet ja kulttuuri oppimisen sytyttäjinä. Helsinki: WSOY.

Hakkarainen, K., Palonen, T. & Paavola, S. 2002. Kolme näkökulmaa asiantuntijuuden tutkimiseen. Psykologia, 448–464.

Hallet, C. 1997. Pragmatism and Project 2000: the relevance of Dewey's theory of experimentalism to nursing education. Journal of Advanced Nursing 26, 1229–1234.

Hanks, W. F. 1991. Foreword. In J. Lave & E. Wenger Situated learning. Legitimate peripheral participation. Cambridge: Cambridge University Press, 13–24.

Hannigan, B. 2001. A discussion of the strengths and weaknesses of 'reflection' in nursing practice and education. Journal of Clinical Nursing 10 (2), 278–283.

Hargreaves, J. 1997. Using patients: exploring the ethical dimension of reflective practice in nurse education. Journal of Advanced Nursing 25, 223–228.

Harland, T. 2003. Vygotsky's Zone of Proximal Development and problem-based learning: linking a theoretical concept with practice through action research. Teaching in Higher Education 2, 263–272.

Harré, R. 1986. An outline of the social constructionist viewpoint. In R. Harré (Ed.) The social construction of emotions. Oxford: Blackwell, 2–14.

Harré, R. & Parrott, W. G. 1996. Overview. In R. Harré & W. G. Parrott (Eds.) The emotions. Social, cultural, and biological dimensions. London: Sage Publications, 1–20.

Heath, H. 1998. Keeping a reflective practice diary: a practical guide. Nurse Education Today 18, 592–598.

Heikkinen, H. L. T. 1999. Opettajaksi kertomusten kautta. In H. Niemi (Ed.) Opettajankoulutus modernin murroksessa. Tampere: Tampereen yliopiston julkaisujen myynti, 192–216.

Heinonen, N. 2004. Terveysalan koulutuksen työssäoppiminen ja ohjattu harjoittelu. Suositus sosiaali- ja terveydenhuollon toimintayksiköille. [On-the-job learning and supervised training in health care education in Finland. Recommendations for social welfare and health care establishments. Ministry of Social Affairs and Health, Finland]. Sosiaali- ja terveysministeriön monisteita 2003:22. Helsinki: Sosiaali- ja terveysministeriö, Terveydenhuollon ammattihenkilöiden neuvottelukunta.

Helakorpi, S. & Olkinuora, A. 1997. Asiantuntijuutta oppimassa. Ammatti korkeakoulupedagogiikkaa. Helsinki: WSOY.

Henderson, E. Berlin, A., Freeman, G. & Fuller, J. 2002. Twelve tips for promoting significant event analysis to enhance reflection in undergraduate medical students. Medical Teacher 24(2) 121–124.

Hildén, R. 1999. Sairaanhoitajan ammatillinen pätevyys ja ammatilliseen pätevyyteen vaikuttavat tekijät. Acta Universitatis Tamperensis 706. Väitöskirja.

Hildén, R. 2002. Ammatillinen osaaminen hoitotyössä. Helsinki: Hygieia, Tammi.

Hiltunen, T. & Lehtinen, E. 2002. Opettajaksi kasvu, itseohjautuvuus ja itsesäätely. In E. Lehtinen & T. Hiltunen (Eds.) Oppiminen ja opettajuus. Turun yliopiston kasvatustieteiden tiedekunnan julkaisuja B: 71. Turun opettajankoulutuslaitos, 157–176.

Hintikka, M. 2002. Hoitotyön opiskelijoiden pelot ensimmäisessä kliinisessä harjoittelussa. Tampereen yliopisto. Hoitotieteen laitos. Pro -gradu tutkielma.

Hirsjärvi, S. 1985. Johdatus kasvatusfilosofiaan. Helsinki: Kirjayhtymä.

Holmia, Silja. 2001. Hoitotyön opettajan ja opiskelijan yhteistyösuhde hoitotyön opettamisessa ja oppimisessa. Tampereen yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Hoyles, A., Pollard, C., Lees, S. & Glossop, D. 2000. Nursing students' early exposure to clinical practice: an innovation in curriculum development. Nurse Education Today 20, 490–498.

Hull, C. & Redfern, L. 1996. Profiles and portfolios. A guide for nurses and midwives. London: MacMillan Press.

Hupert, N. & Pels, R. 1995. Learning the art of doctoring: Use of critical incident reports. Student BMJ 3(28), 99–100.

Hurtig, W.A. & Stewin, L. 1990. The effect of death education and experience on nursing students' attitude towards death. Journal of Advanced Nursing 15, 29–34.

Hämäläinen, S. 1995. "Luulen, että tänään olen oppinut paljon enemmän itsestäni". Sairaanhoitajaopiskelijoiden kokemuksia hoitotyöstä ja sen oppimisesta sairaalaympäristössä. Tampereen yliopisto. Pro gradu -tutkielma.

Ihanainen, P. 1995. Tunteiden tiedostaminen – emotionaalis-moraalinen vahvistuminen aikuiskoulutuksessa. Siinä ei ollut salaseuran makua. Työelämän tutkinnot. Helsinki: Opetushallitus.

Illeris, K. 2003. Towards a contemporary and comprehensive theory of learning. International Journal of Lifelong Education 22(4) 396–406.

Isen, A. M., Johnson, M. M. S., Mertz, E. & Robinson, G. F. 1985. The influence of positive affect on the unusualness of word associations. Journal of Personality and Social Psychology 48(6), 1413–1426.

Isen, A. M., Means, B., Patrick, R. & Nowicki, G. 1982. Some factors influencing decision-making strategy and risk taking. In Clark, M. S. & Fiske, S. T. (Eds.) Affect and cognition. Hillsdale, NJ: Lawrence Erlbaum, 243–261.

Isokorpi, T. 2003. Tunneälytaitojen ja yhteisöllisyyden oppiminen reflektoinnin ja ryhmäprosessin avulla. Tampereen yliopisto, Ammattikasvatuksen tutkimus- ja koulutuskeskus. Hämeen ammattikorkeakoulu.

Isokorpi, T. & Viitanen, P. 2001. Pro Tunnevoimaa! Helsinki: Tammi.

Izard, C. E. 1986. Approaches to developmental research on emotion-cognition relationships. In D. J. Bearison & H. Z. Zimiles (Eds.) Thought and emotion: Developmental perspectives. Hillsdale, NJ: Erlbaum, 21–37.

Jackson, D. & Mannix, J. 2001. Clinical nurses as teachers: insights from students of nursing in their first semester of study. Journal of Clinical Nursing 10 (2), 270–277.

James, C. R. & Clarke, B. A. 1994. Reflective practice in nursing: issues and implications for nurse education. Nurse Education Today 14, 82–90.

Janhonen, S. 1992. The core of nursing as seen by the nurse teachers in Finland, Norway and Sweden. Department of Nursing. Acta Universitatis Ouluensis Series D Medica 245.

Jaroma, A. 2000. Koulutus ja tuleva toiminta hoitotyössä. Kysely kätilö-, sairaanhoitaja- ja terveydenhoitajaopiskelijoille. Kuopio University Publications E. Social Sciences 83.

Jarvis, P. 1987. Meaningful and meaningless experience: towards an analysis of learning from life. Adult Education Quarterly 37(3), 164–172.

Jarvis, P. 1992. Reflective practice and nursing. Nurse Education Today 12, 174–181.

Jarvis, P. 1999. The way forward for practice education. Nurse Education Today 19, 269–273.

Jarvis, P. 2000. The practitioner -researcher in nursing. Nurse Education Today 20, 30–35.

Jarvis, P. & Gibson, S. 1997. The teacher practitioner and mentor in nursing, midwifery, health visiting and the social services. 2nd Edition. Cheltenham: Stanley Thornes Ltd.

Jasper, M. A. 1994. Issues in phenomenology for researches of nursing. Journal of Advanced Nursing 19, 309–314.

Jasper, M. A. 1999. Nurses' perceptions of the value of written reflection. Nurse Education Today 19, 452–463.

Johns, C. 1994. Guided reflection. In A. Palmer, S. Burns & C. Bulman (Eds.) Reflective practice in nursing. Oxford: Blackwell Science, 110–130.

Johns, C. 1995. Framing learning through reflection within Carper's fundamental ways of knowing in nursing. Journal of Advanced Nursing 22, 226–234.

Johns, C. 2000. Becoming a reflective practitioner. Oxford: Blackwell Science.

Johnson, G. R. 1994. The phenomenon of death: a study of Diploma in Higher Education nursing students' reality. Journal of Advanced Nursing 19, 1151–1161.

Jonassen, D. H. 1991. Evaluating constructivistic learning. Educational Technology. September 1991, 28–33.

Jones, P. 1995. Hindsight bias in reflective practice: an empirical investigation. Journal of Advanced Nursing 21, 783–788.

Järvelä, S. 1996a. New models of teacher-student interaction – a critical review. In S. Järvelä. Cognitive apprenticeship model in a complex technology-based learning environment: Socioemotional processes in learning interaction. Joensuun yliopisto. Kasvatustieteellisiä julkaisuja 30.

Järvelä, S. 1996b. The cognitive apprenticeship model in a technologically rich learning environment: interpreting the learning interaction. In S. Järvelä. Cognitive apprenticeship model in a complex technology-based learning environment: Socioemotional processes in learning interaction. Joensuun yliopisto. Kasvatustieteellisiä julkaisuja 30.

Järvelä, S. 1998. Socioemotional aspects of students' learning in cognitive-apprenticeship environment. Instructional Science 26, 439–472.

Järvinen, A. 1990. Reflektiivisen ajattelun kehittyminen opettajakoulutuksen aikana. Jyväskylän yliopisto. Kasvatustieteiden tutkimuslaitoksen julkaisusarja. Tutkimuksia A 35.

Järvinen, A. 1996. Aikuisopiskelijan orientaatiot työn ja koulutuksen maastoissa. Tampereen yliopisto. Kasvatustieteiden laitos. Julkaisusarja A 56.

Järvinen, A. 1999. Opettajan ammatillinen kehittymisprosessi ja sen tukeminen. In A. Eteläpelto & P. Tynjälä (Eds.) Oppiminen ja asiantuntijuus. Helsinki: WSOY, 160–179.

Järvinen, A., Koivisto, P. & Poikela, E. 2000. Oppiminen työssä ja työyhteisössä. Helsinki: WSOY.

Kalli, P. 2003. Ratkaisukeskeinen pedagogiikka ammatillisen opettajan työvälineenä. In H. Kotila (Ed.) Ammattikorkeakoulupedagogiikka. Helsinki: Edita, 59–75.

Kallinen, U. 1997. Terveydenhuollon opettajaksi kasvu - Opettajaopiskelijoiden kokemat merkitykselliset tapahtumat opetusharjoittelussa. Kuopion yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Karma-Järvinen, A. 1999. Reflektio hoitotyön opetuksessa – opettajien käsityksiä. Tampereen yliopisto. Hoitotieteen laitos. Pro -gradu tutkielma.

Karoly, P. 1993. Mechanisms of self-regulation: A system view. Annual Review of Psychology 44, 23–52.

Karttunen, P. 2003. Tietävien käytännön osaajien kouluttaminen sosiaali- ja terveysalalla. In A. Kauppi & T. Huttula (Eds.) Laatua ammattikorkeakouluihin. Korkeakoulujen arviointineuvoston julkaisuja 7: 2003. Helsinki: Edita, 33–44.

Kauppi, A. 2003. Ammattikorkeakoulujen koulutuksen kehityslinjoja. In A. Kauppi & T. Huttula (Eds.) Laatua ammattikorkeakouluihin. Korkeakoulujen arviointineuvoston jukaisuja 7: 2003. Helsinki: Edita, 6–18.

Kelly, B. 1998. Preserving moral integrity: a follow-up study with new graduate nurses. Journal of Advanced Nursing 28, 1134–1145.

Kember, D. 1999. Determining the level of reflective thinking from students' written journals using coding scheme based on the work of Mezirow. International Journal of Lifelong Education 18(1), 18–30.

Kember, D., Jones, A., Loke, A. Y., McKay, J., Sinclair, K., Tse, H., Webb, C., Wong, F., Wong, M. & Yeung, E. 1999. Determining the level of reflective thinking from students' written journals using a coding scheme based on the work of Mezirow. International Journal of Lifelong Education 18(1), 18–30.

Kember, D., Leung, D., Jones, A., Loke, A. Y., McKay, J., Sinclair, K., Tse, H., Webb, C., Wong, F., Wong, M. & Yeung, E. 2000. Development of a questionnaire to measure the level of reflective thinking. Assessment & Evaluation in Higher Education 25(4), 381–395.

Kemppainen, J. K. 2000. The critical incident technique and nursing quality research. Journal of Advanced Nursing 32, 1264–1271.

Keskimaa, M. 1999. Opettajien ja opiskelijoiden käsityksiä teorian ja käytännön integroinnista hoitotyön koulutuksessa. Tampereen yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Kiesler, C. A. 1982. Comments. In M. S. Clark & S. T. Fiske (Eds.) Affect and cognition. Hillsdale, NJ: Erlbaum, 111–118.

Kim, H. S. 1999. Critical reflective inquiry for knowledge development in nursing practice. Journal of Advanced Nursing 29, 1205–1212.

King, P. A., Arnold, A. M. & Wolanin, M. O. 1986. Elderly clients as educators. Journal of Gerontological Nursing 12, 17–21.

Kirjonen, J. 1997. Johdanto. In J. Kirjonen, P. Remes & A. Eteläpelto (Eds.) Muuttuva asiantuntijuus. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos, 11–27.

Kirshner, D. & Whitson, J. A. 1997. Editors' introduction to situated cognition: Social, semiotic, and psychological perspectives. In D. Kirshner & J. A. Whitson (Eds.) Situated cognition. Social, semiotic, and psychological perspectives. Mahwah, New Jersey: Lawrence Erlbaum Associates, 1–16.

Kivelä, A. & Janhonen, S. 1996. Sairaanhoidon opiskelijoiden näkemys hoitotyöstä sairaanhoitajakoulutuksen ensimmäisen harjoittelujakson jälkeen. In H. Aavarinne, R.-L. Kortesluoma & H. Kyngäs Vuosikymmen hoitotieteellistä koulutusta ja tutkimusta Oulun yliopistossa. Oulun yliopiston hoitotieteen laitoksen julkaisuja 1, 161–169.

Kivinen, O. & Ristelä, P. 2003. Pragmatistisia näkökulmia konstruktivistisiin oppimiskäsityksiin. Psykologia 1(4), 4–11.

Kivistö, S. 2003. Metakognitiivisen prosessoinnin huomioonottaminen kognitiivisen psykoterapian työskentelymallissa. Psykologia 3, 152–159.

Klisch, M. L. 1990. Caring for persons with AIDS: student reactions. Nurse Educator 15, 16–20.

Knight, C. M. Moule, P. & Desbottes, Z. 2000. The grid that bridges the gap. Nurse Education Today 20, 116–122.

Knowles, M. S. 1989. The making of an adult educator. An autobiographical journey. San Francisco: Jossey-Bass.

Koch, T. 1995. Interpretive approaches in nursing research: the influence of Husserl and Heidegger. Journal of Advanced Nursing 21, 827–836.

Koch, T. 1998. Story telling: is it really research? Journal of Advanced Nursing 28, 1182–1190.

Koh, L.C. 2002a. The perceptions of nursing students of practice-based teaching. Nurse Education in practice 2, 35–43.

Koh, L. C. 2002b. Practice-based teaching and nurse education. Nursing Standard 16(19), 38–42.

Kolb, D. A. 1984. Experiential learning. Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall.

Kolkka, M. 2001. Ammattiin oppimisen situationaalisuus, yksilöllisyys ja prosessuaalisuus. Academic Dissertation. The Faculty of Education of the University of Tampere.

Konttinen, E. 1997. Professionaalinen asiantuntijatyö ja sen haasteet myöhäismodernissa. In J. Kirjonen, P. Remes & A. Eteläpelto (Eds.) Muuttuva asiantuntijuus. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos, 48–61.

Koponen, P., Perälä, M-L. & Räikkönen, O. 2000a. Kriittisten tapahtumien tekniikka tutkimusmenetelmänä – metodinen tarkastelu (osa I). Hoitotiede 4, 164–172.

Koponen, P., Perälä, M-L. & Räikkönen, O. 2000b. Kriittisten tapahtumien tekniikka tutkimusmenetelmänä väestökyselyssä – naiset hoitokokemustensa kuvaajina (osa II). Hoitotiede 4, 173–183.

Koro, J. 1993. Itseohjattu oppiminen – aikuiskoulutuksen tavoite vai väline. In A. Kajanto (Ed.) Aikuisten oppimisen uudet muodot. Kohti aktiivista oppimista. Kansanvalistusseura ja Aikuiskasvatuksen Tutkimusseura, 21–48.

