Praxis and Work Integrated Learning as Pedagogical Approach in Nursing Education

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The move from student to nurse has been described as difficult and tough for new nurses. New nurses’ feeling of lacking competence can reduce the opportunity to develop professional competence. They also reported fears of being “exposed” as clinically incompetent, and failing to provide safe care. Entering the nursing profession requires a high degree of adaptation where graduates are shown what skills are needed. There is a qualitative difference between the professional competence conveyed during education and the competence demanded in working life.

The aim of this paper is to discuss and propose how nurses’ praxis can be developed by means of Work Integrated Learning as a pedagogical approach.

The study departs from a model which shows processes newly registered nurses must manage to achieve a sense of competence. These processes will be highlighted by discussing the model’s processes related to praxis in the Aristotelian tradition, situated learning, social construction and WIL. One idea behind this paper is to, by using the concept of praxis, hold up the potential of WIL.

It is concluded that WIL may provide an analytical perspective using reflection where the student is given the opportunity to develop metacognitive skills to reflect their experiences in order to create understanding and manifest praxis by learning in and by clinical practice, the move from being a student to becoming a nurse. The intent of praxis and WIL is to integrate scientific knowledge with practical knowledge as a pedagogical approach that provide an analytical perspective where the student is given the opportunity to develop metacognitive skills and to test their experiences in order to create understanding and manifest their praxis by learning in and by clinical practice, the move from being a student to becoming a nurse. One way to do it is by using praxis as a component in WIL and to identify knowledge that is generated in practical knowledge, professional nursing activities and endeavors by nurses on the one hand and scientific knowledge that is generated in the academy on the other hand, in order to elaborate ways to mix them and create a certain kind of knowledge that is neither theoretical nor purely practical.

The result of this study will be proposed as a complement to nursing program curriculum in clinical practice, to identify special challenges facing students when managing and developing their professional competence.
**Introduction**

It has proven to be problematic for new nurses to meet the demands of both themselves and the healthcare organizations requirements for developing professional skills as nurses. This text focuses on the interaction between education and working life by means of knowledge and exchange of experience. A challenge for nurse educators is to prepare the students for the process of professionalization they are faced with as newly registered nurses (Pennbrant, Skyvell Nilsson, Öhlén & Rudman, 2013). This is a challenge for nurse educators, which calls for an approach in which scientific knowledge and professional values are integrated with practical knowledge and clinical competence, i.e. praxis, thus providing an example of work integrated learning (WIL). In this paper we depart from a model, which is based on empirical data and highlights challenges that new nurses have to handle.

**Aim and approach**

The aim of this paper is to assay a theoretical base of WIL as a mutual exchange and creation of knowledge between education and work life by using the analytical concept of praxis. The line of argument departs from a model that point out processes newly registered nurses have to go through including surrounding circumstances that they are facing in their becoming a professional nurse as mirrored in a model that is constructed by Pennbrant, Skyvell Nilsson, Öhlén and Rudman (2013). In this paper the model is reanalysed by discerning salient clinical experiences of newly registered nurses when they encounter clinical circumstances that do not correspond to their expectancies. Their study is supplemented by coherent pedagogical research and nursing research.

From an educational perspective the overall aim in nurse education is to unite scientific knowledge and practical knowledge towards an ability to perform and reflect upon professional skills, which in this paper is regarded as a first step towards what Aristotle (2000) conceptualize as practical wisdom, which is a certain kind of knowledge that shows up as praxis. In this paper it is assumed that developing professional skills requires that WIL is completed with praxis in nursing education in order to be able to adopt challenges in professional work that are pointed out in the model. The reasoning is
framed by the model’s sub-processes and their influencing factors. Accordingly, in this paper the model that was elaborated by Pennbrant et al (2013) is used to clarify the challenges nursing students have to deal with.

