When practice precedes theory — A mixed methods evaluation of students' learning experiences in an undergraduate study program in nursing

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ARTICLE INFO

ABSTRACT

A key area for consideration is determining how optimal conditions for learning can be created. Higher education in nursing aims to prepare students to develop their capabilities to become independent professionals. The aim of this study was to evaluate the effects of sequencing clinical practice prior to theoretical studies on student's experiences of self-directed learning readiness and students' approach to learning in the second year of a three-year undergraduate study program in nursing. 123 nursing students was included in the study and divided in two groups. In group A (n = 60) clinical practice preceded theoretical studies. In group (n = 63) theoretical studies preceded clinical practice. Learning readiness was measured using the Directed Learning Readiness Scale for Nursing Education (SDLRSNE), and learning process was measured using the revised two-factor version of the Study Process Questionnaire (R-SPQ-2F). Students were also asked to write down their personal reflections throughout the course. By using a mixed method design, the qualitative component focused on the students' personal experiences in relation to the sequencing of theoretical studies and clinical practice. The quantitative component provided information about learning readiness before and after the intervention. Our findings confirm that students are sensitive and adaptable to their learning contexts, and that the sequencing of courses is subordinate to a pedagogical style enhancing students' deep learning approaches, which needs to be incorporated in the development of undergraduate nursing programs.

Introduction

This paper reports on effects of sequencing clinical practice prior to theoretical studies in the second year of an undergraduate study program in nursing. Nursing is a practice based discipline, and higher education in nursing aims to prepare students to develop their capabilities to become independent professionals with a lifelong learning, enabling them to adapt their knowledge in relation to advances in both nursing theory and practice. The literature describes two broad orientations in higher education; the teacher-directed approach (i.e. the transfer of information from expert to novice), and the student-centered approach, where students take responsibility for planning and evaluating their learning experiences, rather than being passive recipients of knowledge (Biggs and Tang, 2007; Marton and Bowden, 1999). Research in higher education emphasizes the importance of student centered learning. Despite this, many higher education policies are dominated by lectures and other teacher-directed activities, which give support to belief that theoretical studies must precede clinical practice in order for students to perform clinical work "correctly". There is strong evidence for a discrepancy between classroom theory and clinical practice, which in nursing education takes place in a clinical setting (Scully, 2011; Corlett, 2000). If students' theoretical understanding is of no significance to their practical needs, clinical experience will take priority over theoretical studies (Sweeney, 1986). In this context actions speak louder than words.

Background

Perspectives on learning and nursing

A key area for consideration in nursing education is how optimal conditions for learning can be created. A student-centered learning approach, in line with the client-centered culture in modern society

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is threatened when students are treated as a passive and homogenous group, exposed to identical sets of learning activities regardless of previous experiences, prerequisites and needs. It can be assumed that learning approaches used in nursing education have significant implications for many aspects of nursing practice beyond purely didactic considerations. A teacher-centered learning technique that implies asymmetrical power relations between students and teachers might serve as a poor model for students future patient—nurse interactions (Lasiter, 2014; Stoddart, 2012; Sweeney, 1986). A paradigm that emphasizes the notion that students are autonomous, capable people, who can assume responsibility for their own learning, resonates better with the philosophy of person centeredness.

The constructivist and socio-cultural approach to learning

In traditional approaches to learning, and hence the most common and widely accepted way to educate at universities (Marton and Bowden, 1999), the teacher is the knowledgeable expert with students absorbing knowledge. Assessment of their knowledge is based on the assumption that students become ready to learn at a given level of collective maturation, and that variability between students depend on differences in individual prerequisites and level of motivation (Biggs and Tang, 2007). However, variation among students as well as variability in types of knowledge demands different forms of mediation and acquisition. Relationships between knowledge and individual must be more intimate than that seen in classical theories of knowledge, where objectivity and generalization are central (Wellard et al., 2007). In vocational education, key knowledge and skills must be acquired through activity. This is concordant with social constructivist views of learning, emphasizing performing as the means of acquiring knowledge through personal experiences. This implies a view of learning that is not merely about theories, concepts and principles to be covered and understood, but also about having a clear understanding of what it means to gain experience and to perform in various professional situations (Biggs and Tang, 2007). If constructivists consider learning to be an individual mental process, followers of socio-cultural approaches consider learning to be contextual and integrated with social participation (White, 2010). Thus, the core of nursing education is to encourage an integration of theoretical knowledge with practical skills, e.g. utilization of research in clinical and managerial decision making and to maintain a reflective and evaluative attitude to both.