Koskinen, L. & Silen-Lipponen, M. 2001. Ohjattu harjoittelu oppimiskontekstina sairaanhoidon opiskelijan kokemana. Hoitotiede 3, 122–131.

Kosowski, M. M. 1995. Clinical learning experiences and professional nurse caring: a critical phenomenological study of female baccalaureate nursing students. Journal of Nursing Education 34, 235–242.

Kotila, H. 2003. Oppimiskäsitykset ammattikorkeakoulutuksessa. In H. Kotila (Ed.) Ammattikorkeakoulupedagogiikka. Helsinki: Edita, 13–23.

Käytännön opiskelu hoitoalan ammattiin oppimisessa - kysely sosiaali- ja terveysalan koulutus- ja toimintayksiköille. 1998. Monisteita 1998:12. Helsinki: Sosiaali- ja terveysministeriö, Terveydenhuollon ammattihenkilöiden neuvottelukunta.

Laakkonen, A. 2004. Hoitohenkilöstön ammatillinen kasvu hoitokulttuurissa. Kasvatustieteiden tiedekunta. Tampereen yliopisto. Akateeminen väitöskirja.

Laine, T. 2001. Kasvatustilanteen kaksisuuntaisuudesta. In M. Itkonen (Ed.) Ihminen, mikä ja kuka olet? Tampere University Press, 119–142.

Landeen, J., Byrne, C. & Brown, B. 1995. Exploring the lived experiences of psychiatric nursing students through self-reflective journals. Journal of Advanced Nursing 21, 878–885.

Langer, A. M. 2002. Reflecting on Practice: using learning journals in higher and continuing education. Teaching in Higher Education 7(3), 337–351.

Launis, K. & Engeström, Y. 1999. Asiantuntijuus muuttuvassa työtoiminnassa. In Eteläpelto, A. & Tynjälä, P. (Eds.) Oppiminen ja asiantuntijuus. Helsinki: WSOY, 64–81.

Laurila, E. 2003. Kohti persoonallisen ammatillisen kasvun ammattikorkeakoulua. In A. Kauppi & T. Huttula (Eds.) Laatua ammattikorkeakouluihin. Korkeakoulujen arviointineuvoston julkaisuja 7: 2003. Helsinki: Edita, 68–83.

Lave, J. 1988. Cognition in practice. Cambridge: Cambridge University Press.

Lave, J. 1993. The practice of learning. In S. Chaiklin & J. Lave (Eds.) Understanding practice. Perspectives on activity and context. Cabridge: Cambridge University Press, 3–32.

Lave, J. & Wenger, E. 1991. Situated learning. Legitimate peripheral participation. Cambridge: Cambridge University Press.

Lazarus, R. S. 1991. Cognition and Motivation in Emotion. American Psychologist 46(4), 352–367.

Lee, D. T. F. 1996. The clinical role of the nurse teacher: a review of the dispute. Journal of Advanced Nursing 23, 1127–1134.

Lehtinen, E. & Kuusinen, J. 2001. Kasvatuspsykologia. Helsinki: WSOY.

Lehtinen, E. & Palonen, T. 1997. Tiedon verkostoituminen – haaste asiantuntijuudelle. In J. Kirjonen, P. Remes & A. Eteläpelto (Eds.) Muuttuva asiantuntijuus. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos, 103–121.

Lehtovaara, M. 1994a. Fenomenologinen näkökulma ihmisen tutkimisen metodologiaan. In Varto, J. Kohti elämismaailman ja ihmisen laadullista tutkimista. Tampere: Suomen fenomenologinen instituutti, 3–32.

Lehtovaara, M. 1994b. Subjektiivinen maailmankuva kasvatustieteellisen tutkimuksen kohteena. Tampereen yliopisto. Julkaisusarja A: tutkimusraportti N:o 53. Kasvatustieteiden laitos.

Leinhardt, G., McCarthy Yong, K. & Merriman, J. 1995. Integrating professional knowledge: the theory of practice and the practice of theory. Learning and Instruction 5, 401–408.

Leino-Kilpi, H. 1992. Self-evaluation in nursing students in Finland. Nurse Education Today 12, 424–430.

Lemos, M. S. 1999. Students' goals and self-regulation in the classroom. International Journal of Educational Research 31, 471–485.

Lepola, J. & Vauras, M. 2002. Oppiminen ja motivaation kehittyminen. In E. Lehtinen & T. Hiltunen (Eds.) Oppiminen ja opettajuus. Turun yliopiston kasvatustieteiden tiedekunnan julkaisuja B: 71. Turun opettajankoulutuslaitos, 13–38.

Liimatainen, L. 2002. Kokemuksellisen oppimisen kautta kohti terveyden edistämisen asiantuntijuutta. Hoitotyön ammattikorkeakouluopiske lijoiden terveyden edistämisen oppiminen hoitotyön harjoittelussa.

[Towards health promotion expertise through experiential learning. Student nurses' health promotion learning during clinical practice] Jyväskylän yliopisto: Studies in Sport, Physical Education and Health 90.

Liimatainen, L., Poskiparta, M., Karhila, P. & Sjögren, A. 2001. The development of reflective learning in the context of health counselling and health promotion during nurse education. Journal of Advanced Nursing 34, 648–658.

Lincoln, Y. S. & Guba, E. G. 2000. Paradigmatic controversies, contradictions, and meerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research. 2nd edition. Thousand Oaks, California: Sage, 163–188.

Lindop, P. 1999. A comparative study of stress between pre- and post-Project 2000 students. Journal of Advanced Nursing 29, 967–973.

Lloyd Jones, M., Walters, S. & Akehurst, R. 2001. The implications of contact with the mentor for preregistration nursng and midwifery students. Journal of Advanced Nursing 35, 151–160.

Locke, E. A., Shaw, K. N., Saari, L. M. & Latham, G. P. 1981. Goal Setting and Task Performance. Psychological Bulletin 90, 125–152.

Lonka, K. 1999. Ihmissuhdetaitojen opettaminen tuleville lääkäreille. Suomen Lääkärilehti 32, 3989–3990.

Lonka, K. & Hakkarainen, K. 2000. Oppiminen vuonna 2020? Psykologia 2(35), 135–142.

Lonka, K. & Lindblom-Ylänne, S. 2001. Yliopisto-oppimisen tutkimus: metodologisia pohdintoja. Psykologia 1-2, 36–48.

Lundberg, P. C. & Boonprasabhai, K. 2001. Meanings of good nursing care among Thai female last-year undergraduate nursing students. Journal of Advanced Nursing 34, 35–42.

Luopajärvi, T. 1993. Ammattioppilaitosten opiskelijoiden motivaatioperusta. In P. Ruohotie, J. Leino & P. Rauhala (Eds.) Oppimis- ja opettamismotivaatio ammatillisissa opinnoissa. Ammattikasvatussarja 7. Hämeenlinna: Tampereen yliopiston Hämeenlinnan opettajankoulutuslaitos, 241–316.

Luukka, K. 1998. Sairaanhoidon opiskelijoiden arviointi hoitotyön käytännön opiskelusta. Kuopion yliopisto. Hoitotieteen laitos. Lisensiaattitutkimus.

Lyons, J. 1999. Reflective education for professional practice: discovering knowledge from experience. Nurse Education Today 19, 29–34.

Löfmark, A. & Wikblad, K. 2001. Facilitating and obstructing factors for development of learning in clinical practice: a student perspective. Journal of Advanced Nursing 34, 43–50.

Macaulay, C. 2000. Transfer of learning. In V. E. Cree & C. Macaulay Transfer of learning in professional and vocational education. London: Routledge, 1–26.

Mahara, M. 1998. A perspective on clinical evaluation in nursing education. Journal of Advanced Nursing 28, 1339–1346.

Mahat, G. 1996. Stress and coping: first year Nepalese nursing students in clinical settings. Journal of Nursing Education 35(4), 163–169.

Mair, M. 1980. Feeling and knowing. In P. Salmon (Ed.) Coming to know. London: Routeledge & Kegan Paul, 113–127.

Malinen, A. 2000. Towards the essence of adult experiential learning. SoPhi, University of Jyväskylä.

Mallik, M. 1998. The role of nurse educators in the development of reflective practitioners: a selective case study of the Australian and UK experience. Nurse Education Today 18, 52–63.

Malmivuori, M-L. 2001. The dynamics of affect, cognition, and social environment in the regulation of personal learning processes: The Case of Mathematics. Department of Education, University of Helsinki. Research Report.

Mannila, M. 1998. Röntgenhoitajaopiskelijoiden kokemuksia kliinisen opiskelun ohjauksesta. Tampereen yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Manninen, E. 1998. Changes in nursing students' perceptions of nursing as they progress through their education. Journal of Advanced Nursing 27, 390–398.

Martin, G. W. 1998. Empowerment of dying patients: the strategies and barriers to patient autonomy. Journal of Advanced Nursing 28, 737–744.

Martin, G. W. & Mitchell, G. 2001. A study of critical incident analysis as a route to the identification of change necessary in clinical practice: addressing the theory-practice gap. Nurse Education in Practice 1, 27–34.

Mathers, N. J., Challis, M. C., Howe, A. C. & Field N. J. 1999. Portfolios in continuing medical education – effective and efficient? Medical Education 33, 521–530.

Matthew Maich, N., Brown, B. & Royle, J. 2000. 'Becoming' through reflection and professional portfolios: the voice of growth in nurses. Reflective Practice 1(3), 309–324.

Matthews, G., Schwean, V. L., Campbell, S. E., Saklofske, D. H. & Mohamed, A. A. R. 2000. Personality, self-regulation, and adaptation. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 171–207.

May, N. & Veitch, L. 1998. Working to learn and learning to work: placement experience of Project 2000 nursing students in Scotland. Nurse Education Today 18, 630–636.

Mayne, T. J. 2001. The structure of emotion. In T. J. Mayne & G. A. Bonanno (Eds.) Emotions. Current issues and future directions. New York: Guilford Press, 1–37.

Mayne, T. J. & Bonnano, G. A. 2001. Preface. In T. J. Mayne & G. A. Bonanno (Eds.) Emotions. Current issues and future directions. New York: Guilford Press, xvii–xx.

McCaugherty 1991. The theory-practice gap in nurse education; its causes and possible solutions. Findings from an action research study. Journal of Advanced Nursing 16, 1055–1061.

McKeachie, W. J. 2000. Foreword. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, xxi–xxiii.

McLaughlin, C. 1997. The effect of classroom theory and contact with patients on the attitudes of student nurses towards mentally ill people. Journal of Advanced Nursing 26, 1221–1228. Merleau-Ponty, M. 1962/1978. Phenomenology of perception. (Phènomènologie de la perception. Translated from the French by Colin Smith). London: Routledge & Kegan Paul.

Merriam, S. 1987. Adult learning and theory building: a review. Adult Education Quarterly 37(4), 187–198.

Merriam, S. B. & Caffarella, R. S. 1999. Learning in adulthood: a comprehensive guide. Second Edition. San Francisco: Jossey-Bass.

Merriam, S. & Clark, M. 1993. Learning from life experience: What makes it significant? International Journal of Lifelong Education 12(2), 129–138.

Merriam, S. & Heuer, B. 1996. Meaning-making, adult learning and development: a model with implications for practice. International Journal of Lifelong Education 15(4), 243–255.

Meurier, C.E. 2000. Understanding the nature of errors in nursing: using a model to analyse critical incident reports of errors which have resulted in an adverse or potentially adverse event. Journal of Advanced Nursing 32, 202–207.

Meurier, C.E., Vincent, C.A. & Parmar, D.G. 1997. Learning from errors in nursing practice. Journal of Advanced Nursing 26, 111–119.

Mezirow, J. 1981. A critical theory of adult learning and adult education. Adult Education 32(1), 3–24.

Mezirow, J. 1991. Transformative dimensions of adult learning. San Francisco: Jossey-Bass.

Mezirow, J. 1994. Understanding transformation theory. Adult Education Quarterly 44(4), 222–232.

Mezirow, J. 2000. Learning to think like an adult: core concepts of transformation theory. In J. Mezirow et Associates. Learning as Transformation. San Francisco: Jossey-Bass, 3–33.

Mezirow, J. et al. 1995. Uudistava oppiminen. Kriittinen reflektio aikuiskoulutuksessa. Helsingin yliopiston Lahden koulutus- ja kehittämiskeskus. [Mezirow, J. & Associates 1990. Fostering critical reflection in adulthood. A guide to transformative and emancipatory learning.] San Francisco: Jossey-Bass.

Michelson, E. 1996. Usual suspects: experience, reflection, and the (en)gendering of knowledge. International Journal of Lifelong Education 15(6), 438–454.

Mikkonen, I. 1999. Merkitykselliset tapahtumat - tekniikka opetus- ja oppimismenetelmänä sairaanhoitajakoulutuksessa. Joensuun yliopisto. Kasvatustieteen laitos. Laudatur -tutkielma.

Mikkonen, I. 2003. Clinical learning as experienced by student nurses in their critical incidents. University of Joensuu. Faculty of Education. Licentiate thesis.

Mikkonen, I. & Pitkänen, M. 1998. Sairaanhoitajaopiskelijoiden kokemuksia kliinisestä opiskelusta. Terveydenhuollon hallinnon laitos, Kuopion yliopisto. Tutkielma.

Miles, M. B. & Huberman, A. M. 1994. Qualitative data analysis. 2nd edition. Thousand Oaks, California: SAGE.

Minghella, E. & Benson, A. 1995. Developing reflective practice in mental health nursing through critical incident analysis. Journal of Advanced Nursing 21, 205–213

Moilanen, P. 1999. Piilevä tieto ja refelktio. In H. L. T. Heikkinen, R. Huttunen & P. Moilanen (Eds.) Siinä tutkija missä tekijä. Toimintatutkimuksen perusteita ja näköaloja. Jyväskylä: Atena, 85–110.

Mok, E., Lee, W.M. & Wong F.K. 2002. The issue of death and dying: employing problem-based learning in nursing education. Nurse Education Today 22, 319–329.

Morgan, S. & Sanggaran, R. 1997. Client-centred approach to student nurse education in mental health practicum: an inquiry. Journal of Psychiatric and Mental Health Nursing 4, 423–434.

Morle, K. M. F. 1990. Mentorship – is it a case of emperors' new clothes or a rose by any other name? Nurse Education Today 10, 66–69.

Moskowitz, J. T. 2001. Emotion and coping. In T. J. Mayne & G. A. Bonanno (Eds.) Emotions. Current issues and future directions. New York: Guilford Press, 311–336.

Mountford, B. & Rogers, L. 1996. Using individual and group reflection in and on assessment as a tool for effective learning. Journal of Advanced Nursing 24, 1127–1134

Munnukka, T. 1996. Opiskelija - omahoitajan yhteistyösuhteen opiskelu ja oppiminen käytännöllisessä opiskelussa – yhteistyösuhteen sisältö ja sen reflektio. Hoitotiede 3, 127–133.

Munnukka, T. 1997. Hoitamaan oppiminen ja opettaminen. Tampereen yliopisto. Akateeminen väitöskirja.

Myller, H. & Venejärvi, R. 1998. Opiskelijoiden kokemuksia itseohjautuvuudesta hoitotyön oppimisessa. In K. Tossavainen & H. Turunen, H. (Ed.) Koulutusrakenteet muuttuvat – muuttuuko opetus ja oppiminen? Tampere: Kirjayhtymä, 23–27.

Mäkelä, M. & Laine, T. 1998. Student teachers' personal and professional development from a biographical perspective. In R. Erkkilä, L. Syrjälä & A. Willman (Eds.) Promoting teachers' personal and professional growth. University of Oulu. Acta Universitas Ouluensis, 132–147.

Mäki-Opas, A. 1993 "Älä katko kasvavan siipiä!" Auttava, terapeuttinen kasvatus Lauri Rauhalan eksistentiaalis-fenomenologisesta näkökulmasta tarkasteltuna [Helping, therapeutic education from the existential phenomenological viewpoint of Lauri Rauhala.] University of Oulu. Acta Universitatis Ouluensis Series E, Scientiae rerum socialium 13.

Mäki-Opas, A. 1999. Murtuneet siivet: auttamisen ja muuttumisen mahdollisuudet. Helsinki: Kirjayhtymä.

Mäkisalo, M. 1998. Terveydenhuolto-oppilaitoksen organisaatiokulttuuri. Opettajien ja opiskelijoiden käsitykset todellisesta ja toivotusta toiminnasta. Kuopio University Publications e. Social Sciences 58.

Mäkisalo, M. 1999. Terveydenhuolto-oppilaitoksen organisaatiokulttuuri. Sairaanhoitaja 3, 27–29.