The overall structure of this paper is as follows; by aid of research it is concluded that newly registered nurses are facing difficulties in their professionalization. Then the sub-processes and influencing factors that newly registered nurses have to handle in being nurses, illustrated in the model, that is mentioned above is reported in relation to the concept of praxis, are presented (Pennbrant et al., 2013). Finally, it is argued that WIL by aid of the idea of praxis may serve as a pedagogical approach to provide active and contextualized learning for nurse students which contributes to their engagement in learning for becoming professionalized nurses.

**Background**

During their first year as registered nurses they are confronted with working conditions and organizational circumstances that does not correspond to their professional identity, which is shaped during education (Bisholt, 2012). They reported feelings of not being able to understand and handle workplace demands, feelings of self-doubt, and fear of making mistakes (Goodwin-Esola et al., 2009; Higgins et al., 2010). New nurses describe fears of being “exposed” as clinically incompetent, and failing to provide safe care (Duchscher, 2009). Studies also describe how entering the nursing profession requires a high degree of adaptation (Bisholt, 2012). Difficulties new nurses have in developing professional skills may be viewed by the conflict that exist between the professional role that has been shaped during the education and the role demand in healthcare organizations (Rung-Fen & Yun-Fang, 2012). From a social constructivist perspective new nurses construct their social realities and maintain them through interaction and interpersonal communicative acts with others. How new nurses construct knowledge and develop professional skills are affected by language, interaction, time and the context in which they are part (Berger & Luckmann, 1966). Rystedt and Gustafson (2007) showed, in an evaluation of one nurse education program, that the relationship between scientific knowledge and clinical practice was not articulated in such a way that enabled students to develop
professional skills. As a consequence several students felt that they were not prepared to be what Lave and Wenger (1991) name as “legitimate participants” during clinical practice, which in turn resulted in a limited ability to learn. Newton, Billett, Jolly and Ockerby (2009) highlighted that students questioned the authenticity of what they learn in the nurse educational institutions. Previous research on nurse education has had focus on the “education-practice gap that is the ability of practice settings to adopt and reflect what was being taught in academic institutions. Now the tables are turned: there is a worry about the practice-education gap, as it becomes harder and harder for nurse education to keep pace with rapid change in a practice driven by research and new technologies” (Benner, Sutpen, Leonars & Day, 2010, p. 4). There is a need to create an awareness of being prepared and filling the requirements within nurse education in order to prepare students to meet the vital demands to develop professional skills.

**Model of complex interaction of sub-processes and influencing factors that new nurses’ have to deal with**

This paper takes, as is mentioned above, its’ starting point in a model (see figure), that focus sub-processes newly registered nurses have to go through in managing perceived obstacles in their efforts to integrate knowledge that is acquired in education with organizational and clinical demands for being professionalized nurses. The model is built on data from two national cohorts of nurses within a population based Longitudinal Analysis of Nursing Education (LANA) (Rudman & Gustavsson, 2011). Statements from 330 new nurses responding to an open ended question, describing factors that affect experience and knowledge they bring from their education as they develop professionalism in health care settings were analyzed. Their statements were analyzed and a model that reveals a complex interaction of sub-processes and influencing factors of what new nurses have to deal with in working life as well as possible outcomes was constructed (Pennbrant et al., 2013).

The core process in the model is mastering the professional role. It includes three interrelated sub-processes: evaluating and re-evaluating educational experience, developing professional self-efficacy and developing clinical competence. These sub-processes are influenced by several factors as follows: social values and norms, healthcare organization, management of new nurses, co-workers, patients
and significant others, family and friends. These conditions affected the professional development directly, indirectly or as mediating influences and lead to possible outcomes as new nurses choose to remaining in or leaving the profession. Social values and norms should be seen as macro level influencing factors, while the healthcare organization influences the meso level. Management for new nurses, co-workers, patients and significant others and the influences of family and friends affect the micro level (see figure).

![Diagram showing complex interaction of sub-processes and influencing factors]

Figure. A model illustrating the complex interaction of sub-processes and influencing factors that new nurses have to deal with (Pennbrant et al., 2013).

