Impact of Enquiry Based Learning (EBL) on Student Midwife Praxis

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Abstract

Midwifery training in Ireland moved to Higher Education in 2006. This shift established a physical and educational separation of theory and practice. The adoption of Enquiry Based Learning (EBL) by one Irish midwifery education institution attempted to address this division. Enquiry Based Learning (EBL) has the potential to develop student reflexivity and evidence assimilation across the career-span and may therefore enhance student praxis. EBL has been championed as an example of an educational model that supports praxis, helping to create competent practitioners through the use of authentic learning scenarios that address the theory practice divide The current research study represents the first formal evaluation of EBL in undergraduate midwifery education in the South of Ireland. The study was a mixed-methods design that utilised focus groups, interviews and survey to ascertain the opinions of first exposure to EBL amongst a cohort of first year student midwives. Findings demonstrate the value of EBL in enhancing student midwife praxis.

Introduction and Background

Enquiry Based Learning is also known as Problem Based Learning and describes an educational approach where the learner gains knowledge or skills through active enquiry rather than direct instruction. It is an educational model that was first introduced within medical training in McMaster University Canada in 1969 and has since gained momentum within other health and allied health education programmes across the

world. It is reported that Enquiry Based Learning (EBL) has the potential to develop student reflexivity and evidence based practice across the career-span and may therefore enhance student praxis (Savery, 2015).

The notion of 'praxis' originates from ancient Greek philosophy and describes the practice of thoughtfully combining knowledge, skill and wisdom. Interpretation of "praxis" is varied, from 'reflection and action upon the world in order to transform it' (Freire, 1970, p33) to 'informed action which, by reflection on its character and consequences, reflexively changes the knowledge base which informs it' (Carr and Kemmis,1986, p33). Applied within a midwifery educational context, praxis may be facilitated through encouraging genuine reflection between theory and practice thereby enhancing evidence based care.

EBL has been championed as an example of a model that supports student praxis, helping to create competent practitioners through the use of authentic learning scenarios that help to bridge the theory/practice divide (Rolfe, 1998).

Midwifery Education in Ireland

In Ireland, direct entry midwifery education is currently offered as a four-year honours degree programme in six third level institutions in partnership with seven healthcare bodies. Having commenced in September 2006, this is a relatively new approach to training midwives in Ireland. Prior to this, midwifery training was only available to registered general nurses who wished to pursue a two-year post-registration midwifery course.

Similar to other jurisdictions (Monaghan, 2015), the move into higher education brought with it physical and educational separation between theoretical input in college and clinical application of knowledge and skills in practice. The adoption of evidence-based active educational approaches such as EBL has been advocated to help address these theory/practice divisions (Crookes et al., 2013). Consequently, in an effort to address the emergence of a 'theory-practice gap' within the author's institution, EBL was introduced into undergraduate midwifery education in 2010. This was the first introduction of EBL to midwifery education in the South of Ireland and this study represents the first research based evaluation of EBL in undergraduate midwifery education in Ireland.

EBL as a Model within Midwifery Education

Definitions of enquiry based learning vary and several educational features of EBL are evidenced within the literature. Some of the more specific characteristics of the approach can be found in the writings of Albanese and Mitchell (1993), Barrows (1996) and Barrett (2005). The core principles of this collaborative learning approach are generally acknowledged as follows:

- Learning is learner-centred
- Learning is recognised as a combination of product (what is learned) and process (how knowledge is attained)
- Learning occurs in small groups
- A teacher is presented as a facilitator or guide
- Authentic scenarios (triggers) are presented during the course

- These scenarios (triggers) are used as tools to achieve knowledge and problem solving skills

- New information is attained through self-directed and group learning

- Learning is achieved by analysing and solving representative real life issues

Structure of EBL Tutorials and Feedback Sessions

A hybrid EBL model was developed and introduced to midwifery education by the author in 2010. This involved some modules being facilitated through EBL and the remaining being lecture-based.

The structure of all EBL modules was informed by Barrow's (1996) influential work and proceeded as follows: students were presented with three real life scenarios (triggers) over the course of an 8 week theory module. Each trigger was allocated 2-3 weeks for completion during the module. At the start of each new trigger, students were guided by two facilitators to:

i)   Identify key issues

ii)   Identify their existing knowledge relating to the key issues

iii)   Identify what they did not know (learning needs) and

iv)   Develop an action plan to address learning needs.

There were normally three tutorials per week with each lasting 2-3 hours. During this time students worked in groups of about five to determine which key issues/aspects of the trigger to research in depth. Follow up tutorials provided students with the opportunity to feedback their research to the EBL group and then decide whether to

investigate the issues further or consolidate/apply their knowledge. Each tutorial was facilitated by two midwifery lecturers (1 facilitator: 8 students). Both facilitators within the current study had attended EBL training workshops prior to commencing EBL.

The final tutorial of each trigger required students to present their knowledge/skills to the larger class. Groups were normally allocated 20-25 minutes to undertake this final presentation/role-play. Students received facilitator feedback and grades on completion of each trigger. This resulted in students receiving feedback on three occasions during each EBL module.