Learning approach

Students react and respond in line with their experience of the learning environment and what they perceive is required of them by the learning institution (Asikainen et al., 2014; Marton and Bowden, 1999). Dominant teaching cultures tend to profile students to become either proactive or reactive learners. This promotes two widely accepted learning styles: a surface approach (SA) and a deep approach (DA). Students with SA tend to focus on memorizing facts and data rather than its meaning. Students with DA strive to grasp the essential meaning of the situation and reflect critically on different aspects of the phenomenon (Marton and Bowden, 1999). There may be an abundance of definitions of student-centered learning but they all embody certain tenets; reliance on active rather than passive learning; an emphasis on DA and understanding; personal responsibility and accountability; increased sense of autonomy; independence and mutual respect in the student—teacher relationship, and a reflective approach to learning and teaching by both parties (Lea et al., 2003).

Theory-practice gap

The theory-practice gap in nursing involves translation as well as relevance. Historically, nursing knowledge was communicated to students through experiences in clinical settings, i.e. the specific nursing knowledge was seen as embedded in practice. The earliest form of gap between theory and practice was translational (i.e. lectures in medical science taught in classrooms vs. knowledge acquired when caring for patients). In the late 1960s a relevance gap between theory and practice was first mentioned in the nursing literature (Risjord, 2011), meaning that concerns about the relationship between theory and practice was not a matter of either pedagogics or of translating scientific discoveries into useful bedside practices, but both. Upton (1999) proposed that a theory-practice gap exists within the four pillars of nursing; management, practice, research and education. In the latter, educationalists talk about "nursing as it ought to be" and practitioners as "nursing at it is". This dissonance between professional ideals and practical reality makes students vulnerable (Curtis et al., 2012). In addition, Allan et al. (2011) show that there is a hidden curriculum in clinical practice for nursing students in that they are expected by trained staff to work while they learn, and expected to be competent enough to work as autonomous registered nurses immediately after graduation, which also contributes to a theory-practice gap. Conversely, Upton (1999) argued that it is not students who are in focus of the theory-practice debate but rather the curriculum. Since the dominant "technical rational model" in nurse education usually is contrary to the nature of nursing knowledge, nursing philosophy and contemporary opinions alike, suggests a hierarchy of knowledge, i.e. that academic knowledge is given higher status than practical and experiential knowledge. In most universities, theoretical studies precede clinical practice in nursing curricula, and this sequencing of leaning is based on a model assuming that students should have substantial theoretical knowledge before being given the opportunity to apply this knowledge in practice (Dale, 1994; Landers, 2000). There are surprisingly few studies that evaluate the effects of self-directed learning on the relationship between theory and practice in nursing education. Present trends include innovative methods to better prepare the students for practice. Studies show that simulation labs (Hope et al., 2011), videoconferences (Rush et al., 2011), computer assisted learning (Bloomfield et al., 2010), and training at clinical skill centers (Freeth and Fry, 2005) promote self-directed learning and tie theory with practice. Some studies demonstrate that problem-based learning (PBL) is associated with students' abilities to think critically and to engage in self-directed practices (Applin et al., 2011), to adopt a deep learning approach (Tiwari et al., 2006), and to be more satisfied with the educational experience (Rideout et al., 2002). There are also studies evaluating other aspects of learning in clinical practice such as collaborative initiatives between academics and practitioners (Chan, 2012), mentorship (Roxburgh, 2014) and reflective practice (Chong, 2009; Kautz et al., 2005; Kuiper and Persut, 2004; Tashiro et al., 2013). Reflective practice has shown to be a vital tool that connects students' knowledge and experience and promote self-directed learning. However, all these studies had the perspective that theory preceded practice in nursing education. What would be the outcome if the curriculum was reorganized in a way that clinical practice came first, followed by theory? The objective behind such a model would be to stimulate the students' curiosity and motivation to learn more about practical situations in accordance with the action-based knowledge emphasized in the constructivist approach (Moss et al., 2010). For the purpose of this study learning process was defined as the act of acquiring new knowledge or to modify and reinforce existing knowledge, behaviors, skills, values, or preferences, and self-directed learning