**Work Integrated Learning - a pedagogical approach**

Work Integrated Learning (WIL) is an umbrella term for a range of approaches and strategies that integrate theory with the practice of work within a purposefully designed curriculum (Patrick, Peach, Pocknee, Webb, Fletcher & Pretto, 2008). WIL have received different names, in English refers to work integrated learning and cooperative learning. Another term for this is Cooperative & Work-Integrated Education (CWIE). WIL is both a way to organize vocational education and a strategy to
give it a specific content. WIL is challenging a classic view of education in which scientific knowledge is a reliable and highly valued form that is separated from vocational skills. WIL requires the student to be situated in the workplace (Patrick, Peach, Pocknee, Webb, Fletcher & Pretto, 2008).

Knowledge gained through formal learning in education, is many times expressed as theories of general validity, while knowledge developed through informal learning constitutes a basis for being able to act in specific situations. In this paper formal learning is considered as learning that takes place in educational settings. By informal learning is meant learning that occurs in day-to-day interactions in clinical settings. In general, formal learning at the university is supposed to be integrated with perceived skills needs in healthcare organizations and skills obtained by registered nurses through informal learning. From this perspective, it appears that informal learning is implicit learning that takes place in a caring activity in situations where specific tasks shall be performed (Bjork, Tøien & Sørensen, 2013). Formal and informal learning have to be integrated into more organized forms (Tynjälä, Slotte, Nieminen, Lonka & Olkinuora, 2006). WIL requires reciprocity between formal and informal learning. WIL may be described as an effort to systematize and conceptualise learning experiences in education and in other contexts.

In nursing training, there is often a tension between the ambition to integrate scientific and theoretical knowledge with practical knowledge. A challenge for nurse training is to elaborate a way to satisfy educational needs, workplace needs and, above all, students’ needs (Newton, Billett, Jolly & Ockerby, 2009). According to McLennan (2008) way is to increase the emphasis on WIL curriculum with the goals in institutional strategic directions and the provision of internal structures and support that value WIL as “a teaching and learning approach which has the potential to provide a rich, active and contextualized learning experience for students which contributes to their engagement in learning” (p. 2).

**Praxis**

Learning is situated, which means it is embedded within the professional activity, context and culture. Informal learning is also usually unintentional rather than deliberating. According to Lave and Wenger...
(1991) this is a being which they define as “legitimate peripheral participation”. A major challenge for nurse educators is to overcome this, and to provide students with tools to “bring theoretical and practical knowledge together to form a whole”, i.e. praxis (Dahlborg-Lyckhage & Pennbrant, 2014). Praxis can be understood as a concept that, attempts to dissolve the dichotomy between theory and practice, idea and reality, thinking and doing. Our point of view is that a development of professional skills should be a step towards praxis, or practical wisdom. The concept of praxis focuses on actions that take place when practice and theory are confronted with each other.

The roots of praxis derive from Aristotle’s ethics, where theoría is distinguished from practical activities. Aristotle separated the spectating of theoría from practical purpose, and saw it as an end itself, the highest activity (Wilson Nightingale, 2004). Ability to understand the theory is by scientific knowledge, epistémé; target action, techne; and act as a target, phróinesis or wisdom (Liedman, 1978). Aristotle also distinguished between poesis and praxis which both are action-oriented (Balaban, 1990). Poesis means a product that is separate from the act itself, i.e. it has no intrinsic value, and it is the product which is central. Praxis, however, means that the act is important and no visible end result required “the telos of praxis coincides with the performance of the act itself” (Balaban, 1990, s. 191). Praxis derives from the ethical/moral knowledge, fronesis, or practical wisdom, and implies the ability to use knowledge from theory, techne and lived experience and by means of reflection develop practical wisdom or praxis.

