

Assessing Lifelong Learners through Enquiry Based Learning: A Master's Level Perspective

ANGELA WRIGHT

Abstract

'Enquiry Based Learning' (EBL), as an engagement strategy to encourage lifelong learning, is the focus of this paper. Participants in this study are adult learners in full time employment who are returning to education, in many cases, after a substantial break. The empirical data was gathered from these students who are studying a master's in business. As educators, there is a need to move beyond traditional assessment models to more creative and innovative ways to ensure learning. The empirical data gathered in this research is relevant and important and will inform practice when considering the inclusion of EBL for assessment and its role in lifelong learning.

Keywords: Lifelong Learning, Enquiry Based Learning (EBL), Assessment, Masters, Engagement, Adult Learners

Introduction

Student engagement is an 'umbrella term' that covers a very wide range of strategies and activities (Wynne, 2014), but, in the context of this discussion on Enquiry Based Learning (EBL), it leads to the encouraged use of working with 'real life' issues and problems, outside of the educational institution, for pedagogical enhancement and, ultimately, as a valuable assessment tool. Attempts at engagement present challenges on two fronts: in the day-to-day order of how a university conducts its work, and in higher order considerations around values, identity and purpose (Wynne, 2014). Emphasis is placed on public scholarship, on sharing the expertise of the university more broadly, and on learning from communities, to contribute to public problem solving, where civically engaged universities are mindful of the contribution they make to the economy (Hunt, 2011; Wynne, 2014). Hutchings (2007) attempts to set out the

philosophical bases of EBL, and argues that the true sources of EBL are to be found in enlightenment thought, its epistemology and in its aesthetics.

Research Context

It is vital that we move beyond a conceptualisation of education as the simple acquisition of knowledge to one which equally emphasises, nurtures and assesses innovation and expertise in the utilisation and application of knowledge (Boland, 2010). This research focuses on the use of EBL as an appropriate assessment tool for the adult learner at a master's level 9. In Ireland, qualifications are assigned to one of 10 levels on the National Framework of Qualifications as defined by Quality and Qualifications Ireland. Levels 6–10 cover higher education qualifications with level 9 equating to Master's level. Adult learners are defined either based on their age, cognitive maturity, or, as a non-traditional learner (Chao, 2009). The adult learner returning to education brings a different perspective to the classroom and varying standpoints to education, in terms of emotion, motivation, and financial resources, when compared to students entering higher education through normal channels after second level education. Students learn differently in varying situations (Ramsden, 1992), and this is to the fore with adult learners and lifelong learners. Connotation varies greatly with each student but especially with the adult learner (Ramsden, 1992). Considered reflection is therefore important when developing and applying appropriate assessment strategies for these learners. EBL has enjoyed increasing inclusion in assessment processes and, now, some informed student feedback is timely; correspondingly, this study was conducted in conjunction with adult learners studying a master's in business degree.

Literature

Problem solving (as it was initially called - and later referred to as Problem Based Learning (PBL)) in higher education (HE) was developed initially for medical schools (Ertmer and Simons, 2006). The use of problems and EBL in HE prepares students to be more effective in the real-world situations in which they work, and to return to their places of work with the skills and knowledge that they need to develop policy and implement change (Miles, 2006). Advocates, specifically of EBL, outline numerous benefits of EBL such as teamwork, critical thinking, problem solving, deep learning etc., but are reluctant to acknowledge any disadvantages, such as the ability of students to gain and develop large knowledge about the particular topic, the difficulties for instructors and, in general, the need to change the ethos of the educational institution. Gaining large quantities of knowledge in a fast manner is typically suited to a traditional

classroom situation and not problem solving. Problem solving is still not yet widely used (Ertmer and Simons, 2006). Implementation and operational issues around EBL and PBL are challenging and much more taxing for the instructor. Instructors need to have a much broader skill set, and be able to adapt and be flexible (Ertmer and Simons, 2006) to this changing learning environment when compared to traditional classrooms—the instructor is now facilitating and not instructing, and also a provider of scaffolds¹ (Resier, 2004) for the student. Transitioning to this type of guidance is exigent. Barrett (2005) considers problem solving not merely as a teaching and learning technique, but a total approach to education, and outlines several philosophical principles underpinning Problem-based Learning.

What is Enquiry Based Learning (EBL)?

EBL describes approaches to learning that are driven by a process of enquiry (Kahn and O'Rourke, 2005). The tutor establishes the task and supports/facilitates the process, but the students pursue their own lines of enquiry, draw on their existing knowledge (often found in the workplace) and identify the consequent learning needs. They seek evidence to support their ideas and take responsibility for analysing and presenting this appropriately, either as part of a group, or, as an individual supported by others. They are thus engaged as partners in the learning process (Kahn and O'Rourke, 2005), and students can take control of their learning (Whowell, 2006). EBL, however, while incorporating elements of PBL, also covers a broader spectrum of approaches (Kahn and O'Rourke, 2005). Problem and Enquiry-based Learning are multifaceted in nature and are not mere teaching techniques but rather total educational strategies (Barrett, 2005).