Mölsä, K. 2000. Sairaanhoitajaopiskelijoiden käytännön ohjaus ohjaajan näkökulmasta. Tampere: Tampereen yliopisto.

Narayanasamy, A. & Owens, J. 2001. A critical incident study of nurses' responses to the spiritual needs of their patients. Journal of Advanced Nursing 33, 446–455.

Natanson, M. 1973. Edmund Husserl. Philosopher of infinite tasks. Northwestern University Studies in Phenomenology and Existential Philosophy. Evanston: Northwestern University Press.

Neary, M. 2000. Supporting students' learning and professional development through the process of continuous assessment and mentorship. Nurse Education Today 20, 463–474.

Neary, M. 2001. Responsive assessment: assessing student nurses' clinical competence. Nurse Education Today 21, 3–17.

Nelson, A. 1994. Researching adult transformation as autobiography. International Journal of Lifelong Education 13(5), 389–403.

Nelson, L. & McSherry, R. 2002. Exploring the lecturer / practitioner role: individuals' perceptions of the lived experience. Nurse Education in Practice 2, 109-118.

Niemi, H. 1999. Aktiivinen oppiminen – opettajankoulutuksen ja koulun yhteinen tehtävä. In H. Niemi (Ed.) Opettajankoulutus modernin murroksessa. Tampere: Tampereen yliopiston julkaisujen myynti, 64–94.

Niemi, H. 2000. Why is active learning so difficult? In B.Beairsto & P. Ruohotie (Eds.) Empowering teachers as lifelong learners. Hämeenlinna: Research Centre for Vocational Education, 97–126.

Nieminen, S. 2000. Ammattikorkeakoulusta valmistuvien sairaanhoitajien käsityksiä hoitotyön käden taidoista. Tampereen yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Nolan, C. 1998. Learning on clinical placement: the experience of six Australian student nurses. Nurse Education Today 18, 622–629.

Nolan, P. W. & Cheung Chung, M. 1999. Nursing students' perceptions of their first mental health placement. Nurse Education Today 19, 122–128.

Norman, I., Redfern, S., Tomalin, D. & Oliver, S. 1992. Developing Flanagan's critical incident technique to elicit indicators of high and low quality nursing care from patients and their nurses. Journal of Advanced Nursing 17, 590–600.

Novak, J. D. 1998. Learning, Creating, and Using Knowledge: Concept Maps as Facilitative Tools in School and Corporations. New Jersey: Erlbaum.

Novak, J. D. 2002. Tiedon oppiminen, luominen ja käyttö. Käsiterkartat työvälineinä oppilaitoksissa ja yrityksissä. [Learning, creating and using knowledge: concept maps as facilitative tools in schools and corporations]. Translated in Finnish by Åhlberg, M. Jyväskylä: PS-kustannus.

November, P. 1996. Journals for the journey into deep learning: A framework. Higher Education Research and Development, 15, 115–127.

Nummenmaa, A. R. 2002. Ammattikorkeakoulu oppimisympäristönä. In J. - P. Liljander (Ed.) Omalla tiellä. Ammattikorkeakoulut kymmenen vuotta. Helsinki: Arene, Edita, 128–141.

Nurmi, J.-E., Aunola, K. & Onatsu-Arvilommi, T. 2001. Työskentelytavat oppimisvaikeuksien selittäjinä. Psykologia 1-2, 68–73.

Nurminen, L. 1995. Hoitotyö ja sen oppiminen sairaanhoitajakoulutusta aloittavan opiskelijan kokemana. Tampereen yliopisto. Pro gradu -tutkielma.

Nurminen, R. 2000. Intuitio ja hiljainen tieto hoitotyössä. [Intuition and tacit knowledge in nursing care] Kuopio University Publications E. Social Sciences 80.

Näätänen, P., Ryynänen, A., Räikkönen, K., Ravaja, N. & Keltikangas-Järvinen, L. 1995. Emootioiden funktiot, säätely ja somaattinen terveys. In K. Räikkönen & J. Nurmi (Eds.) Persoonallisuus, terveys ja hyvinvointi. Acta Psychologica Fennica. Soveltavan psykologian monografioita 8. Helsinki: Suomen psykologinen seura, 54–75.

Oatley, K. 1991. Distributed cognition. In Eysenck, M. W. (Ed.) The Blackwell dictionary of cognitive psychology. Oxford: Blackwell, 102–107.

Oermann, M.H. & Garvin, M.F. 2002. Stresses and challenges for new graduates in hospitals. Nurse Education Today 22, 225–230.

O'Gorman S.M. 1998. Death and dying in contemporary society: an evaluation of current attitudes and the rituals associated with death and dying and their relevance to recent understandings of health and healing. Journal of Advanced Nursing 27, 1127–1135.

Oinonen, I. 2000. Harjoittelun ohjaus hoitotyön koulutuksen eri vaiheissa. Lahden ammattikorkeakoulun julkaisusarja A. 2000.

Ojanen, S. 1993. Reflektiivisyys opetuksessa ja ohjauksessa. In Ojanen, S. (Ed.) Tutkiva opettaja. Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus, 125–147.

Ojanen, S. 1996. Reflektion käsite opettajankoulutuksessa. Muotihulluus vai kasvatusreformin kulmakivi. In S. Ojanen (Ed.) Tutkiva opettaja 2. Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus, 51–70.

Ojanen, S. 2000a. Ohjauksesta oivallukseen. Ohjausteorian kehittelyä. Helsinki: Palmenia kustannus.

Ojanen, S. 2000b. Ihmisenä kasvaminen. Mitä merkitsee ottaa kokemus käyttöönsä? In In K. Harra (Ed.) Opettajan professiosta. Artikkelisarja. OKKA-vuosikirja 2000, Nro 1. Helsinki: OKKA-säätiö, 98–106.

Ojanen, S**.** 2003. Ohjauksesta oivallukseen. Ohjausteorian kehittelyä. In R. Silkelä (Ed..) Tutkimuksia opetusharjoittelun ohjauksesta. Suomen harjoittelukoulujen vuosikirja n:o 1. Joensuun yliopisto, 11–22.

Opetussuunnitelma 1998. Degree Programme in Nursing. Pohjois-Savon ammattikorkeakoulu. Sosiaali- ja terveysala, Kuopio.

Ora – Hyytiäinen, E. 2004. Auttajasta reflektiiviseksi sairaanhoitajaksi. Ammattikorkeakouluopiskelijan kasvu ja kehittyminen ammattiin. Acta Universitatis Tamperensis 1032. Tampere University Press.

Packer, M. J. & Goicoechea, J. 2000. Sociocultural and constructivist theories of learning: Ontology, not just epistemology. Educational Psychologist 35(4), 227–241.

Paley, J. 1997. Husserl, phenomenology and nursing. Journal of Advanced Nursing 26, 187–193.

Palmer, A. 1994. Introduction. In A. Palmer, S. Burns & C. Bulman (Eds.) Reflective practice in nursing. The growth of the professional practitioner. Oxford: Blackwell Scientific Publications, 1–9.

Papp, I., Markkanen, M. & von Bonsdorff, M. 2003. Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences. Nurse Education Today 23, 262–268.

Parathian, A. R. & Taylor, F. 1993. Can we insulate trainee nurses form exposure to bad practice? A study of role play in communication bad news to patients. Journal of Advanced Nursing 18, 801–807.

Parker, D. L., Webb, J., D'Souza, B. 1994. The value of critical incident analysis as an educational tool and its relationship to experiential learning. Nurse Education Today 15, 111–116.

Parviainen, U. 1999. Sairaanhoitajaopiskelijoiden ja potilaan välinen kumppanuussuhde. Tampereen yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Pask, E. J. 1994. Trust: an essential component of nursing practice – implications for nurse education. Nurse Education Today 15, 190–195.

Paterson, P. 1994. Developing and maintaining reflection in clinical journals. Nurse Education Today 15, 211–220.

Perkins, D. N. & Salomon, G. 1989. Are cognitive skills context-bound? Educational Researcher 18(1), 16–25.

Perttula, J. 1993. Fenomenologinen psykologia kokemuksen systemaattista tutkimusta. Psykologia 28, 267–274.
Perttula, J. 1995a. Kokemus psykologisena tutkimuskohteena. Johdatus fenomenologiseen psykologiaan. Tampere: Suomen fenomenologinen instituutti.
Perttula, J. 1995b. Fenomenologisen psykologian metodi - kohti käsitteellistä selkeyttä. Hoitotiede 7 (1), 3–11.
Perttula, J. 1995c. Kokemuksen tutkimuksen luotettavuudesta. Kasvatus 1, 39–47.
Perttula, J. 1996. Deskriptio ja tulkinta: psykologin avaimia kokemukseen. Psykologia 31, 9–18.
Perttula, J. 1998. The experienced life-fabrics of young men. University of Jyväskylä. Jyväskylä Studies in Education, Psychology and Social Research. Doctoral dissertation.
Perttula, J. 1999 Mitä opettajuus on? In P. Räsänen, J. Arikoski, P. Mäntynen & J. Perttula (Eds.) Opettajuuden psykologia. Second edition. Jyväskylä: Julkishallinnon koulutuskeskus, 12–61.
Perttula, J. 2000. Kokemuksesta tiedoksi: fenomenologisen metodin uudelleen muotoilua. Kasvatus 31 (5), 428–442.
Peterson, C. & Seligman, M. E. P. 1987. Helplessness and attributional style in depression. In F. E. Weinert & R. H. Kluwe (Eds.) Metacognition, motivation and understanding. Hillsdale, NJ: Erlbaum, 185–215.
Petäjä, M. & Koponen, E. 2002. Muutosprosessin ohjaaminen. Aikuiskouluttajan opas. Helsinki: Dialogia Oy.
Phillips. D. C. 1995. The Good, the Bad, and the Ugly: The many faces of constructivism. Educational Researcher 24(7), 5–12.
Phillips, R.M., Davies, W.B. & Neary, M. 1996a. The practitioner-teacher: a study in the introduction of mentors in the preregistration nurse education programme in Wales. Part 1. Journal of Advanced Nursing 23, 1037–1044.
Phillips, R.M., Davies, W.B. & Neary, M. 1996b. The practitioner-teacher: a study in the introduction of mentors in the preregistration nurse education programme in Wales. Part 2. Journal of Advanced Nursing 23, 1080–1088.
Pierson, W. 1998. Reflection and nursing education. Journal of Advanced Nursing 27, 165–170.
Pilhammar Andersson, E. 1995. Marginality: concept or reality in nursing education? Journal of Advanced Nursing 21, 131–136.

Pintrich, P. R. 2000a. The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 451–502.

Pintrich, P. 2000b. The role of motivation in self-regulated Learning. In P. Pintrich & P. Ruohotie. Conative constructs and self-regulated learning. Hämeenlinna: Research Centre for Vocational Education, 51–66.

Pintrich, P. 2000c. Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. In P. Pintrich & P. Ruohotie. Conative constructs and self-regulated learning. Hämeenlinna: Research Centre for Vocational Education, 67–88.

Pintrich, P. 2000d. The role of goal orientation in self-regulated learning. In P. Pintrich & P. Ruohotie. Conative constructs and self-regulated learning. Hämeenlinna: Research Centre for Vocational Education, 89–139.

Pintrich, P. R. & McKeachie, W. J. 2000. A framework for conceptualizing student motivation and self-regulated learning in the college classroom. In P. Pintrich & P. Ruohotie. Conative constructs and self-regulated learning. Hämeenlinna: Research Centre for Vocational Education, 31–50.

Platzer, H., Blake, D. & Ashford, D. 2000. Barriers to learning from reflection: a study of the use of groupwork with post-registration nurses. Journal of Advanced Nursing 31, 1001–1008.

Platzer, H., Snelling, J. & Blake, D. 1997. Promoting reflective practitioners in nursing: a review of theoretical models and research into the use of diaries and journals to facilitate reflection. Teaching in Higher Education 2, 103–121.

Plutchik, R. 2003. Emotions and Life: Perspectives from psychology, biology and evolution. Washington DC: American Psychological Association.

Poikela, E. 2001. Ongelmaperustainen oppiminen yliopistossa. In E. Poikela & S. Öystilä, (Eds.) Tutkiminen on oppimista – ja oppiminen tutkimista. Tampere University press, 101–117.

Poikela, E. & Nummenmaa, R. 2002. Ongelmaperustainen oppiminen tiedon ja osaamisen tuottamisen strategiana. In E. Poikela (Ed.) Ongelmaperustainen pedagogiikka. Teoriaa ja käytäntöä. Tampere: Tampere University Press, 33–52.

Polanyi, M. 1958/1962. Personal knowledge. Towards a post-critical philosophy. Corrected Ed. London: Routledge.

Powell 1989. The reflective practitioner in nursing. Journal of Advanced Nursing 14, 824–832.

Pratt, D. D. 1993. Andragogy after twenty-five years. In S. B. Merriam (Ed.) An update on adult learning theory. New directions for adult and continuing education, No. 57. San Francisco: Jossey Bass, 15–23.

Preskill, H. 1997. Using critical incidents to model effective practice in the teaching of evaluation. Evaluation Practice 18 (1), 65–71.

Procter, S. & Reed, J. 1993. Teaching reflective practice: possibilities and constraints. In J. Reed & S. Procter Nurse education. A reflective approach. London: Edward Arnold, 30–44.

Puolimatka, T. 2002. Opetuksen teoria. Konstruktivismista realismiin. Helsinki: Tammi.

Puolimatka, T. 2004. Kasvatus, arvot ja tunteet. Helsinki: Tammi.

Quinn, F. M. 1995. The principles and practice of nurse education. Third edition. Cheltenham: Stanley Thornes.

Rafferty, A. M., Allcock, N. & Lathlean, J. 1996. The theory/practice 'gap': taking issue with the issue. Journal of Advanced Nursing 23, 685–691.

Rahilly, D. A. 1993. A phenomenological analysis of authentic experience. Journal of Humanistic Psychology 33 (2), 71.

Raij, K. 2000. Toward a profession. Clinical learning in a hospital environment as described by student nurses. University of Helsinki. Department of Education.

Randi, J. & Corno, L. 2000. Teacher innovations in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 651–685.

Rauhala, L. 1974. Psyykkinen häiriö ja psykoterapia filosofisen analyysin valossa. Helsinki: Weilin + Göös.

Rauhala, L. 1989. Ihmisen ykseys ja moninaisuus. Helsinki: SHKS, Karisto.

Rauhala, L. 1990. Humanistinen psykologia. Helsinki: Yliopistopaino.

Rauhala, L. 1993. Eksistentiaalinen fenomenologia hermeneuttisen tieteenfilosofian menetelmänä. Filosofisia tutkimuksia Tampereen yliopistosta, Vol. 41.

Rauhala, L. 1995. Tajunnan itsepuolustus. Helsinki: Yliopistopaino.

Rauste-von Wright, M. & von Wright, J. 1996. Oppiminen ja koulutus. Helsinki: WSOY.

Rauste-von Wright, M., von Wright, J. & Soini, T. 2003. Oppiminen ja koulutus. Helsinki: WSOY.

Reed, J. 1994. Phenomenology without phenomena: a discussion of the use of phenomenology to examine expertise on long-tem care of elderly patients. Journal of Advanced Nursing 19, 336–341.

Reid, B. 1993. 'But we're doing it already!' Exploring a response to the concept pf Reflective Practice in order to improve its facilitation. Nurse Education Today 13, 305–309.

Reynolds, W. & Scott, B. 2000. Do nurses and other professional helpers normally display much empathy? Journal of Advanced Nursing 31, 226–234.

Rich, A. & Parker, D. 1995. Reflection and critical incident analysis. Ethical and moral implications of their use within nursing and midwifery education. Journal of Advanced Nursing 22, 1050–1057.

Richardson, R. 1995. Humpty Dumpty: reflection and reflective nursing practice. Journal of Advanced Nursing 21, 1044–1050.

Richardson, G. & Maltby, H. 1995. Reflection-on-practice: enhancing student learning. Journal of Advanced Nursing 22, 235–242.

Rieber, L. P. 1993. A pragmatic view of instructional technology. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 194–212.

Riley-Doucet, C. & Wilson, S. 1997. A three-step method of self-reflection using reflective journal writing. Journal of Advanced Nursing 25, 964–968.

Roberts, J. 1992. The Logic of Reflection. German philosophy in the twentieth century. London: Yale University Press.

Rogoff, B. 1984. Introduction: Thinking and learning in social context. In B. Rogoff & J. Lave (Eds.) Everyday cognition: Its development in social context. Cambridge, Massachusetts: Harvard University Press, 1–8.

Rogoff, B. & Gardner, W. 1984. Adult guidance of cognitive development. In B. Rogoff & J. Lave (Eds.) Everyday cognition: Its development in social context. Cambridge, Massachusetts: Harvard University Press, 95–116.

Rolfe, G. 2002. Reflective practice: where now? Nurse Education in Practice 2, 21–29.