As stated earlier praxis is simultaneously epistemological and ontological. Both Aristotle’s starting points and Marx's development of the concept represent the epistemological dimension of the concept (Marx, 2003). When we get into the concept as a way for achieving autonomy and emancipation, which emphasized, inter alia, by Arendt (1958/1998) and Freire (1970/1993), we focus on the ontological dimension where praxis can have an ability to emancipate the nurse in her/his profession.

In the following section, by using the findings on the sub-processes that are crucial in the transition to clinical practice as they are demonstrated in the model, it will be argued that praxis needs to be inserted in WIL as a pedagogical approach where theory and practice are brought together as a whole.
**The significance of praxis in nurse education**

The model describes the sub-processes and influencing factors challenges new nurses have to handle in order to develop praxis. In this section it is described how the concept of praxis can be explained and understood in relation to the sub-processes and the influencing factors.

**To grasp the meaning of theoretical understanding in clinical practice**

The model argues for the importance of evaluating and re-evaluating educational experiences, i.e. to identify practical knowledge in relation to the theoretical knowledge in educational contexts. To grasp the meaning of scientific understanding in clinical practice, scientific knowledge that is acquired in education has to be valid in clinical practice. The model indicates how absences of theoretical understanding may disrupt perceived ability to act as new nurse. This process is related to Aristotle’s view on the difference between episteme and techne. Epistemic knowledge is similar to scientific knowledge, while professionalized experiential knowledge has similarities with the concept of techne.

For the student, this means a focus on the technical-practical i.e. performance of duties in nursing actions. Both the constraints and possibilities of episteme and techne must be mutually recognized and according to Jonsson (2007) “to learn episteme or to learn techne as they have been institutionally interpreted is to affirm the actual form and neglect the other” (p. 8), the one form excluding the other in its purest state.

Praxis is the glue that holds together skills and knowledge in the nurse’s professional role (Connor, 2004). It is possible to understand praxis as something in between abstract knowledge (to know) and concrete applications (to do), a synthesis between scientific knowledge and practical knowledge. It is also possible to understand praxis as a synthesis because the dichotomy between theory and practice is exceeded by praxis. A fruitful way to explain the dialectics between theory and practice, which is central from a materialistic perspective of history, is that we enunciate theories on the basis of observations of practice in reality. If theory cannot be applied for understanding practice and reality have to be re-evaluated, which may change understanding of practice. Understanding in vocational education takes place when the scientific knowledge is tested in practical situations; it's not just a rewording. This is to evaluate and re-evaluate the experiences from the education.
To be part of the community of practice
The model argues for the importance of developing a professional self-efficacy which emerges as both an individual process and a social process, i.e. the feeling of being competent and to fit in, as well as to be accepted by others. Professional self-efficacy is related to personal factors such as self-confidence, feelings of practical competence and to support from co-workers and management.

Starting from praxis as an ontological concept, we can put into words what happens when professional skills develop. Arendt (1958/1998) mean that the human being through praxis can develop an ability to realise oneself, to become being of praxis. Also Freire (1970/1993) considers praxis being a means for bringing knowing and doing together as a dialectical whole and through this understand the entirety of a practice which requires both theoretical- and practical knowledge. Awareness and transformation of oneself can be seen as the most fruitful outcome of nursing within the emancipator paradigm. Freire and Arendt have described praxis as a way to overcome human alienation in working life. To develop professional self-efficacy should be seen as a process dependent both on the new nurses own knowledge as well as on co-workers and management approach. Development of praxis requires close collaboration with the surrounding world as regards to training and learning in different environments and social practices as learning activities, with the goal of gaining knowledge related to specific fields, in what Lave and Wenger (1991) labels as a community of practice. The training emphasizes "the ideology of nursing", while the professional skills are prioritized in the workplace (Bisholt, 2012).

