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Midwifery education in practice

Learning to create new solutions together: A focus group study exploring interprofessional innovation in midwifery education

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ABSTRACT

Undergraduate students can learn how to be innovative in partnerships with health care institutions and private enterprises. This study portrays how a three phase innovation model was applied in an interprofessional health education context at a Danish university college.

The aim of the study was to explore midwifery, nutrition and health as well physiotherapy students' perceptions of participating in a real-life innovation project situated in antenatal care.

A total of eighteen students participated in five focus group interviews. Thematic analysis was used to interpret data findings. Data analysis revealed three themes: 'Navigating in uncertainty', 'Being part of a team' and 'Impact of project learning'.

Students found project learning to be the most relevant with regards to their clinical practice. Furthermore, study findings suggest that innovation is promoted by teamwork, interprofessional participation, mentor support and external partnerships.

Introduction

Across Europe major political, economic and social changes have taken place over the last 2 decades. Presently, the health sector faces the challenge of economic restraints, whilst at the same time seeking to provide quality healthcare for all (WHO, 2011). In the future, health care workers need the ability to adapt to a healthcare sector undergoing change and the skills to develop quality solutions in times of economic restraints. The educational sector plays an important role in promoting innovative skills. Innovation is currently a central element in trans European policy agendas seeking to develop education (European Commission, 2013b; European Commission, 2012). The national Danish curriculum of midwifery stipulates that graduates of undergraduate midwifery education programs upon completion of their education, must be able to apply established knowledge in new contexts and develop the midwifery discipline (Ministry of Science, Innovation and Higher Education, 2009). Furthermore, ICM standards for midwifery education include continuous quality improvement in midwifery programs and their outcomes (ICM, 2013). At the moment, a limited body of evidence supports or refutes innovative learning in health education. This paper seeks to investigate how students perceived their participation in an innovation project undertaken in a partnership between a university college, a large regional hospital and a private IT enterprise. The purpose of the project was to build innovative skills among midwifery, nutrition and health as well as physiotherapy students. The students were given the assignment of developing content for a new web portal in antenatal care. This paper reports on the qualitative part of a multimethod study where questionnaires and focus group interviews were used to collect data.

Background

Innovation originates from the mercantile industry. In this understanding of the concept, it relates to new or improved products, services or processes (OECD and Eurostat, 2013). The transition of innovation into educational contexts is linked to innovation as a key factor for societal growth and development (European Commission, 2013b; European Commission, 2012). Aligning educational curriculums to political recommendations implicates learning innovative skills by practising innovation in education (European Commission, 2012).

According to the national Danish Innovation strategy, university colleges are advised to integrate innovation into existing curricula (Danish Government, 2012). Furthermore, university colleges are

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encouraged to support innovation partnerships with public service providers and private enterprises (Danish Government, 2012). Despite political recommendations, a recent report mapping joint innovation projects has shown that Danish university colleges are poorly represented in public innovation projects (DEA et al., 2012).

Literature review

Innovative learning can to some extent be compared to other learning approaches applied within health education. Innovative learning builds on the assumption that better solutions are created in teams and thus shares characteristics with collaborative learning and interprofessional education (Rogers, 2010; Kromann-Andersen and Jensen, 2009; Feingold et al., 2008). Innovative learning also acknowledges problem solving and self-directed learning (Darsoe, 2011; Barnett, 2004; Jones and English, 2004) and thus shares characteristics with problem based learning (Spiers et al., 2014; Rowan et al., 2008; Smith and Coleman, 2008).

Innovative learning also differs from the learning approaches mentioned above. As a method, innovative learning accentuates the importance of creativity (Kromann-Andersen and Jensen, 2009; Pattison, 2006). Innovative learning seeks to improve traditional convergent thinking and divergent thinking. These two ways of thinking are needed to be creative (Kromann-Andersen and Jensen, 2009). In addition, innovative learning seeks to build action competence in students so their ideas will be turned into solutions (Darsoe, 2011; Kromann-Andersen and Jensen, 2009). Other educational differences comprise of the likely inclusion of one or more external partners in the innovation process (European Commission, 2013b; Danish Government, 2012; European Commission, 2012).