Rose, P., Beeby, J. & Parker, D. 1995. Academic rigour in the lived experience of researchers using phenomenological methods in nursing. Journal of Advanced Nursing 21, 1123–1129.

Roth, R. 1962. John Dewey and self-realization. New Jersey: Prentice Hall.

Roth, W-M. 1993. Construction sites: Science labs and classrooms. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 146–170.

Ruohotie, P. 1994. Motivation and self-regulated learning. In P. Ruohotie & P. P. Grimmett (Eds.) New themes for education in a changing world. University of Tampere and Simon Fraser University, 15–59.

Ruohotie, P. 1998. Motivaatio, tahto ja oppiminen. Helsinki: Edita.

Ruohotie, P. 2000a. Kehittävä vuorovaikutus ammatillisen kasvun perustana. In J. Honka, P. Ruohotie, A. Suvanto & L. Mustonen (Eds.) Ammattikasvatuksen haasteet 2000. Hämeen ammattikorkeakoulu julkaisu D:125. Hämeenlinna: Hämeen ammattikorkeakoulu, 23–31.

Ruohotie, P. 2000b. Oppiminen ja ammatillinen kasvu. Helsinki: WSOY.

Ruohotie, P. 2000c. Vuorovaikutteinen oppiminen. In J. Honka, P. Ruohotie, A. Suvanto & L. Mustonen (Eds.) Ammattikasvatuksen haasteet 2000. Hämeen ammattikorkeakoulu julkaisu D:125. Hämeenlinna: Hämeen ammattikorkeakoulu, 102–121.

Ruohotie, P. 2000d. Ammatillinen kasvu – jatkuvaa oppimista. Ammattikasvatuksen aikakauskirja 1, 4–7.

Ruohotie, P. & Honka, J. 2003. Ammatillinen huippuosaaminen: kompetenssitutkimusten avaama näkökulma huippuosaamiseen, sen kehittämiseen ja johtamiseen. Hämeenlinna: Hämeen ammatikorkeakoulu.

Ruohotie, P. & Nieminen, J. 2000. Itsesäätely oppimisessa. In P. Ruohotie, J. Honka & L. Mustonen 2000. Työssäoppimisen haasteet ammattikasvatukselle. Hämeenlinna:Hämeen ammattikorkeakoulu, 134–147.

Ruohotie, P. & Nokelainen, P. 2000. Modern modeling of student motivation and self-regulated learning. In P. Pintrich & P. Ruohotie. Conative constructs and self-regulated learning. Hämeenlinna: Research Centre for Vocational Education, 141–193.

Räisänen, A. 2002. Hoitotyöntekijöiksi valmistuvien osaaminen. Turun yliopiston julkaisuja. Sarja – Ser C osa 178.

Saarikoski, M. 2002. Clinical learning environment and supervision. Development and validation of the CLES evaluation scale. Academic dissertation. Annales Universitatis Turkuensis. SER. D. TOM. 525.

Saariluoma, P. 2001. Konstruktivismi ja kognitiivinen psykologia. Psykologia 1-2, 29–35.

Sairaanhoitajan, terveydenhoitajan ja kätilön osaamisvaatimukset terveydenhuollossa. Terveydenhuollon ammatinharjoittamisen kannalta keskeisiä näkökohtia. 2000. [Qualification requirements for nurses, public health nurses and midwives in health care. Essential considerations related to practising health care profession]. Helsinki: Ministry of Social Affairs and Health. Advisory Board for Health Care Professionals. Stencils 2000:15. <URL:http://www.vn.fi/stm/suomi/pao/julkaisut/mon20 15/moniste.htm.

Salmela, M. 2004. Sairaanhoitajaopiskelijoiden hoitamisen taidot ja niiden opetus ammattikorkeakoulussa. Opiskelijoiden, opettajien ja ohjaajien arviot. [The nursing skills of nurse students and the teaching of these skills at polytechnic – students', teahcers' and mentors' ratings]. Annales Univeristatis Turkuensis. Faculty of Medicine, Department of Nursing Science, University of Turku.

Sarajärvi, A. 2002. Sairaanhoidon opiskelijoiden hoitotyön näkemyksen muotoutuminen sairaanhoitajakoulutuksen aikana. Acta Universitatis Ouluensis Medica D 674. Hoitotieteen ja terveyshallinnon laitos, Oulun yliopisto.

Schoenfeld, A. H. 1989. Teaching mathematical thinking and problem solving. In L. B. Resnick & L. E. Klopfer (Eds.) Towards the thinking curriculum: Current cognitive research, 1989 ASCD Yearbook. Pittsburgh: Association for Supervision and Curriculum Development, 83–103.

Schraw, G. 1998. On the development of adult metacognition. In M. C. Smith & T. Pourchot (Eds.) Adult learning and development. Perspectives from educational psychology. USA: Erlbaum, 89–106.

Schunk, D. H. & Ertmer, P. A. 2000. Self-regulation and academic learning. Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 631–649.

Schwandt, T. A. 2000. Three epistemological stances for qualitative inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research. 2nd edition. Thousand Oaks, California: Sage, 189–213.

Schön, D. 1983/1995. The Reflective practitioner. Aldershot, Hants, England: Arena.

Schön, D. A. 1987. Educating the reflective practitioner. San Francisco: Jossey-Bass.

Seed, A. 1994. Patients to people. Journal of Advanced Nursing 19, 738–748.

Seppä, T. & Westergård, A. 1998. Hoitotaito ja sen oppiminen opintojensa alkuvaiheessa olevien sairaanhoitajaopiskelijoiden kokemana. Tampereen yliopisto. Pro gradu –tutkielma.

Severinsson, E.I 1997. Bridging the gap between theory and practice: a supervision programme for nursing students. Journal of Advanced Nursing 27, 1269–1277.

Sfard, A. 1998. On two metaphors for learning and the dangers of choosing just one. Educational Researcher, 27(2) 4–13.

Shields, E. 1995. Reflection and learning in student nurses. Nurse Education Today 15, 452–458.

Sigel, I. E. 1986. Cognition-affect: A psychological riddle. In D. J. Bearison & H. Z. Zimiles (Eds.) Thought and emotion: Developmental perspectives. Hillsdale, NJ: Erlbaum, 211–229.

Silen-Lipponen, M. 1997. Leikkaushoitajien merkityksellisiä tapahtumia yhteistoiminnallisuudesta. Kuopion yliopisto. Hoitotieteen laitos. Pro gradu -tutkielma.

Silen-Lipponen, M., Turunen, H., Tossavainen, K., Smith, A. & Russel, J. 1999. Leikkaushoitajien merkityksellisiä kokemuksia yhteistoiminnallisuudesta. Hoitotiede 1, 39–48.

Siljander, P. 2002. Systemaattinen johdatus kasvatustieteeseen. Helsinki: Otava.

Silkelä, R. 1996. Miksi luokanopettajiksi opiskelevien persoonallisesti merkittävien oppimiskokemusten tutkiminen on tärkeää? In S. Ojanen Tutkiva opettaja 2. Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus, 125–135.

Silkelä, R. 1997. Mitä persoonallisesti merkittävät oppimiskokemukset ovat? Psykologia 32, 174–182.

Silkelä, R. 1999. Persoonallisesti merkittävät oppimiskokemukset. Tutkimus luokanopettajiksi opiskelevien oppimiskokemuksista. Joensuun yliopisto. Kasvatustieteen julkaisuja.

Silkelä, R. 2000. Persoonallisesti merkittävät oppimiskokemukset. In J. Enkenberg, P. Väisänen & E: Savolainen (Eds..) Opettajatiedon kipinöitä. Kirjoituksia pedagogiikasta. Joensuun yliopisto. Savonlinnan opettajankoulutuslaitos, 120–131. Silkelä, R. 2001. Luokanopettajaksi opiskelevien persoonallisesti merkittävät oppimiskokemukset. Kasvatus 32 (1), 15–23.

Smith, A. 1998. Learning about reflection. Journal of Advanced Nursing 28, 891–898.

Smith, A. & Russell, J. 1991. Using critical incidents in nurse education. Nurse Education Today 11, 284–291.

Smith, A. & Russell, J. 1993. Critical incident technique. In J. Reed & S. Procter Nurse Education: a reflective approach. London: Edward Arnold, 119–130.

Snowball, J., Ross, K. & Murphy, K. 1994. Illuminating dissertation supervision through reflection. Journal of Advanced Nursing 19, 1234–1240.

Soini, H. 2001. Oppiminen sosiaalisena käytäntönä. Psykologia 1-2, 49–58.

Soini, T. 1999. Preconditions for active transfer in learning processes. Commentationes Scientiarum Socialium 55. Helsinki: The Finnish Society of Sciences and Letters.

Soini, T. 2000. Aktiivisen transferin edellytykset oppimisprosessissa. Psykologia 4 (36), 321–324.

Soini, T. 2001. Aktiivinen transfer koulutuksen tavoitteena. Psykologia 1-2, 9–17.

Sparks III, W.G. & Butt, K.L. 2000. Student teaching action plans: a context for expanded inquiry in multicultural education. Physical Educator 57 (3), 114–124.

Spiegelberg, H. 1975. Doing Phenomenology. Essays on and in phenomenology. The Hague: Martinus Nijhoff.

Spiegelberg, H. 1982. The phenomenological movement. Third revised and enlarged edition. The Hague: Martin Nijhoff.

Spouse, J. 1996. The effective mentor. A model for student -centred learning in clinical practice. NT Research 1, 120–133.

Spouse, J. 2000. An impossible dream? Images of nursing held by pre-registration students and their effect on sustaining motivation to become nurses. Journal of Advanced Nursing 32, 730–739.

Spouse, J. 2001. Bridging theory and practice in the supervisory relationship; a sosiocultural perspective. Journal of Advanced Nursing 33, 512–522.

Stanley, H. 2003. The journey to becoming a graduate nurse: a study of the lived experience of part-time post-registration students. Nurse Education in Practice 3, 62–71.

Stevenson, J. 2002. Concepts of workplace knowledge. International Journal of Educational Research 37, 1–15.

St. Julien, J. 1997. Explaining learning: The research trajectory of situated cognition and the implications of connectionism. In D. Kirshner & J. A. Whitson (Eds.) Situated cognition. Social, semiotic, and psychological perspectives. Mahwah, New Jersey: Lawrence Erlbaum Associates, 261–279.

Strohschein, J., Hagler, P. & May, L. 2002. Assessing the need for change in clinical education practices. Physical Therapy 82(2), 160–172.

Stuart, C. C. 1997. Reflective journals as a teaching/learning strategy: a literature review. British Journal of Midwifery 5 (7), 434–438.

Stutsky, B. J. & Spence Laschinger, H. K. 1995. Changes in student learning styles and adaptive learning competencies following a senior preceptorship experience. Journal of Advanced Nursing 21, 143–153.

Suen, L. K. P. & Chow, F. I. W. 2001. Students' perceptions of the effectiveness of mentors in a undergraduate nursing programme in Hong Kong. Journal of Advanced Nursing 36, 505–511.

Suhre, C. J. M. & Harskamp, E. G. 2001. Teaching planning and reflection in nurse education. Nurse Education Today 21, 373–381.

Suikkala, A. & Leino-Kilpi, H.2001. Nursing student – patient relationships; a review of the literature from 1984 to 1998. Journal of Advanced Nursing, 33, 42–50

Taylor, E. 1997. Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory. Adult Education Quarterly 48(1), 34–59.

Taylor, E. W. 2001. Transformative learning theory: a neurobiological perspective of the role of emotions and unconscious ways of knowing. International Journal of Lifelong Education 20(3), 218–236.

Taylor, P. C. S. 1993. Collaborating to reconstruct teaching: The influence of researcher beliefs. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 267–297.

Teekman, B. 2000. Exploring reflective thinking in nursing practice. Journal of Adanced Nursing 31, 1125–1135.

Timmins, F. & Kaliszer, M. 2002. Aspects of nurse education programmes that frequently cause stress to nursing students – fact-finding sample survey. Nurse Education Today 22, 203–211.

Tobin, K. 1993. Preface. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, ix–xvi.

Tobin, K. & Tippins, D. 1993. Constructivism as a referent for teaching and learning. In K. Tobin The practice of constructivism in science education. Hillsdale, NJ: Erlbaum, 3–21.

Tossavainen, K. 1996. Yhteistoiminnallinen oppiminen terveydenhuollon opettajakoulutuksessa. Joensuun yliopisto. Kasvatustieteiden tiedekunnan tutkimuksia.

Tossavainen, K. 1999. Oppimisen ja opetuksen kehittämismahdollisuudet terveys- ja sosiaalialan ammattikorkeakoulutuksessa. In K. Tossavainen & H. Turunen (Eds.) Koulutusrakenteet muuttuvat – muuttuuko opetus ja oppiminen? Helsinki: Kirjayhtymä, 9–18.

Tossavainen, K. & Turunen, H. 1999. Neuvojasta oppimisen ohjaajaksi – ohjaamiskäytännöt tarkoituksenmukaisiksi. In K. Tossavainen & H. Turunen (Eds.) Terveys- ja sosiaalialan opiskelijoiden ohjaamisesta ammattikorkeakoulussa. Helsinki: Kirjayhtymä, 8–17.

Tripp, D. 1993. Critical incidents in teaching. Developing professional judgement. London: Routledge.

Tuomi-Gröhn, T. 2001. Kehittävä siirtovaikutus koulun ja työpaikan yhteistyön tavoitteena – tapaustutkimus lähihoitajien lisäkoulutuksesta. In. T. Tuomi-Gröhn & Y. Engeström (Eds.) Koulun ja työn rajavyöhykkeellä. Uusia työssä oppimisen mahdollisuuksia. Helsinki: Yliopistopaino, Helsingin yliopisto, 28–66.

Turpeinen, R. 1998. Ammattitaito ja sen arviointi näyttökokeissa. Työelämän tutkinnot 4/1978. Helsinki: Opetushallitus.

Turunen, H. 1997. Hoidollisen vuorovaikutuksen oppiminen - kokemuksen tutkimusmetodinen tarkastelu. Kuopion yliopisto. Hoitotieteen laitos. Lisensiaattitutkielma.

Turunen, H. 2002. Critical learning incidents and use as a learning method. A comparison of Finnish and British nurse student teachers. Kuopio University Publications E. Social Sciences 93.

Twinn, S. F. 1995. Creating reality or contributing to confusion? An exploratory study of client participation in student learning. Nurse Education Today 15, 291–297.

Twinn, S. & Davies, S. 1996. The supervision of Project 2000 students in the clinical setting: issues and implications for practitioners. Journal of Clinical Nursing 5(3), 177–183.

Tynjälä, P. 1991. Kvalitatiivisten tutkimusmenetelmien luotettavuudesta. Kasvatus 22(5-6), 387–398.

Tynjälä, P. 1999a. Oppiminen tiedon rakentamisena. Konstruktivistisen oppimiskäsityksen perusteita. Helsinki: Kirjayhtymä.

Tynjälä, P. 1999b. Konstruktivistinen oppimiskäsitys ja asiantuntijuuden edellytysten rakentaminen koulutuksessa. In A. Eteläpelto & P. Tynjälä Oppiminen ja asiantuntijuus. Helsinki: WSOY, 160–179.

Tynjälä, P. 1999c. Towards expert knowledge? A comparison between constructivist and a traditional learning environment in the University. International Journal of Educational Research 31, 357–442.

Tynjälä, P. 2004. Asiantuntijuus ja työkulttuurit opettajan ammatissa. Kasvatus 2, 174–190.

Tynjälä, P. & Nuutinen, A. 1997. Muuttuva asiantuntijuus ja oppiminen korkeakoulutuksessa. In J. Kirjonen, P. Remes & A. Eteläpelto (Eds.) Muuttuva asiantuntijuus. Jyväskylän yliopisto: Koulutuksen tutkimuslaitos, 182–195.

Tynjälä, P., Nuutinen, A., Eteläpelto, A., Kirjonen, J. & Remes, P. 1997. The Acquisition of Professional Expertise – a challenge for educational research. Scandinavian Journal of Educational Research 41, 475–494.

Usher, R.1989. Locating experience in language: towards a poststructuralist theory of experience. Adult Education Quarterly 40(1), 23–32.

Valentino, J.B., Blue, A.V., Donnelly, M.B. & Stratton, T.D. 1999. The most valuable critical incidents in a 4th-year acting internship in surgery. Teaching & Learning in Medicine 11(2), 75–79.

Vallo, K. 1995. Auttaminen ja auttamaan oppiminen. Opiskelunsa keskivaiheilla olevien sairaanhoitajaopiskelijoiden kokemuksia hoitotyön auttavasta toiminnasta ja sen oppimisesta. Tampereen yliopisto. Pro gradu –tutkielma.

Valtioneuvoston asetus ammattikorkeakouluista 352/2003.