To grasp the meaning of clinical practice from a theoretical and practical point of view
The model describes how the development of clinical competence relates to the ability to understand and handle clinical problems and situations. The development of clinical competence is related to theoretical knowledge as well as to an understanding of the meaning and constraints of nursing practice. Benner et al (2010) describe practice situations as undetermined, open-ended, and that they change over time. Consequently, nurses must first face the nature of the situation, i.e. what is important and unimportant about the clinical situation. This process is ongoing, where nurses’ interpretation of clinical situations continuously is developing by experience. Consequently, even
scientific knowledge required in order to explain and understand the clinical situation will change by increased experience. Clinical competence can be seen as both the ability to understand the clinical situation and the ability to act (techne) and is taught and developed in practice, where the norms, values and attitudes affects how different situations can be understood and what is considered as possible and appropriate. In this way clinical competence becomes the ability to, understand what is to be done, why and in what way (techne). Developing clinical competence requires integration of theoretical- and practical knowledge, problem-solving and analytical skills and is a process that starts during education and continues throughout working life (Pennbrant et al., 2013). Praxis can thus be seen as an in-depth clinical competence with several different theories, knowledge, norms, values and attitudes that are being considered and interpreted in relation to healthcare organization’s expectations and requirements.

**Influencing factors for praxis development**

In addition to the sub-processes a number of influencing conditions viewed as important for the professional development, are pointed out in the model. The influencing factors are social values and norms, health care organization, management, co-workers, patients and significant others, like family and friends. In summary these are factors that influence new nurses, and their abilities to develop praxis (Pennbrant et al., 2013).

Although nurses coming out of clinical training with a humanistic values, and theoretical knowledge based on science, a hindrance of professional development to praxis comprises of harsh working conditions and organizational circumstances. Practice also involves unspoken implicit rules; and sometimes lack of support and poor role models. (Maben, Latter & MacLeod Clark, 2006; Standing, 2007). Today’s healthcare organizations often involve time pressure, something that can limit the opportunity for new nurses’s to develop their theoretical- and practical knowledge in to praxis. It is difficult getting support from such organizations, something that is desirable, as highlighted in the model (Pennbrant et al., 2013).
**Discussion**

The model indicates a need of praxis in nurse education in order to master the sub-processes and influencing factors that challenge new nurses when entering work life. The model inspired a basis for further discussion about how work integrated learning (WIL), as a pedagogical approach in nurse education, could be designed in relation to nursing students’ development of professional skills as a step towards praxis. Nurse education should be permeated by an integration of theory and practice, between university and clinical education.

Pennbrant et al (2013) describe how new nurses experienced that their educators highlighted normative aspects of nursing instead of explain how healthcare actually works within the prevailing factors. This indicates a need for WIL as a pedagogical approach, with the opportunity for students to develop praxis. For the professional nurse, it is important to understand the complex interplay between theoretical and practical knowledge (Connor, 2004). Thus, the point of developing praxis as an interplay between theory and practice is on the hand to facilitate the students’ professionalization by letting theoretical knowledge and professional values that was learned in education serve as support to students and new nurses when they are confronted with clinical demands, and on the other hand to fill up theory with experiences of practice. The aim and outcome is ultimately a fusion of theory and practice into praxis. Scientific knowledge and practical knowledge is then dealt with thoroughly and simultaneously to such an extent that they are not observable as separated from each other.

Another question is whether the nurse's ability to perform her work in the long run makes her professional role sustainable (Maben, Latter & MacLeod Clark, 2007). According to Falk Rafael (1996), it is possible to distinguish three different types of nursing; ordered caring, assimilated caring and empowered caring. Ordered caring, means a lack of theoretical knowledge, assimilated caring is a caring which is based on scientific knowledge from the medical science and empowered caring, constitute nursing sciences and healthcare ethics an integral part of nursing care. Falk Rafael (1996) connects praxis to empowered caring that is when the nurse conducts nursing that is in harmony with nursing values and knowledge from nursing science. This is praxis used in a way where it becomes
clear that there is a dialectical and mutual relationship between theoretical knowledge and practical knowledge. Theory and practice are regarded equally. To combine the different forms of knowledge allow a new and greater knowledge which emerges as a synthesis, i.e. praxis. Development of praxis is a complex process, affected by the new nurses’ personal maturity, personal circumstances, the education and training they receive from their nurse education, and the organizational factors they encounter in their new workplaces, including management practices and co-worker relations. The new nurses are looking for different ways to develop professional skills and become more secure in their role for creating autonomy. It is through the process of sharing information and experiences with others, a personal as well as a professional development are improved (Lave & Wenger, 1991), and in the same way these prerequisites exists for new nurses.