Prior studies of innovative learning have focused mainly on the entrepreneurial aspect of innovation within the context of business education (Maritz and Brown, 2013). However, Taatila (2010) argues that entrepreneurial competences are psychological and social rather than specific to an academic branch. According to Taatila (2010), the successful entrepreneur needs the skills to create and implement solutions and the willingness to work hard to achieve goals. Jones and English (2004) note that student-centered learning in innovation and entrepreneurship education provides students with the autonomy over how they learn, when they learn and where they learn. This learning approach differentiates from passive traditional teaching, due to the fact that it requires students to be active in collaborative activities and goal-driven tasks.

Within the context of social- and healthcare education, research suggests that students best learn how to innovate by practising innovation (Id-Korhornen et al., 2011). These findings also propose that students are able to create more innovative solutions, when they cooperate with students from different professional fields and external partners.

The project

The innovation project was developed in 2013 in a cooperation between a midwifery program and an obstetric gynecological department. The project had dual settings and dual purposes at respectively the university college and the regional hospital. At the university college the purpose of the project was to promote innovative skills by creating an experimental learning environment where students could create digital communication solutions. The project was also a sub-project under a national welfare technology project. This project was situated at the regional hospital. The purpose of the hospital project was to improve communication by testing and implementing a new web portal for women in antenatal care. The contribution the university college made to the national welfare technology project consisted of the development of web content for the portal.

Participants

Students at different levels within the midwifery, the nutrition and health and the physiotherapist programs were invited to participate in the project. Participation was voluntary. Alongside project signup each student chose one out of three possible web portal themes; healthy living, birth preparation and family life. The duration of project participation was three to four months. Students participated in the project as part of interdisciplinary- and elective courses or in addition to attending their regular classes. Seventy seven students signed up for the project. At the start of the project, six students withdrew their consent to participate. Seventy one students, all female, who were divided into 18 groups, took part in the project (midwifery n = 44, nutrition and health n = 21, physiotherapist n = 6). Twelve groups were mono professional and six groups were multi professional. All 18 groups completed the project. Upon completion of the innovation project, students had produced a wide variety of web portal content including information/advice, FAQS, training programs, tests and films/animations.

Each group was supported by a mentor. The mentors were employed as lecturers at the 3 bachelor programs (midwifery n = 4, nutrition- and health n = 1, physiotherapy n = 1). The mentors were enrolled in the project a month and a half prior to the enrollment of the students. Formal meetings were used to prepare innovation as a didactical approach. An external innovation consultant supervised the process. Upon offset of the project, the mentor's role consisted of facilitating student work and ensuring the web content met professional quality standards. During the project, the mentors met regularly to share experiences of student mentoring and discuss the progress of the project.

The innovation process

The Creative, Innovative and Entrepreneurial (CIE) model was used to structure the innovation process. The model consisted of 3 different phases; a creative-, an innovative- and an entrepreneurial phase (Kromann-Andersen and Jensen, 2009). Each phase defined a set of tasks the students had to complete before entering the next phase of the innovation process. Each phase also offered a set of innovation tools the students could use to structure their work. The students also attended 3 workshops (Fig. 1). In addition to cooperating with fellow students during the workshops, the students also cooperated with each other during the innovation process to ensure that each web product was distinct.

Method

Aim

The aim of the study was to explore students' perceptions of participating in a real-life innovation project.

Sample

Convenience sampling was used to recruit students (Malterud, 2004), however to ensure a representative sample, students from all three bachelor programs were recruited for the study. Furthermore the sample of informants consisted of students at different levels of their education ranging from first to final year. The students were recruited in the groups they had worked in during the innovation project. Five out of eighteen groups were invited to participate in the qualitative study. All five groups accepted the