Vanhanen, L. 2000. Terveysalan opiskelijoiden suuntautuminen hoitamiseen. Acta Unversitatis Ouluensis D Medica 579.

Vanhanen, L. & Janhonen, S. 2000a. Factors associated with students' orientations to nursing. Journal of Advanced Nursing 31, 1054–1062.

Vanhanen, L. & Janhonen, S. 2000b. Changes in students' orientations to nursing during nursing education. Nurse Education Today 20, 654–661.

Van Manen, M. 1990. Researching lived experience. Human science for an action sensitive pedagogy. New York: State University of New York Press.

Varila, J. 1990. Itseohjautuvan oppimisen käsitteellistä ja empiiristä tarkastelua. Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus. Tutkimuksia no 2.

Varila, J. 1999. Tunteet ja aikuisdidaktiikka: tunteiden aikuisdidaktisen merkityksen teoreettinen ja empiirinen jäljitys. University of Joensuu Research Reports of the Faculty of Education, Number 74.

Varto, J. 1992 Laadullisen tutkimuksen metodologia. Helsinki: Kirjayhtymä.

Vermunt, J. D. 1995. Process -oriented instruction in learning and thinking strategies. European Journal of Psychology of Education X (4), 325–349.

Veräjänkorva, O. 1996. Sairaanhoitajaopiskelijan käsitys hoitotyön oppimisestaan kliinisessä opiskelussa. In P. Routasalo & H. Leino – Kilpi (Ed.) Hoitamaan oppiminen ja opettaminen. Turun yliopisto. Hoitotieteen laitoksen julkaisuja. Tutkimuksia ja raportteja A:14 /1996, 111–137.

Vesterinen, M-L. 2002. Ammatillinen harjoittelu osana asiantuntijuuden kehittymistä ammattikorkeakoulussa. Jyväskylän yliopisto. Jyväskylä Studies in Education, Psychology and Social Research 196.

Von Post, I. 1996. Exploring ethical dilemmas in perioperative nursing practice through critical incidents. Nursing Ethics 3, 238–249.

Vosniadou, S. 1996. Towards a revised cognitive psychology for new advances in learning and instruction. Learning and Instruction 6, 95–109.

Väisänen, P. 2000. Kohti oppimiskeskeistä pedagogiikkaa opettajankoulutuksessa. In J. Enkenberg, P. Väisänen & E. Savolainen (Eds..) Opettajatiedon kipinöitä. Kirjoituksia pedagogiikasta. Joensuun yliopisto, Savonlinnan opettajankoulutuslaitos, 34–39 .

Väisänen, P. & Silkelä, R. 1999. Kokemukset ja merkitykset opettajaksi kasvussa. In H. Niemi (Ed.) Opettajankoulutus modernin murroksessa. Tampere: Tampereen yliopiston julkaisujen myynti, 217–234.

Väisänen, P. & Silkelä, R. 2003. Luokanopettajiksi opiskelevien ammatillinen kasvu ja kehittyminen pitkäkestoisessa ohjauksessa – tutkimushankkeen teoreettisen mallin ja menetelmien kehittelyä. In R. Silkelä (Ed..) Tutkimuksia opetusharjoittelun ohjauksesta. Suomen harjoittelukoulujen vuosikirja n:o 1. Joensuun yliopisto, 27–42. .

Warner Weil, S. & McGill, I. 1989. A framework for making sense of experiential learning. In S. Warner Weil & I. McGill Making sense of experiential learning, diversity in theory and practice. Milton Keynes: The Society for Research into Higher Education & Open University Press, 3–24.

Watson, N. 1999. Mentoring today – the students' views. An investigating case study of pre-registration nursing students' experiences and perceptions of mentoring in one theory/practice module of the Common Foundation Programme on a Project 2000 course. Journal of Advanced Nursing 29, 254–262.

Weiner, B. 1979. A theory of motivation for some classroom experiences. Journal of Educational Psychology 71, 3–25.

Weiner, B. 1980. The role of affect in rational (attributional) approaches to human motivation. Educational Researcher 9, 4–11.

Weinstein, C. E., Husman, J. & Dierking, D. R. 2000. Self-regulation interventions with a focus on learning strategies. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 727–747.

Wellard, S. J. & Bethune, E. 1996. Reflective journal writing in nurse education: whose interests does it serve? Journal of Advanced Nursing 24, 1077–1082.

Wenger, E. 1998. Communities of practice. Learning, meaning and identity. Cambridge: Cambridge University Press.

Wildemeersch, D. 2000. Lifelong learning and the significance of the interpretive professional. In K. Illeris (Ed.) Adult education in the perspective of the learners. 5th report form The Adult Education Research Project. Roskilde University Press, 158–176.

Wilkes, L. M. & Wallis, M.C. 1998. A model of professional nurse caring: nursing students' experience. Journal of Advanced Nursing 27, 582–589.

Williams, P. L. & Webb, C. 1994. Clinical supervision skills: A Delphi and critical incident technique study. Medical Teacher 16(2/3), 139–157.

Wilson, A. L. 1993. The promise of situated cognition. In S. B. Merriam (Ed.) An update on adult learning theory. New directions for adult and continuing education, No. 57. San Francisco: Jossey Bass, 71–79.

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

Wilson-Barnett, J. Butterworth, T., White, E., Twinn, S., Davies, S. & Riley, L. 1995. Clinical support and the Project 2000 nursing student: factors influencing this process. Journal of Advanced Nursing 21, 1152–1158.

Winne, P. H. & Perry, N. E. 2000. Measuring self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 531–566.

Wlodkowski, R. J. 1993. Enhancing adult motivation to learn. San Francisco: Jossey-Bass.

Wong, F. K.Y., Kember, D., Chung, L.Y. F. & Yan, L. 1995. Assessing the level of student reflection from reflective journals. Journal of Advanced Nursing 22, 48–57.

Wong, F.K.Y. & Lee, W.M. 2000. A phenomenological study of early nursing experiences in Hong Kong. Journal of Advanced Nursing 31, 1509–1517.

Wright, C. M. 1990. An innovation in a diploma program: the future potential of mentorship in nursing. Nurse Education Today 10, 355–359.

Yhdistetty säännöstö: Ihmisten käyttö tutkimuskohteina. (ns. Reynoldsin säännöstö 1979). In L. Hannikainen (Ed.) 1992. Eettiset säännöt. Turku: Åbo Akademin ihmisoikeusinstituutti, 119–126.

Ylipulli-Kairala, K. & Lohiniva, V. 2002. (Eds.) Development of supervised practice in nurse education. Helsinki: Publications of the Higher Education Evaluation Council 14: 2002.

Yorks, L. & Kasl, E. 2002. Toward a theory and practice for whole-person learning: reconceptualizing experience and the role of affect. Adult Education Quarterly 52(3), 176–192.

Zeidner, M, Boekaerts, M. & Pintrich, P. R. 2000. Self-regulation. Directions and challenges for future research. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego, California: Academic Press, 749–768.

Zhang, Z. Luk, W. Arthur, D. & Wong, T. 2001. Nursing competencies: personal characteristics contributing to effective nursing performance. Journal of Advanced Nursing 33, 467–474.

Zimmerman, B. J. 2000. Attaining self-regulation: a social cognitive perspective. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.) Handbook of self-regulation. San Diego: Academic Press, 13–39.

Appendix 1. Research on reflection

Researcher	Purpose	Materials and methods	Results
Powell, J. H. 1989. UK.	To explore whether experienced nurses reflect in action; to what extent and at what level this reflection-in-action occurs, if it takes place; and whether experienced nurses base their nursing care on theory form nursing or other disciplines.	Open-ended inquiry: observation + interview (8 nurses).	Reflection-in-action is present extensively in the form of description and of planning of actions, but to a much less extent in the area of recognition of value judgements and the areas of reflection-in-action leading to learning taking place.
Järvinen, A. 1990. Finland.	To develop a model describing the development of reflective professional thinking during teacher education.	Qualitative, case study: teacher students.	In the model created on the basis of the data the objects of reflection are professional personality, teaching and learning process, contents of teaching, the curriculum, and the relationship between the educational institution and society. The results show that already at the beginning students choose the target areas in which they reflect on teaching profession.
Paterson, B. L. 1994. Canada.	To discuss difficulties which arise in the use of clinical journals as a reflective strategy in nursing education.	Literature review + the author's experience.	Factors affecting reflection are: the individual's developmental level of reflection; the perception of the trustworthiness of the teacher; the clarity and nature of expectations associated with the journal writings assignment; and the quantity and quality of the teacher's feedback.
Jones, P. R. 1995. Wales.	To investigate the phenomenon of hindsight bias and its consequence on the reflective rocess.	Small-scale study: vignette (one foresight group without a provisional diagnosis and four hindsight	Nurses do appear to show the hindsight effect; given the medical diagnosis the higher probabilities to that diagnostic outcome. This was not because the nurses were unable to make a correct diagnosis, since the foresight

		groups with a sentence offering a provisional diagnosis) and questionnaire (27 nurses)	group gave the actual outcome. Therefore, the hindsight nurses were influenced by the doctor's provisional diagnosis. As part of the educational strategies used with nursing students, reflection has much to commend it, but its use by qualified nurses as a method for improving patient care may have its dangers.
Landeen, J. , Byrne, C. & Brown, B. 1995.Canada.	To explore the use of journals to identify important issues facing nursing students when learning in psychiatric settings.	During a 13-week psychiatric clinical experience, 18 third-year nursing students kept journals.	Students progressed through stages of first feeling uncomfortable and focusing on what they were doing to being able to analyse a situation from many different perspectives. The journal allowed the faculty member to support each student in his or her unique times of transition. Some students benefited from the journals more than others. A few students appeared unable to reflect an experience in any depth. Journals can be seen as one strategy within an overall curriculum that promotes self-reflection.
Richardson, R. 1995. UK	To explore and discuss the concepts of reflection and reflective practice in nursing	A review of the literature	Instead of practice being reduced to increasingly technical knowledge and skills which are supposedly value-neutral, the reflective and critically analytical processes could contribute to the understanding, improvement and development of person-centred, 'morally appropriate' action in particular situations.
Shields, E. 1995. Northern Ireland.	To assess if student nurses value reflection as an aid to learning.To assess if students are developing reflective skills.To assess what types of learning, if any, takes place as a result of reflection.	Qualitative: Semi-structured interview (11 student nurses).	Students valued reflection as a means of learning and they were developing reflective skills. Journal writing was valued and was useful in developing reflective skills. Debriefing is an important part of the reflective process and must be facilitated.

Richardson, R. 1995. England.	To explore the meaning of reflection and reflective practice	Literature review.	It is suggested that reflection may be a multi-faceted 'round about' process of thinking which may be entered, exited and re-entered at any one of a number of points.
Wellard, S. J. & Bethune, E. 1995. Australia.	To consider reflective journal writing in nurse education.	Experiences of two university lecturers.	The authors see the challenge for nursing education to question the unqualified use of reflective journal writing in curricula. It is important to acknowledge its theoretical roots and critique of its problems.
Richardson, G. & Maltby, H. 1995. Australia.	To explore are the processes of reflection identified in the students' reflective diaries; to what extent and at what level does this reflection-on-action occur; and to what extent do reflective diaries promote the concept of reflective practice and assist students with the development of skills in reflection.	Diaries (30 student nurses); focus group interview (8 students).	The exercise of diary writing promotes the concept of reflective practice and assists students with the development of skills in reflection and learning. The extent and level of reflectivity was heavily weighted towards the lower levels of reflectivity. It was significant that a number of students felt apprehensive about expressing feelings of discomfort regarding aspects of their practice experience. A 'sense of discomfort' in the clinical setting is viewed as a trigger for reflection, and apprehension about expressing these feelings in their diary writing may hinder generation and understanding of the reflective process. Students need support and assistance in the development of critical inquiry and problem solving in practice.
Wong, K. Y., Kember, D., Chung, L. Y. F. & Yan, L. 1995. Hong Kong.	To develop and test coding systems for written reflective journals.	Reflective papers (45 registered nurses).	The students were placed into three categories non-reflectors (6), reflectors (34) and critical reflectors (5). The study suggests that student writing in reflective journals can be used as evidence for the presence or absence of reflective thinking.
Mountford, B. & Rogers.	To explore the potential for	Reflective sheet and	The findings support that the use of reflection influences

L. 1996. England.	assignment-reflection.	reflective group discussion concerning the two summative assignments of the course (two groups of post-registration nursing students)	positively on students' educational outcomes and professional practice via six key factors: academic self-concept, task awareness, views of knowledge, the influence of knowledge on behaviour, writing as a learning activity, and generating knowledge by reflecting in and on assessment with discussion.
Riley-Doucet, C. & Wilson, S. 1996. Canada.	To use reflective writing with nursing students to facilitate the acquisition and application of analytic critical thinking skills through a process of self-reflection.	Reflective journal (a three-step method of experiential learning using the reflective journal: critical appraisal, peer group discussion, self-awareness to self-evaluation).	When students direct their own learning, and identify their learning needs, then their skills associated with self-responsibility, autonomy, accountability are evident both in their clinical practice and in their peer-group discussions.
Platzer, H. & Snelling, J. 1997.UK	What are the most popular techniques used to promote reflection in nursing	A review of the literature	The most popular techniques used for promoting reflection in nursing seem to be diaries and journals. However, the amount of research which actually evaluates the effectiveness of such techniques is minimal. The research tends to rely on self reports. More research is needed.
Stuart, C. C. 1997. UK.	To discuss the use of reflective journals as a teaching/learning strategy.	Literature review.	The use of reflective journal appears to increase the understanding students derived from clinical experiences to enhance their learning. For reflection to be used successfully as a teaching/ learning strategy, students need to develop the skills of critical inquiry and problem solving in

			the clinical area. It is apparent that using this educational strategy is not straightforward. Facilitators need to have a clear understanding of, and be committed to, this educational strategy.
Durgahee, T. 1998. UK.	To identify and explain concepts used while facilitating reflection.To identify the skills required by the teacher to make reflection a learning experience.	Participant observation of 60 reflective diary sessions; group interviews (110 nurses)	Facilitating reflection is participative education and the reflective diary is a developmental tool to gain insight into the realities of practices and generate knowledge from practice. The study concludes that purposefulness, activity, collaboration, critical thinking and confrontation and support are the key concepts which should be used by teachers in the operationalisation of reflection.
Pierson, W. 1998. Canada.	To explore reflection as both a technique and a purposeful inter-subjective process.	Literature review.	Reflection was considered as a purposeful inter-subjective process that requires the employment of both calculative and contemplative thinking. The technique of reflection may be taught as a discrete skill.
Smith, A. 1998. England.	To explore what are the main preoccupations of student nurses in their reflection upon their clinical experiences and how do they explain these experiences. What do they learn from reflecting on their experiences and are there any changes in preoccupations and/or levels of analysis over a period of time.	Critical incidents (47 incidents) (25 student nurses over a 3-year period) + discussions based on critical incidents.	A strong theme in the students' experiences occurring throughout appeared to be the complexity of learning what it means to be a professional and in consequence, what they learn about themselves - their identity, values, hopes, fears and actions. Students' preoccupation with emotional aspects of learning was evident. There is some evidence that reflection involves the integration of practice experience and academic knowledge and that there is a reassessment of old perspectives so that some views and ideas may be rejected, whilst others are retained.