Turning points in learning is when the notion of knowledge change focus (Marton, 2005). Turning points in learning can occur when theoretical knowledge integrates with practical knowledge, or when clinical practice can be understood on the basis of theory. To reflect is a way of integrating theory and clinical practice, thought and awareness/idea and reality (Schön, 1981/2011). Continuous learning occur by reflection. When the plan fails the nurse students are forced to think and act in a different way by the organization. Praxis in this case is a way for overcoming the false dichotomies between the objective and the subjective within both the scientific tradition extolling the objective, and the social order denying human experiences. Even Benner (1984) moved the concept praxis from the epistemological field and highlighted the concepts ontology. Benner express that nursing is: praxis, reflective praxis, or reflective in practice. According to Newton and McKenna (2009) it is impossible to expect that new nurses will be able to develop knowledge and skills through critical reflection when it is counteracted by their socialization and the limits that have been formed between the training organization and the healthcare organization. It is important that theoretical knowledge may be transferred between different situations and contexts (Säljö, 2003). In order to become a nurse with professional skills, theoretical knowledge needs to be combined with practical knowledge and personal experience. According to Berger & Luckmann, (1966), when people, like in this case newly registered nurses, interact in a social system, mental representations of each other's actions are created.
over time and become internalised into reciprocal roles. The referred literature stress that development of praxis depends on individual factors such as self-efficacy and perceived competence. In addition also the working atmosphere in the healthcare organization. It emphasizes the importance of an educational approach to education which consistently strives to relate the theoretical and practical requirements to each other.

For a re-contextualization to take place, education and learning need to take place in relation to surrounding circumstances, in order to further develop and implement improvements in nurse education (Pennbrant et al., 2013). One way to improve the nurse education is to increase the emphasis on WIL curriculum with the goals in institutional strategic directions and the provision of internal structures and support (Patrick, Peach, Pocknee, Webb, Fletcher & Pretto, 2008). This would then be prerequisites for constructing a critical mass where profession, education and health care staff can meet (Evans, Guile, Harris, Helen & Allan, 2010). To be explicit, a continuous collaboration throughout ongoing education is required.

A target for clinical practice should be to raise the students and educators/tutors awareness of the nurse's development to praxis (Connor, 2004; Kilpatrick, 2008; Dahlborg Lyckhage & Pennbrant, 2014). It is of importance “to affirm nursing practice as praxis and to acknowledge the epistemological diversity that sustains praxis” (Tarlier, 2005, p. 133). Historical materialism offers insights into how the nurse’s material conditions and the student’s educational environment can bring about different ways of being, “being in praxis” or “being of praxis”, as the contradictions between theory and clinical practice lead to progress in terms of both modes of thought and action.

**Conclusion**

The intent of both praxis and WIL is to integrate scientific and theoretical knowledge, with practical knowledge. WIL as a pedagogical approach may provide an analytical perspective using reflection where the student is given the opportunity to develop metacognitive skills and to try their experiences in order to create understanding and manifest the praxis by learning in and by clinical practice, the move from being a student to becoming a nurse. One way to do it is by using praxis as a component in
WIL and to identify knowledge that is generated in practical knowledge, professional nursing activities and endeavors by nurses on the one hand and theoretical knowledge that is generated in the academy on the other hand, in order to elaborate ways to blend them and create a certain kind of knowledge that is neither theoretical nor purely practical. The goal is to develop nursing education as a vocational program where the dichotomy between the two kinds of knowledge is exceeded. To, so to speak, actualize praxis in clinical practice.


References