Current Study

Perspective

The current study attempted to appraise the impact of Enquiry Based Learning (EBL) among a cohort of first year student midwives with respect to student learning.

Methodology

During the 2014/15 academic year 21 student midwives who undertook a theoretical EBL module were invited to participate in the study, 14 students consented. Students were mixed ages (17-42 years) and exclusively female. Ethical approval was gained from the author's institution.

A mixed methods research design that used focus groups, individual interviews and survey, was employed to evaluate the impact of EBL on student midwives' learning.

Focus groups and interviews were semi-structured to investigate in what way(s) learning was impacted by EBL. Focus group data collection took place in the opening weeks of module delivery. Interviews took place at module mid-point.

Quantitative data collection utilised the Lander questionnaire (2008) to appraise the impact of EBL on student's ownership of learning, acquisition of knowledge/skills and ability to critically analyse research. This survey was administered on module completion.

Mixed methods research requires qualitative and quantitative data to be combined to provide broader answers to the research question. Therefore thematic analysis of qualitative data was combined with quantitative descriptive statistics to reveal three broad synthesised themes: i) Evolving beliefs, ii) Group Dynamics and iii) Learning Processes.

The 'Learning Processes' theme will be examined in more detail to describe the impact of EBL on student midwife praxis.

Impact of EBL on Student Midwife Praxis

Students' appraisals of EBL learning processes were considerable. An overarching theme that emerged from the data was students' acknowledgement of the active learning philosophy and practice inherent to EBL. Students articulated how activity in tutorials contributed enormously to their seeking, sourcing, sharing and retaining information '*when you have an incentive to look something up and you have an interest in it you're going to keep looking it up*'.

Quantitative findings echoed this affirmation revealing how 71% of students highly rated learner autonomy and recognised EBL as an effective and enjoyable driver of enquiry.

Copious educational research suggests that active learning strategies can significantly enhance student learning, promoting higher order cognition, critical analysis, transferability of knowledge and skills and prolonging retention (Prince, 2004).

Students' requirement to source and share evidence also resulted in them becoming far more discerning and discriminatory towards the literature. Several students recognised this as the initial development of critical thinking '*it's like learning to think…like critical thinking'*.

Quantitative data compounded this finding revealing that 79% of students resolutely affirmed that EBL had improved their information sourcing and helped nurture their interpretative and analytic skills.

The impact of EBL on the development of critical thinking has been a growing area of interest within the literature. One of the more recent systematic reviews undertaken on the subject indicated that students' critical thinking was improved with the use of EBL when compared with traditional lectures (Kong et al., 2014).

A further important finding of the impact of EBL on student learning was acknowledgement of the relevance of scenarios/triggers to the clinical area.

This notion of 'applicability' appeared to confer credibility and meaning on student learning efforts. Students recognised that the knowledge and skills gained through EBL were transferable to the clinical area and this enhanced their learning '*I think it's more*

useful like, the information you're looking up, it's actually going to benefit you when you go out on [clinical] *placement'*. This quote is a pertinent example of authentic learning which has been described by Rule (2006) as supportive self-directed discourse amongst a community of learners where real-world problems encourage open-ended inquiry/thinking. It is apparent that EBL encompasses these features and, as such, it has long been recognised as an exemplar of authentic learning (Biggs and Tang, 2007). Analysis of quantitative data from the study further reinforced this finding revealing that 76% of students believed that EBL enhanced their clinical roles due to the relevance of the skills they had acquired.

'Relevance' as a key principle of EBL scenarios/triggers enhances student learning (Watson, 2004), so it is reassuring that students within the current study acknowledged this. Allied to this idea that EBL can enhance applicability of subject matter to practice, students also articulated that they felt a strong sense of professional duty to be evidence based. Students explained how this duty transferred into the clinical area primarily due to the authentic nature of the scenarios/triggers. The transferability of EBL acquired knowledge and skills to clinical practice may occur as a result of a deeper situational awareness of theory among students (Crookes et al, 2013).

Limitations of the study

The small population/sample size and brief exposure of students to EBL may limit the applicability of study findings. A larger study cohort with prolonged experience of EBL would improve transferability of results. Nevertheless, the study has been valuable in

assisting the understanding of student opinion of initial exposure to EBL with respect to student midwife praxis.

Conclusion

This study provides evidence to demonstrate the positive impact of EBL on student praxis. When given real-life scenarios/triggers, students appeared better able to link theory to practice, which suggests that adopting EBL within midwifery education may help bridge the theory/practice divide and enhance student praxis. In addition, the majority of midwifery students found the approach enjoyable. EBL has significant potential for nursing and midwifery education, even when the underlying educational philosophies are culturally novel and class sizes are large (EL-Nemer et al, 2016).

Educational challenges are inherent to professional training programmes and this study has highlighted that EBL may contribute to overcoming some of these challenges. Further research is necessary to more thoroughly evaluate the potential impact on the provision of care and clinical practice as students enter the midwifery workforce.

Nevertheless, the ability of students to transfer EBL generated knowledge and skills to clinical practice has been readily demonstrated by this, and other studies (Randle et al., 2004; Yuan et al., 2008), which suggests it is a promising education strategy for enhancing student praxis, both now and in the future.

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