Jasper, M. A. 1999. UK.	To explore how nurses are using and developing writing techniques as a tool for facilitating and supporting their development in practice.	Two focus group interviews (16 nurses completing a professional course which involved reflective writing as the assessment component over a year).	The skills of reflective writing need to be learned rather than being assumed as a natural capacity, and this leads to acceptance of writing as a learning strategy in its own right. Reflective writing is considered to be a tool which helps the practitioner to develop analytical and critical abilities. The nurses identified their personal and professional growth as being facilitated by reflective writing.
Karma-Järvinen, A. 1999.	To describe nurse teachers' perceptions about reflection in teaching of nursing.	Qualitative, open interview (8 teachers).	Teachers examine reflection in nurse education broadly, through a variety of dimensions. Teachers perceived reflection as basis for teaching nursing. In addition, the teachers considered reflection from the perspectives of learning, their own actions and through the different levels and fields of teaching nursing. The third dimension was reflection as a goal of teaching of nursing.
Kember, D. 1999. Hong Kong	To devise a method for estimating the quality of reflective thinking in students' writing in reflective journals.	A coding scheme was planned to assess the levels of reflection (Mezirow); the initial test and practical test followed.	The method is recommended for both assessing students and evaluating courses in programmes which aim to develop reflective thinking.
Kember, D., et al.1999. Hong Kong.	To develop and test an instrument to evaluate reflective thinking.	303 students.	The authors believe that the instrument will have value as a diagnostic tool in course that aim to promote reflective thinking.
Kember, D., et al. 1999. Hong Kong.	To propose a scheme for estimating the quality of reflective thinking in students' writing	Four assessors independently graded the written reflective	The developed scheme seems to be appropriate scheme for assessing the level of reflective thinking. The further testing is recommended.

	in reflective journals, using categories based on Mezirow's work on reflective thinking.	papers of nine students.	
Lyons, J. 1999. Australia.	To explore journal writing as a learning strategy for the development of reflective skills within midwifery.To explore the value of journal writing for midwifery education.	Postgraduate students' journal entries.	Reflection allowed students to make a conscious attempt to identify and study what is happening and lo learn from them. Journal writing is a powerful technique that enables students to learn the process and the skills of reflection to improve their professional practice.
Mathers, N. J., Challis, M. C., Howe, A. C. & Field, N.J. 1999.UK	To compare 'traditional' continuing medical education activities with portfolio-based learning in general practice.	Qualitative and quantitative evaluation data (question-naire, semi-structured interview, participant observation, review of completed portfolios (22 general practitioners).	A portfolio-based learning scheme can meet the needs of GPs relevant to their professional practice; it can give learners control over how, what and when they learn and encourage active peer-supported learning.
Eklund, A-L. 2000. Finland.	To describe student nurses' reflective learning in group situations of practice placements.	Recorded group discussions (7) in group situations of clinical learning (22 student nurses, 6 teachers and 3 mentors). Open-ended questionnaire (students, teachers).	The levels of reflection were classified into technical, interpretative and critical reflection. Half of the students' reflective utterances were on the level of technical reflection which means that the students told about their observations, thoughts and actions without considering or reasoning related to them. On the level of critical reflection was only seven per cent about all classified utterances. The results support the perception that students of final stages of their studies are able to reflect

			better that the students at initial sages of their education. However, it seems that the planning of the learning event influences the reflection process.
Matthew Maich, N., Brown, B. & Royle, J. 2000.	To explore the experiences of nursing students developing professional portfolios.	Qualitative: a hermeneutic phenomeno-logical research (question-naire, focus-group interviews, Profiles).	The Profile (portfolio) experience enabled students to view their lives as a Journey that offered control and direction for the future. Reflection, developed as an explicit process, was highly valued by the students. Educational insights and critical thinking skills were enhanced.
Nurminen, R. 2000. Finland.	To describe intuition and the knowledge which is the basis for intuition, and also can be developed on the basis of intuition.	Grounded theory approach; Question-naires and theme interviews (153 nurses, midwives and public health nurses).	Intuition was perceived as immediate consciousness and silence achieved through an inner feeling. This intuition was seen to lead new, significant knowledge. Nursing knowledge was seen to consist of both empirical and conceptual as well as of tacit knowledge.
Platzer, H., Blake, D. & Ashford, D. 2000. England.	To evaluate the effectiveness of groups to develop reflective practice.	In-depth, qualitative interview about student nurses' experience in the reflective practice group (30 students).	The main themes that emerged were: the effects of previous education and socialisation as a nurse, and the culture of the organisation in which they worked, which made it difficult for many nurse to engage in a process of shared learning from experience.
Teekman, B. 2000. New Zealand.	To uncover whether qualified nurses engage in reflective thinking, and the focus of this thinking, as well as how these nurses make use of the reflective thinking process in their practice.	Qualitative: 22 interviews (10 registered nurses).	The study indicated very strongly that reflective thinking was first of all used or action, no matter whether this thinking occurred prior to, during, or after the action. Another level of reflection was thinking for evaluation which main focus was on creating understanding of the situation. The study found that reflective thinking-

			for-evaluation focused on two main aspects, 'situation in totality' and 'self'. There was only little indication of reflective thinking in the level of the critical inquiry.
Daly, W. 2001. UK.	To explore a method for identifying critical thinking in student nurses' reasoning processes.	A longi-tudinal multimethod design (86 critical thinking appraisal test, videotaped client simulation + 'think aloud' technique, cognitive task, stimulated recall strategy).	The group's critical thinking abilities by the end of the programme as measured by the WGCTA (critical thinking appraisal) showed no change from those shown at the outset of the course. The curriculum as an intervention had not resulted in changes to the sample's critical thinking ability.
Suhre, C. J. M. & Harskamp, E. G. 2001. Netherland.	(Is the curriculum carried out according to plan)To what extent do students show planning skills and reflection on learning? (Do students show more evidence of planning and reflection skills than students of traditional program?)	Question-naire (19 teacher practitioners); interview (4 teachers).	Teacher practitioners expressed their satisfaction with more than 70% of the items concerning planning skills; least positive were students' initiative and communication with practitioners. On the whole, the reflection on learning was evaluated as positive. The items that were judged least satisfactorily concerned the students' ability to determine the outcome of long-term learning.
Brown, J. O. 2002.USA.	To describe adult students' perspectives on the learning that resulted from their creation of an experiential learning portfolio.	Qualitative: portfolio documents and interviews (8 adult students).	Major findings:-a marked increase in the participants' self-knowledge-a greater recognition of the value of learning from work and from mentors-improved communication and organisation skills, and greater appreciation of the role of reflection in recognising learning.

Glaze, J. 2002. UK.	To explore student Advanced Nurse Practitioners' experiences of reflection.	Qualitative: interview (14 students) + reflective learning contract analysis (14).	The findings were categorised under three headings: reflection as a transforming process, reflective journeys, and worldviews. The development of reflective abilities was compared by students to being on a journey. It was concluded that for the students the development of reflective abilities was a complex transitional process. Time and support were essential. The experience of receiving challenges helped students to explore their practice in depth.
Green, C. A. 2002. UK.	To evaluate the usefulness of reflection for moving and handling.	15 hours moving and handling classroom teaching including five hours of reflection. Reflective accounts (25 student nurses).	All students believed that the component of reflection was either helpful or useful for moving and handling education. Students appeared to value the sharing of their experiences of practice through reflection. Reflection enabled them to adopt a more open and questioning approach through the sharing of unique practice experiences and though the sharing and challenging of different beliefs and values.
Langer, A. 2002. USA	To explore whether learning journals prove to be an effective teaching tool in science-based, adult learning.	Evaluative review of the learning journals (up to 300 journals from 20 students) Interview (10 students).	Non-traditional students are more sceptical than traditional students about using learning journals and more likely to use them as study tools. Student perception and scepticism of the assignment can affect the objective of developing reflective thinking. A smaller percentage of students demonstrated critical reflection in their journal writings.

Appendix 2. Research on mentoring clinical learning

Researcher	Purpose	Materials and methods	Results
Hagerty, B. 1986. U.S.A.	To provide another look at mentoring in nursing through a critical analysis of mentoring literature.	Literature review	There is no well-conceived definition of the mentoring phenomenon or its probable multiple dimensions and conceptual linkages. The mentor relationship is described in nursing literature as exclusive, nondemocratic, personality-based, intense, and emotional.
Burnard, P. 1990. Wales.	To explore the notions of adult learning, andragogy and mentorship, and their relationship to nursing educational practice.	Literature review	Student nurses are adult learners and can benefit from the principles and practice of the education of adults.The concepts related to mentorship are ambiguous.
Donovan, J. 1990. U.K.	To analyse the role of the mentor in nurse education.	Literature review	Mentoring in nurse education emphasises a short term interaction concentrating on the educational needs of the learner: tuition, assessment and monitoring. Elements of choice, emotional ties and sponsorship are very limited.
Gerrish, C. A. 1990. U.K.	To analyse the educational role of the ward sister.	Literature review	Collaborative links between nurse educators and ward sisters are crucial in order to maximise learning opportunities in the clinical setting; in order for ward sisters to be made aware of current developments in nurse education; in order for facilitating the application of research findings to clinical practice.
Morle, K. M. F. 1990. England.	To examine and discuss the concept of mentorship.	Literature review	There is no clear definition for mentorship.
Armitage, P. & Burnard, P. 1991. Wales.	To compare the roles of the mentor and preceptor	Literature review	The roles of mentor and preceptor are different. The mentor role seems to be

	and offer some suggestions as to how those roles may help to narrow the theory/practice gap in nursing.		about 'looking after', whereas the preceptor role is more concerned with enhancing clinical competence through role-modelling.
Anforth, P. 1992. U.K.	To clarify the role of the mentor.	Literature review.	It is suggested: initial meetings should be arranged with the allocated mentor and student; matching student with mentor; preparation of nurses to undertake the role of mentor; monitoring the subsequent relationship between students and mentors.It is suggested that the role of the mentor should be to assist, befriend, guide, advise and counsel students, and should not incorporate the roles of supervisor, assessor, preceptor or facilitator.
Earnshaw, G. J. 1994. UK.	To look at mentorship from the student's point of view.	Questionnaire (19 student nurses).	Mentoring was generally seen as a valued way of supporting student nurses. The mentors served numerous roles (e.g. supporter, role model, socialising agent).
Williams, P. L. & Webb, C. 1994. UK.	To investigate the activities of radiographers who supervise students in the clinical environment.	Delphi technique (24 experts in radiographer education) Critical incidents (82 students; 448 incidents).	Teaching skills and techniques and interpersonal style attracted the largest number of incidents. Professional competence scored the lowest number of incidents. It was evident that students appreciated the characteristics of practitioners which encouraged their active participation in the learning process; learning atmosphere was perceived also important.
Cahill, H. 1996. England.	To analyse student nurses' experiences of mentorship.	Qualitative: Group discussion and individual interviews (16 third-year student nurses).	There is limited understanding of the role of the mentor amongst the staff with whom they were involved; lack of coherent preparation and support for mentors clearly exists. It also appears that the hospital ward culture, hierarchy and division of labour separates those who have the knowledge

			from those who need to learn it. (The relationships described by the students are ones of control rather than support).
Twinn, S. & Davies, S. 1996. UK.	To examine the relationship between teaching, support, supervision and role modelling in student clinical learning within the context of Project 2000 courses.	Qualitative: semi-structured interview (53 student nurses, 37 practitioners, 25 tutors), case study (6 students).	Five key areas specific to practitioners' perception of their role in the clinical supervision of Project 2000 students was identified: facilitating student learning, supernumerary status, preparation for clinical supervision; supervision of clinical practice and assessment of practice.
Severinsson, E. I. 1997. Sweden.	To describe effects of a systematic supervision programme provided to nursing students during their first nursing period of practice.	Questionnaire (29 student nurses).	The main findings were the effects of clinical supervision on integration between theory and practice: improved understanding of the experiences of clinical situations, improved interpersonal skills, greater sensitivity to patients' needs, confirmation and reconfirmation. It seems to be possible to bridge the gap between practice and theory by adopting discovery-orientated approaches and experiential learning.
Mannila, M. 1998. Finland	To describe how radiography students experience their supervision in practice placements.	Essays (28 radiography students) - qualitative research (grounded theory).	Students experienced supervision as important and supporting their professional growth. Supervision was related to the atmosphere on the ward, the personality of the mentor and the activity of the student herself. Students found that it would be important to have more opportunities to participate in nursing actions. They found that the mentors' commitment to supervision should be developed.
Andrews, M. & Wallis, M. 1999. U.K.	To conduct a literature review about mentorship in nursing.	Literature review.	Literature illustrates various interpretation of the role of mentors. Most of the literature reports mentoring in a positive

			light. There is a need for efficient communication between mentors, practitioner teams and nurse educators.
Watson, N. 1999. England.	To investigate the mentoring experiences and perceptions of student nurses on a pre-registration nursing course during the Common Foundation Programme.	Qualitative: Semi-structured interview (35 student nurses and 15 clinical supervisors).	Students perceived the role of the mentor including: assessor, facilitator, role model, planning and support in the clinical setting. Instead, the staff did not identify planning as a part of their role. The mentoring role is defined according o individual understanding.
Darwin, A. 2000. Australia.	To investigate mentoring form contrasting theoretical perspectives (Functionalist and Radical Humanist)	Literature review.	Most research on mentoring is anchored in a functionalist paradigm which constructs it as a rational and hierarchical process. In contrast, Radical Humanist approach emphasises mentoring as a strategy as an overall plan to share intellectual and emotional resources.
Gray, M. A. & Smith, L. N. 2000. Scotland.	To discover the effects of mentorship on student nurses.	Longitudinal study; grounded theory (10 students were interviewed 5 times during 3 years education + kept diary) + diary (7 students).	All students experienced what they felt was a good mentor in at least one of their placements and valued a good mentor. Good mentors spend quality time with the students, value their contribution to patient care and are good role models. Poor mentors lack the skills, knowledge and attitudes of god mentors.
Jackson, D. & Mannix, J. 2001. Australia.	To gain insight about the role of clinical nursing staff in the planned clinical experience of nursing students.	Story-telling approach (53 student nurses in the first semester).	The findings position clinical nurses (role models, teaching role, assisting with socialisation into the profession) as central to students' experiences of clinical practice.
Lloyd, J., Walters, S, Akehurst, R. 2001.UK	To examine the extent to which preregistration nursing and midwifery students have contact	An activity diary (quantitative data) held by students and their mentors	Students frequently worked shifts without their named mentors. In the mentor's absence other members of staff covered for some of their activities. Students whose

	with their named mentor and the implications of this.	(81 student-mentor pairs); focus groups+ free text comments in the activity diaries (qualitative data)	named mentors were absent spent significantly less time working with a qualified member of staff as a partner in giving care.
Suen, L. & Chow, F. 2001.Hong Kong	To identify the students' perceptions and expectations of the various roles of mentors. '	Four phases both qualitative (Interviews n = 22) and quantitative methods (question-naire n=145? n=93)	After the mentoring scheme was evaluated in semester one, a series of strategies were designed to improve the preparation of mentors and the implementation of the scheme. The questionnaire developed in the project could be a useful instrument for evaluating the effectiveness of mentoring programmes. The majority of students agreed that the five roles of mentor (befriending, assisting, guiding, advising and counselling) were essential functions of a mentor.
Koh, L. C. 2002a.UK.	To provide insights into the student nurses' perceptions of practice-based teaching facilitated by link lectures and the extent to which the students' learning needs and support in the practice might be met.	Focus group interview (24 participants from three different student groups). Phenomeno-logical analysis.	Teaching in the practice area by link lectures was an important means of educational support. There were three key benefits associated with practice-based teaching: enhanced integration of theory to practice, development of the skill of reflection and increased student and peer support.

Appendix 3. Research on theory – practice relationship

Researcher	Purpose	Materials and methods	Results
Ferguson, K. E. & Jinks, A. M. 1994. England.	To present a model to integrate theory and practise of nursing.	Literature review.	Fundamental to the model is the notion of collaboration between education and service staff at all stages of the curriculum process. The model highlights eight key areas for the curriculum: the curriculum model to be used, sequencing of taught content and clinical practice, the content of the course, teaching methods, assessment criteria, the role of tutors in the learning process, the contribution of the service staff and the influence of the hidden curriculum.
Keskimaa, M. 1999. Finland.	To describe and understand perceptions of teachers and student nurses about theory-practice integration.	Interview (4 nursing teachers) and essay (16 student nurses).	Theory-practice integration as its best was described as an integrated entity of knowledge, thinking and action. A main tool in gaining this entity is to support reflective thinking during education.
Corlett, J. 2000. UK.	To investigate the theory-practice gap from the perspective of nurse teachers, student nurses and clinical preceptors.	Qualitative: semi-structured group interviews (23 group interviews for teachers, preceptors, students - 69 participants altogether).	Interviewees felt a theory-practice gap does exist, with students saying it was huge, whilst teachers thought it was probably fairly narrow. Preceptors play and important role in helping students relate theory to practice, but there is too little time for that. It also appear that reflecting and lining theory and practice are not taking place on any structured basis.
Corlett, J., Palfreyman, J. W., Staines, H. J. & Marr, H.2003.UK	How the theory-practice gap could be closed.	A full factorial experimental design; a sample of first year under-graduate	Preceptors were more effective than nurse teachers in promoting theoretical knowledge relating to their clinical specialty. Delay between theoretical input and clinical experience was not detrimental for

student nurses (n=19).	medical placements, and for rehabilitation placements resulted in an improved theoretical knowledge.

Appendix 4 Research on nursing students' experiences about clinical learning

Researcher	Purpose	Materials and methods	Results
Campbell, I. E., Larrivee, L., Field, P. A. & Reutter, L. 1994. Canada.	To determine how nursing students become socialised into nursing, and how their attitudes and values change over the course of a 4-year baccalaureate programme.	Interview (50 student nurses); questionnaire (81 student nurses).	The role of the instructor and the role of peer support were the most influential factors on student learning in the clinical setting. Two factors were identified as facilitating student learning: a competent clinical instructor, who acted as a role model and the support offered by the student's own peers.
Seed, A. 1994. England.	To discover the students' perceptions about patients throughout 3 years education	A longi-tudinal study: Participant observation (over 1000h) and interview (23 student nurses).	The process of moving from 'seeing patients' to 'seeing people' appeared to involve many elements. The data indicated that the students eventually came to see those they nursed as people with individual preferences and needs. The students identified with those they nursed. This identification appeared to be dependent on the students' ability to see themselves in similar personal circumstances. Although the students found these experiences disturbing, such reflections were an important element in changing the students' perspective from seeing patients to seeing people.
Wilson, M. E. 1994. U.S.A.	To explore and describe nursing students' experience of learning in a clinical practice setting.	Qualitative; observation 75 hours + interview (30 students).	Nursing students developed a perspective as they interacted with the clinical education environment. This perspective served a guide to their actions. Students had six major goals: to cause no harm to a patient, to help patients, to integrate theory-based knowledge into clinical practice; to learn nursing clinical practice skills, to look good as a student and to look good as a nurse.

Day, R. A., Field, P. A., Campbell, I. E. & Reutter, L. 1995. Canada.	To explore student nurses' beliefs about nursing from entry to graduation in a four-year baccalaureate programme.	Interviews (50 student nurses), Open-ended question-naires (81 student nurses)	There is evidence that students moved from a lay to a professional image of nursing over the course of their four-year programme. There was also evidence that the students became less idealistic and more realistic in relation to the impact they would have within an institution. However, they had strong internalised professional values.
Twinn, S. F. 1995. Hong Kong.	To explore the role of clients in learning process, clients' perception of students' role in the practicum, and clients' perception of their role in the assessment process.	Qualitative and quantita-tive:1. stage: questionnaire (28 students and 28 Community Practice Teachers). 2. stage: Inter-view (13 students and 13 CPTs and 24 clients).3. stage: Questionnaire (students)	The clients have a particular role in the students' learning (overcoming the theory-practice gap, the provision of the opportunity for students to practice their clinical skills, clients' support of students and students' support for clients). The third major category, the clients' perception of the process of assessing student performance demonstrated ambiguity in clients' perceptions of their role in student learning.
Wilson-Barnett, J. , Butterworth, T., White, E., Twinn, S., Davies, S. & Riley, L. 1995. England.	To explore factors influencing clinical support of the Project 2000 nursing students.		Factors that can facilitate good learning experience are: appropriate use of supernumerary status, staff committed to teaching, students working closely with practitioners, link tutors in regular contact with clinical area, well-planed student learning experiences, practitioners with time to give students, staff with a capacity to be supportive an a good team spirit.
Cooke, M. 1996. Australia.	To study nursing students' perceptions of difficult or challenging clinical situations.	Question-naires: Year 1 nursing students before (105) and after (103) clinical experiences.	The findings suggest that students do find certain clinical situations difficult or challenging, and that clinical facilitators are significant in assisting and supporting students. The most frequently mentioned pre-clinical

			challenges/difficulties were technical skills. The most frequently mentioned post-clinical challenges/difficulties were type of patient situations.
Durgahee, T. 1996. UK:	To describe how the nurses perceive their development and practices after 1 year of reflective practice.	Survey (110 nurses who had participated in reflective practice groups) Semi-structured interviews (50 nurses). Personal, reflective diary + group discussions	The students felt the diary helped them to think about their practices and made them more alert to their approaches and the clients' needs. Through this consciousness-raising process, the students learnt to perceive their practice in a different way (evaluation).
Kivelä, A. & Janhonen, S. 1996Finland	To explore how nursing students describe their perception of nursing in practice situations after their first clinical practice.	An essay about clinical experiences as a nurse; interview (35 student nurses).	Students perceived that a basic process in nursing is assisting patients in daily living. Students' perceptions were situation related and nursing was mainly based on rules and norms of the ward. There were differences between students in their personal competence to encounter patients and take care of them. The students failed to have a holistic view about patients and their situations.
Clark, J., Maben, J. & Jones, K. 1997a. England.	To examine how students' perceptions of the philosophy and practice of nursing changed during the Project 2000 course.	Self-completion question-naires (three times; 498 students - over 1200 question-naires were completed); a postal questionnaire (78 newly qualified nurses); in-depth	The main result was that the students and newly qualified nurses in this study do 'differ' from their traditional counterparts, valuing 'basic nursing care', communication skills, health promotion and evidence-based care. They perceive themselves as professional practitioners with theoretical knowledge, holistic in their approach and prepared to e 'lifelong learners'.

		interview (20 newly qualified nurses).	
Clark, J., Maben, J. & Jones, K. 1997b. England.	To examine perceptions of the extent to which the Project 2000 education has prepared students to take on the role of qualified nurse.	Question-naires (1200 question-naires from 494 students), in-depth interviews (20 newly qualified nurses), focus group interviews (teachers, practitioners, nurse managers).	The findings indicate that the majority of students, diplomats and nurse managers felt that the Project 2000 programme had prepared them well to take on the role of qualified nurse. The balance of the course had been discussed, particularly with respect to life sciences, preparation for a management role and the acquisition of practical skills.
Dunn, S. V. & Hansford, B. 1997. Australia.	To describe factors influencing undergraduate nursing students' perceptions of their clinical environments.	Quantitative (Clinical Learning Environment Scale, 229 student nurses) and qualitative (focus group interviews 42 student nurses).	The impact of a broad range of people (e.g. nursing staff, students, other staff) on students' perceptions of their clinical learning environment was readily apparent. The attitudes of nursing staff to patient care were also important. Students' satisfaction with their clinical experience, and the hierarchy and ritual of the unit were two further factors.
Nolan, C. A. 1998. Australia.	To understand the clinical learning experiences of undergraduate nursing students.	Recoded post-clinical conferences with the students, informal discussions and observations (6 student nurses).	One of the biggest challenges was the need for students to fit into the social environment of the clinical setting and be accepted by staff and clients. The new setting brought with it feelings of fear and anxiety, which in turn affected the students' responses to their learning environment. Feelings of inadequacy have much to do with the attitude and practices of staff. As acceptance increased, the students sought an increase in independence. The students were constantly moving between the reality

			of practice and the ideal of university.
Wilkes, L. M. & Wallis, M. C. 1998. Australia.	To describe the phenomenon of professional nurse caring as it develops in nursing students.	Qualitative: Questionnaire Interview	Students were directed, especially in later study years, in their care to the health and well-being of patients. A beginning student nurse brings some caring attributes such as compassion with her on entering nursing. Over the duration of their course they develop and add to their personal caring attributes but to different degrees.
Gray, M. & Smith, L. N. 1999. U.K.	To describe the process of professional socialisation of student nurses.	A longi-tudinal study (10 students; five interviews + diary, throughout the three year study).	The students' progression through a hierarchical and sequential process is accompanied by a developmental process. The students experience anticipatory anxiety before their first placement which is replaced by 'culture shock' The transition from the CFP to branch is stressful. Students work through this by accepting more responsibility, developing a more holistic approach to care. The process of professional socialisation of students is facilitated by two key factors: the mentor and the learning environment.
Nolan, P. W. & Cheung Chung, M. 1999. U. K.	To investigate how nursing students experience their first mental health placement.	Pre-/post-questionnaire.	The placements were effective on improving students regard in attitudes towards mental health nurses, mental health nursing practice and education, and theoretical aspects of mental health nursing.
Parviainen, U. 1999. Finland.	To describe the relationship of nursing students and their patients in clinical learning.	Written assignments; content analysis (15 students of international nursing education).	The relationship between the patient and the student nurse was experienced as important. The relationship was experienced as rewarding and helped the students to understand the life and individual needs of the elderly. It is important that students

			receive support in their relationships with patients.
Cope, P., Cuthbertson, P. & Stoddart, B. 2000. Scotland.	To explore the experiences of student nurses in their practice placements.	Interview (nurses who had just completed their training).	The results support the importance of recognising placements as a social and technical context and the significance of becoming accepted into the culture of the workplace. Students require social support and reassurance when they start a new placement. Mentors provide supports to students and they use cognitive apprenticeship techniques.
Glover, P. A. 2000. Australia.	To identify third year nursing students' perceptions and use of feedback in the clinical area.	Case study; Question-naires, clinical logs, interviews (5 students).	Feedback in the clinical practice setting improved the students' confidence and knowledge. The elements of feedback for the students were: focused on behaviour, immediate, positive, just enough information to help improve their practice. It was important that the feedback focused on the student (her needs) and the person giving the feedback checked that it was understood. The feedback allows for refection of practice.
Neary, M. 2000. UK.	To establish what has happened in nursing practice in relation to assessing the clinical competence of nursing students during their Nurse Education Programme.	Quantitative, qualitative: Questionnaire (300 student nurses, 155 nurse practitioners), interview (70 nursing students, 80 assessors).	Students experienced variation within practice placements concerning both what assessment criteria should be and what should be assessed. The study puts forward for developing a conceptual model called responsive assessment, in which the students' readiness for assessment and their response to patient/client needs is identified.
Spouse, J. 2000.UK	To explore the nature of pre-registration nursing students' images and beliefs on entry and the extent to which	A longi-tudinal study (8 preregistra-tion nursing students). A multi-method approach	Students' preconceptions of nursing had a profound influence on their decision whether to continue with their course or to leave nursing. An important contribution to realising their aims

	they influence their development to become nurses.	over 4-year programme (focus group interviews, individual interviews, etc.)	was their supernumerary status and effective support from knowledgeable and experienced practitioners. The findings indicate that with better understanding of the relationship between this form of personal knowing and practice, educators would have more information with which to select students and to design professional curricula.
Lundberg, P. & Boonprasa-bhai, K. 2001. Thailand	To describe and express the meanings of good nursing care among female last-year undergraduate nursing students of a nursing college in Bangkok.	Ethnographic method; Interview, observation (20 students).	Six categories emerged to describe good nursing care: compassion, competency, comfort, communication, creation and courage. Thus, the students described good nursing care in humanistic as well as scientific terms.
Neary, M. 2000. UK.	To establish what has happened in nursing practice in relation to assessing the clinical competence of nursing students during their Nurse Education Programme.	Quantitative, qualitative: Questionnaire (300 student nurses, 155 nurse practitioners), interview (70 nursing students, 80 assessors).	Students experienced variation within practice placements concerning both what assessment criteria should be and what should be assessed. Students and practitioners developed strategies to cope with the 'messy' problem of assessment of clinical competence by negotiating their own objectives. The study puts forward for developing a conceptual model called responsive assessment, in which the students' readiness for assessment and their response to patient/client needs is identified.
Wong, F. K. Y. & Lee, W. M. 2000. Hong Kong.	To uncover the internal meaning structures of the early lived experiences of nurses.	Phenomeno-logical study; critical incidents of early nursing experiences (77 post-graduate nursing students).	Five main themes emerged from the data: facing death, interpersonal relationships, professional development, school life and dealing with unexpected cases. The study highlights the importance of providing a conducive clinical learning environment.

Löfmark, A. & Wikblad, K. 2001. Sweden.	To provide information on what the student nurses found facilitating and obstructing for their learning during clinical practice.	Diary (47 degree student nurses); content analysis.	The students emphasised responsibility and independence, opportunities to practice different tasks, and receiving feedback as facilitating factors. Obstruction factors were for example lack in the student-supervisor relationship, and lack of opportunities to practice. The proposals: organisational changes (for example continuity in supervision) and educational changes (for example identification of individual students' need to practice skills; and changes of attitudes of supervisors).
Spouse, J. 2001. UK.	To investigate how pre-registration nursing students acquired their professional knowledge in clinical settings.	A longi-tudinal study: Focused interviews, non-participant observation, statements of achievement (critical incident analysis) and illuminative artwork (8 student nurses).	For a considerable portion of the students' placements, mentorship was poorly understood by clinical staff. In such situations students found it difficult to gain access to the professional knowledge of their colleagues and to engage with their environment in an educational manner. By contrast, occasions when students received good support from their mentor and established a strong and trusting relationship, they settled into their placement quickly, developed confidence and learned to recognise the relevance of their epistemic knowledge to their practice.
Suikkala, A. & Leino-Kilpi, H. 2001. Finland.	To examine the research of the nursing student -patient relationship.	Literature review (104 articles from 1984 to 1998); inductive analysis.	It seems that the relationship with a patient is an important part of a meaningful learning process, teaching nursing students about the patient, individualised care and promoting their personal and professional growth, confidence and self-esteem.
Liimatainen, L. , Poskiparta,	To describe the development of reflective learning	Stimulated recall interview	Half of the students reached the level of critical consciousness and the others remained at

M., Karhila, P. & Sjögren, A. 2002. Finland	in the context of health counselling and promotion during clinical training of a 3-year nursing education programme.	(16 student nurses once a year between 1998-2000).	the level of consciousness. The meaning schemas of counselling developed and were enriched when the students moved into the higher stages of reflection.
Oermann, M. H. & Garvin, M. F. 2002. USA.	To describe the stresses and challenges new graduates experience in their initial clinical practice in hospitals.	Clinical Stress Questionnaire (46 nursing students).	New graduates found beginning clinical practice on the unit moderately stressful. The stresses reported most frequently were: not feeling confident and competent; making mistakes because of increased workload and responsibilities; and encountering new situations, surroundings and procedures. The study concludes that the importance of establishing supportive relationships with new graduates remains an area in need of improvement.
Saarikoski, M. 2002. Finland.	To describe nursing students' experiences of their clinical environments and the supervision given by staff nurses.To develop and test an evaluation scale of Clinical Learning Environment and Supervision (CLES).	Pilot study (163 student nurses),An expert panel (9 nurse teacher),Test-retest group (38 student nurses), Evaluative phase (CLES) (416 student nurses)British sample (142 nursing students).	The individualised supervision system is the most used supervision model and the supervisory relationship with personal mentor is the most meaningful single element of supervision evaluated by student nurses. The ward atmosphere and the management style of ward manager are the most important environmental factors. The produced evaluation scale (CLES) can be used in assessments of clinical learning environment and supervision.
Sarajärvi, A. 2002. Finland	To describe nursing students' conceptions of nursing during their studies.	Essays written by students +interviews (n=35). Grounded theory.	Three different approaches to nursing: normative, independent, collaborative. Clinical nurse tutor as a role model. At the early stage of education: holistic nursing conception; later ward rules and norms as the most important guidelines in practice.

Timmins, F. & Kaliszer, M. 2002. Ireland.	To explore aspects of nurse education programmes that frequently cause stress to nursing students.	Questionnaire (110 student nurses).	Factors associated with academic performance, clinical placements, financial constraints, death of a patient and relationships with staff on the wards cause considerable stress. The experience of difficulty with interpersonal relationships with the ward staff is likely to affect the students' overall perception of the placement.
Stanley, H. 2003.UK	To explore the impact of a part-time modular post-registration degree on the students.	The pheno-menological study of the lived experience of nine students. (Unstructured interviews)	The students' experiences could be symbolised as a journey consisting of four key themes: the traveller, the guide, the journey and journey's end. Areas such as motivation, the impact of education on individuals, and linking theory to practice were found to be part of a complex web of variables influenced by the individual, their workplace, managers and colleagues and personal tutor.
Haigh, C. 2003.UK	To apply the Judgmental Module of Assessment	Two multi-disciplinary cohorts of MSc students.	The epistemological assumptions inherent within the model make it highly appropriate fro the assessment of practical skills at Master Degree level.
Papp, I., Markkanen, M. & von Bobsdorff, M. 2003. Finland	To describe student nurses' perceptions of clinical learning experiences in the context of the clinical learning environment.	A qualitative, phenomeno-logical approach. Observation and interview of 16 student nurses.	Four elements sum up the experiences of student nurses: the appreciation and support the students received, the quality of mentoring and patient care, and students' self-directness. Student nurses' valued clinical practice and the possibilities it offered in the process of growing to become a nurse and a professional.

Appendix 5. Critical Incident Journaling

Sit down at least once a week and choose one critical incident that has taken place during the week and explore it in detail in your journal. Remember, critical means having strong impact on you. Here are the steps for organising your reflecting and writing.

1. *Identify* the event or occurrence with as much specificity as possible. You may not have precise ideas on this when you start writing. Just start writing.

2. *Describe* the relevant details and circumstances surrounding the event so that you and the teacher who reads your entry will understand what happened. What? When? How? Why? Where?

3. *List* the people involved, describe them and their relationship to you and to each other.

4. *Describe* your role in the situation: what did you do? How did you act?

5. *Analyse* the incident. How well or badly did you understand the situation? How did you handle it? What would you do differently the next time? Why?

6. *Analyse* this incident in terms of its impact on you and explain why you view it as critical. How does it relate to your particular objectives? What have you learned from the experience? How has your perspective on yourself been changed and/or reinforced? Where do you go from here?

Write in your journal at least once a week. Discuss the journal with your teacher. You can use these critical incidents when reflecting your learning experiences in your assignment.

Appendix 6. The codes referring to the different practice periods

Time	Practice Placement	Code
Spring 1999	Health Centre Wards	0
Autumn 1999	Medical Nursing	1a
Spring 2000	Surgica Nursing	1b
Spring 2000	Operation Theatre	1c
Autumn 2000	Paediatric Nursing	2a
Autumn 2000	Community Nursing	2b
Spring 2001	Mental Health Care	2c

Appendix 7. Tentative proposals

Tentative proposal 1

Having own patients is rewarding. Feelings towards clients are reflected. Good relationship with patients is valued. Mutuality in relationships is important. Empathy and emotions are experienced towards patients. Especially working with own patients include a lot of emotions. Often these are related to patients' health and disease. Feedback from patients and relatives is valued because it is considered emotionally rewarding. However, meeting 'different' clients or the behaviour of patients or relatives may sometimes cause feelings of confusion. These issues are reflected afterwards. Reflecting patients' and relatives' behaviour supports understanding of the situations. Experience has helped to deal with patients. However, even towards the end of the education, patients are in thoughts also during free time.

Mentor's ability to be a good supervisor is valued. Mentor's support is especially important in challenging situations. Good mentors act as role-models but there are also poor mentors. Discussing with mentors both during and after situations is appreciated. The actions of staff are considered. Especially staffs' attitudes towards students are significant and meaningful for behaving in future. When working professionally the whole staff actions as a role-model. Professionalism includes patient-centeredness and ability to cope in difficult situations. Sometimes staffs' unprofessional working causes confusion. Staffs' negative attitude and their ignorance of students are found to be unfair. Sometimes also staffs' ignorance of patients causes feelings of inadequacy. Feedback from staff is valued. The need of feedback is especially important after challenging situations. Feedback supports development of self-confidence. Experience of being trusted in a novice stage is especially rewarding.

Working independently is experienced both rewarding and worrying. In these situations it is necessary to choose procedures that one is capable of doing. Doing new procedures cause positive feelings. It is experienced to be necessary to practice skills that are not yet possessed. Other students' learning opportunities are also taken into account. Making a mistake causes anxiety but behaving reliably is a necessity. Feelings of succession are experienced in the situations where the permanent staff needs students' contribution. Student's role may sometimes hinder actions in practice.

It is typical for the student to illustrate different kinds of learning experiences in detail. The events and own actions on wards are reflected afterwards. Especially ethical issues are reflected Encountered patients and own actions in wards are considered sometimes also at home. Reflecting own qualities, which are considered as positive, is meaningful. Also reflecting mistakes is important; responsibility while making mistakes is considered necessary. Theory and practice are compared. Sometimes the practice supports understanding what has been learnt in theory. Theoretical knowledge is applied into practice. It is considered why the theory does not always

come true in practice. Sometimes the issues encountered in practice are verified in literature. In later stages of practice, previous experiences make situations easier to handle. Practice periods also taught to understand that it is not possible for nurses to be prepared to everything but it is necessary to use intuition.

Tentative proposal 2

Practice periods widen the nursing perspective: studying in placements lead to deeper understanding of nursing field and nursing as a profession. Practice periods also may lead to changes in attitudes. The quality of care is important and being trustworthy, too. The quality of care is especially important when taking care of critically ill patients. The quality of own actions may also be interpreted through patients' non-verbal language. Taking care of patients arouses empathic feelings towards them. Good relationships with patients are significant. Relationships with patients include ethical issues. It is important to behave professionally in all care situations and not to be too much involved in patients' emotions. Making mistakes causes anxiety but at the same time it is educating. Responsibility and staff's support while making mistakes is important.

It is meaningful to carry out nursing procedures. Encountering death is also significant; encountering death for the first time causes anxiety and different kinds of emotions but it also leads to reflection of life and death. Also new situations or new kinds of patients arouse anxiety.

Mentors are valued as supervisors and professionals as well. They can support students to behave professionally. The support is especially appreciated in challenging situations. Other staff's professional behaviour is appreciated. However, staffs' actions are disapproved in the situations where patients' needs are neglected. This kind of events lead to consider future situations and plan own actions in them. Feelings of success are experienced in the situations where permanent staff needs students' contribution.

It is typical to reflect events afterwards. Events on wards lead to considering ethical issues. Some patients whose care includes ethical dilemmas lead to reflect own attitudes and feelings. Reflecting an event may also lead to conclude that false generalisations should be avoided. Theoretical knowledge is applied in practice. The performance of tasks is verified by textbook knowledge.

Tentative proposal 3

It is meaningful to enter a new placement and work in different kinds of environments. Often these situations cause anxiety that is decreased by mentors' support. There are also amusing or surprising situations in wards. Mentors' actions are valued

while being supported especially in challenging situations, and disapproved in the situations where they ignore students. Mentors' inappropriate actions lead to consider own abilities to deal with similar situations. Sometimes also teachers' unsupportive attitude causes anxiety and feelings of disappointment.

Carrying out nursing procedures and seeing new medical procedures for the first time is significant. It is experienced especially important for the future. Making mistakes causes anxiety; behaving reliably in these situations is important and afterwards they are experienced to be educating because they teach to be more careful. Nurses' support is important in these situations. Many other situations in wards lead to anxiety, for example fear of contagious diseases, new situations and hectic work environment. Encountering death is significant and it leads to reflect own death.

Good relationships with patients and feedback received from patients are appreciated. There are feelings of empathy towards patients, especially in challenging situations and during procedures. In addition to empathy, patients arouse also other emotions; sometimes fear and sometimes anxiety not to be too touched and also feelings of inadequacy.

Other staff's actions are both valued in the situations where they act professionally and support students and disapproved in the situations where their actions are experienced to be inappropriate. Especially doctors' instructive attitude is appreciated. Sometimes other professionals' behaviour creates feelings of disappointment and anger. New diseases motivate to learn more theory about them and it is often necessary to verify issues from textbooks. Experiences abroad as an exchange student support personal growth.

Tentative proposal 4

Sometimes choosing a critical incident from many significant events is difficult; sometimes choosing a certain incident for recording is self-evident. Once also an event experienced in free time is recorded as her critical incident. Entering a new placement always causes anxiety but is also educating. It is especially interesting to work in placements that include a lot of technology and equipment. It is meaningful to see and carry out new nursing procedures, especially for the first time. Uncertainty is felt and instruction needed when doing nursing procedures for the first time but later on motivation to work independently increases. Nursing procedures are often simple but meaningful to students to practice. Meaningful nursing procedures include different kinds of actions: patient or student education, assisting or doing nursing procedures, helping patients in daily living, and assisting in different kinds of medical procedures. Succeeding in own actions leads to growth of self-confidence. Encountering death is significant; especially in resuscitation situations.

Theoretical knowledge is applied in practical situations and in practice also theoreti-

cal issues are learned more in detail. Learning in practice includes different kinds of procedures, and anatomy and physiology. Some events, especially issues related to death, lead to deeper understanding of issues learned in theory. Especially, events that include appreciation and achievement are experienced to be significant. These enhance the feeling of choosing the right profession. Other professionals' work is appreciated. Other staff is working professionally and also supervising students. Similarly, teamwork is appreciated. However, sometimes other staffs' actions awaken confusion; also these situations are valued as learning experiences. Opportunity to discuss issues afterwards with staff is important; sometimes it corrects mistaken ideas. A principle: 'Do the issue how you would like it to be done to yourself' is significant.

It is significant and educating to have own patients. It gives the feeling of being trusted. Throughout the practice periods patients' feelings and experiences are reflected. There are feelings of empathy towards patients especially in challenging situations. Other students are also empathised in challenging situations. Feedback, which is versatile - verbal, non-verbal or concrete gifts, from patients and staff is rewarding. It gives the feeling of being appreciated. Sometimes events in practice lead to reflect own personality and differences between personal and professional self. It is important to behave professionally at work. Events in practice also lead to consider life and death more thoroughly and own health as well.

Tentative proposal 5

Some areas of health care are experienced less motivating. Often, especially at the beginning of course, a lot of challenging situations are experienced. Many of these situations are experienced as unsuccessful actions. These include making minor mistakes, having language problems, having difficulties in carrying out nursing procedures, and difficulties in acting professionally. Towards the end of studies experiences are more positive though there are still also feelings of failure. Successful actions include taking care of a challenging patient and succeeding in a situation while having experience about it. Success in challenging situations leads to positive feelings. However, throughout the practice periods there are events that lead to feelings of inadequacy. Sometimes this is related to language problems. Sometimes working independently causes feelings of inadequacy. Opportunity to practice skills and carry out nursing procedures is important and creates self-confidence. Encountering death, especially at the initial stages of the course, is significant leading to reflection. Empathic feelings towards patients are experienced throughout the practice periods; especially towards dying patients and their family and also towards patients in challenging situations.

Sometimes the practice situations or events in practice create the need to study issues more in detail. Theory and practice are compared. Theoretical knowledge is applied to practice. Principle 'to treat other people as you want to be treated' is experienced to be significant. Reflecting events leads to consider the significance of communication

in nursing, similarly necessity of certain precautions in nursing. Some events lead to reflect experiences, for example own experiences in different cultures support in encountering patients from different cultures. Sometimes empathising with patients lead to consider own life and experiences.

There are experiences about both good and poor mentors. Throughout the course, feelings of being ignored by staff are experienced. There are also experiences of staffs' unprofessional behaviour. These events lead to reflection of communication, ethics and the quality of nursing. Support in challenging situations is received from student colleagues.

Tentative proposal 6

Interaction with patients is important and their well-being as well. It is significant to be able to perceive issues from patients' view. Patients' needs may also be interpreted through non-verbal behaviour. Having own patients is important and there are empathic feelings towards them, especially when relationship with them is close, and even when their behaviour is experienced to be challenging. When patients are ignored by other staff or family even more empathic feelings are experienced. Working as a patients' advocate is important though it would sometimes demand disagreeing with permanent staff. Interaction with patients is experienced to be educating and it helps to grow as a human being. It is important to learn to work with all kinds of patients.

Learning new procedures, especially at initial stages of education, is rewarding. Sometimes doing procedures causes anxiety especially if situations are experienced to be challenging. Being able to act professionally in challenging situations is rewarding. Sometimes there are feelings of inadequacy that leads to disappointment of own action. In challenging situations support is sought for. Sometimes student's role hinders acting as patients' advocate. Encountering deaths, especially for the first time, is significant.

Experiences about mentors are mostly positive. Good mentors are expert as nurses and supervisors as well. Mentors work as role-models. Mentors can have effect in future carrier choices. Staff appreciates students as equals. Feedback from staff is rewarding. In spite of positive feedback the need of continuous education is acknowledged. There are also situations where students are not appreciated by staff. Staffs' expertise and professionalism is valued. However, sometimes staff ignores patients. In these situations empathic feelings are experienced and staffs' decision making skills are also reflected.

Critical incidents are described to be very individual experiences that happen more in thoughts than in the outer world because of experienced learning style. Some incidents are described to deal with individuality and variety of life. It is emphasised

that the aim is not to make any false generalisations. There are more incidents than has been recorded. Theoretical knowledge is applied in practice situations. Events encountered in practice are revised by theoretical knowledge. Sometimes the fact that theory does not always come true in practice causes disappointments. However, the knowledge is not enough in nursing a nurse needs a warm heart as well. Occasionally, just being in wards arouses emotions; there is feeling of being privileged whilst having an opportunity to work with people.

Own actions are reflected afterwards; it is important to behave professionally according to the skills possessed at that time. Reflection of learning deal with ethical questions, people's rights, quality of care, personal life and life in general. Reflecting own actions is experienced to be a part of the learning process. Events on wards lead to considering nursing and its quality more thoroughly. Practice periods also support in widening the nursing perspective. It is important that nursing is holistic; taking into account patients' all needs. Similarly, the ethics in the care of elderly is considered. Individuality in nursing is also important; it is significant to acknowledge people's life history. The Finnish society and its values are considered, similarly nursing responsibilities are recognised. Sometimes events in wards lead to consider own life and family and also the life in general. Student's role may sometimes hinder acting as patients' advocate. Realising this leads to reflect identification and how also student should be able to behave professionally. Sometimes event encountered in practice helps to change own attitudes and see issues to be more versatile than anticipated.

Tentative proposal 7

Sometimes there are biases towards new placements but these are removed after starting to work in these. Working in new environments is experienced to be interesting. The beginning of practice periods is learning the routine of the placement. There are a lot of significant events during the placements but only part of them is documented. Throughout the practice periods, learning new skills is important, emphasis being at the beginning. Especially, new procedures and examinations are experienced to be interesting and they are easily learned. Only carrying out procedures for the first time causes anxiety. Working independently while mentors are not available is experienced both rewarding and worrying. Also students are responsible for the quality of care though student's role may hinder actions in practice. The student is usually satisfied with her own action and often this is verified by the feedback from patients or staff. Making mistakes causes anxiety but behaving reliably is a necessity.

It is important and educating to have own patients. Being able to create natural and confidential relationships with patients and act as patients' advocate is important. The whole nursing process and the results of care can be seen in relationships with own patients. Empathy is experienced towards patients especially when understanding their experiences. Supporting patients, especially in difficult situations and also when the other personnel ignore them, is important. Patient education is also neces-

sary in care. Feedback from patients is important though also non-verbal feedback could be interpreted.

There is reflection of learning throughout the practice periods. Events that make the student to reflect include encountering death, relationships with patients and especially own patients and quality of care. Witnessing death makes to consider nurse's role. It is especially important to be present and to listen to patients. Often, events are considered also afterwards and sometimes events encountered in practice help to manage in private life situations. Sometimes touching issues, like death, lead to reflect own life and family. Similarly, some events create the need to reflect life in general and meaning of life. Events on practice placements make to consider Finnish Health and Social Care system. Some events lead to studying issues more in detail because acquiring more knowledge is seen to be important. Reflecting mistakes is also important and teaching. Theory and practice are compared. Sometimes the practice supports understanding what has been learned at school. Practice widens the perspective of nursing. Holism of nursing is appreciated and reflected. It is self-evident that patients' all needs – physiological, psychological, social and spiritual should be met. In practice this does not always come true.

There are both poor and excellent mentors. Good mentors are highly valued. They are able both to supervise students and to take professionally care of patients. The support of the mentor is experienced to be especially helpful in challenging situations. Feedback from mentors and other staff is appreciated. However, mentors may neglect students and this causes disappointment. Having different mentors nearly every day does not necessarily cause any problems. It is hoped that mentors would call students by their names. Other staff may also be meaningful for students' learning. Staff is working very professionally and their work is patient-centred. Sometimes staff is ignoring patients psychologically and also ignoring students or behaving inappropriately towards them.

Tentative proposal 8

Working in different kinds of nursing environments is appreciated though it may cause anxiety. Learning to carry out new nursing procedures is significant. A feeling of succession is especially experienced in the situations where permanent staff needs students' contribution. It is important to perform well. Consequently, events that cause the feeling of inadequacy are difficult to endure and making mistakes causes anxiety. However, it is appreciated that through mistakes one is able to develop. Responsibility is important and it leads to clarify both own perceptions and unclear issues both with staff and patients when necessary. Working independently taking care of own patients leads to the feeling of being trusted. Having own patients is significant and student-patient relationships are valued. Feeling empathy towards patients is present in different situations. It is important to support not only the patient but the whole family. It is important to respect people and their right to decision-making. Listening

to patients is an important nursing method learned from patients.

Recorded critical incidents are seen as minor events but remarkable for one who is experiencing them. Events on wards lead to reflecting own life as a female and a nurse. It is important to be able to work professionally. Nursing is seen to be holistic. Self-evaluation is experienced to be a life-long process which aim is to develop professionals continuously. Deaths, ethical questions, unintentional errors, quality of care and student evaluation are issues that lead to reflection. It is reflected that at the beginning of studies there are a lot of situations that arouse emotions in students – especially encountering death is such. Ethical issues are considered and also discussed with mentors in order to learn. Theory and practice are compared. Practice is supported by scientific knowledge. Some events lead to reflect Finnish social policy and its development.

Receiving feedback both from staff and patients is important. Staff's support is especially important in challenging situations. It is necessary to receive feedback throughout the practice period. It is also important for staff to hold their promises so as students do not feel betrayed and undervalued.

Staff's professional behaviour is valued. Nurses are considered as role-models. Afterwards staff's actions that include ethical questions are reflected. Staff's ability to work in a team is appreciated; it is even more valued if students are acknowledged to be part of the team, which is not self-evident. Doctors' and nurses' equality is appreciated but it does not always come true. Staff's action is not always inappropriate towards patients.

Mentors are experienced mostly to be good and mentors' support is highly valued especially in challenging situations. Good mentors act as role-models. The mentor is experienced to be unfair while giving feedback about the mistake only at the end of practice period and not directly in the situation. Support from student colleagues is valued.

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