EBL V PBL

An examination of the literature reveals that the terms EBL and PBL are used interchangeably – although some theorists suggest differences. Kahn and O'Rourke (2005) outline for example, that EBL has a definite overlap with PBL, where the handling of a problem defines and drives the whole learning experience of the students. EBL, however, is more far reaching in nature (Kahn and O'Rourke, 2005). Problem Based Learning originated from innovative health sciences and progressed into mainframe schools and Universities. PBL is a learner-centred approach – students engage with the problem (Savery, 2006).

1 A teacher assists a learner, altering the learning task, so that the learner can solve problems or accomplish tasks that would otherwise be out of reach, (Resier, 2004, p.274).

Problem-based Learning is seen as a set of approaches under the broader category of Enquiry-based Learning and is a total approach to education (Barrett, 2005). Within PBL, significant time is involved in the search for relevant resources. If a sufficient set of relevant resources has already been collated, then the time for searching will be reduced (Kahn and O'Rourke, 2005). In PBL, the students define their own learning issues (Barrett, 2005). Interestingly, one of the main defining characteristics of Problem-based Learning, which distinguishes it from some other forms of Enquiry-based Learning, is that the problem is presented to the students first at the start of the learning process, before other curriculum inputs (Barrett, 2005). This is an important point to note.

By contrast, EBL advocates a wider use of project work or research activity, emphasising the use of project-work to master a given body of knowledge itself, and not simply to make connections within an existing body of knowledge. This approach is a key factor that distinguishes an enquiry-based approach from a more traditional use of projects. During the EBL process, students are facilitated to construct their knowledge (Kahn and O'Rourke). Certainly, EBL facilitates deep, and especially, memorable learning (Whowell, 2006), and is now implemented in higher education institutions across the U.K. and world-wide in a broad and diverse list of subject areas (Whowell, 2006).

Methodology

The motivation for this study was to inform practice, and to examine the value of EBL as an assessment tool at master's level. It was considered appropriate to apply a positivistic research methodology in this context. A quantitative research survey instrument using Likert questions was devised based on surveys and suggestions on educational research on Survey Monkey. Quantitative measurements and hard facts may be of more use in demonstrating concrete achievement to the researcher (Harvey, 1998). The survey was completely confidential, facilitating confidential and anonymous contributions to access negative feedback (Harvey, 1998), thus allowing graduates the freedom and confidence to make a relevant and genuine contribution to the research. Sixty-two graduates (male and female 23-55 years of age), consisting of the total population of the last three years of the taught master's programme, were invited to give feedback on this method of assessment. This was considered an appropriate sample size; more students could have been invited to participate, but it was believed that a more recent pool was more beneficial. Prior to sending out the survey, the questionnaire was tested to eliminate any errors and cleansed prior to surveying the sample proper. When the survey was ready, an email was

sent to the sixty-two graduates with the survey link attached with a request to complete same in the interest of improving practice. Four of the emails bounced (the emails on file were work emails), implying that the graduates had moved from their place of work and relevant email to another position. Therefore, the working sample was reduced to 58. Forty graduates of the relevant 58 taking the survey responded – a response rate of 68.96 – 70%.

Discussion

In the context of lifelong learning at master's level 9, the use of EBL is encouraged and considered a worthy approach for assessment at group level within HE. It is also considered to be attractive to prospective students returning to education when compared to traditional examinations. The key reason for using EBL and not PBL is due to the fact that the 'Enquiry' assignment is not presented to the students until week 4 of the term, (in line with Barrett), as it is necessary to present relevant theory to the groups in advance of their 'Enquiry' process so that they are fully informed. For the initial lecture, the format and process of what will happen throughout the module is provided to the students (Hadgraft, 2000). Findings from this research, however, reveal that graduates would actually like to get the problem earlier in the term due to its short nature (12 weeks) prior to week four.

For the EBL, a business organisation (local or international) is chosen by the lecturer (who will facilitate the learning), and the research problem is developed in conjunction with this organisation. Overall, and in line with the literature, respondents were satisfied with the quality of the organisations, and derived particular satisfaction when it involved a 'not for profit' organisation (86%) especially. Problems that are current, local, relevant, and authentic were welcomed by respondents as they are viewed as beneficial to both parties to the exercise. 'The best elements of the course were the live case studies and the guest speakers.' 'The speakers from industry worked very well and gave excellent insights into their companies and problems.' 'As an adult returning to education, this was attractive to me'.

This research found that EBL as a method of assessment was both engaging and challenging for students. 89% stated that EBL was challenging, but in a 'positive way', with only 7% stating that it was 'stressful'. When asked about working together in groups to 'problem solve', 38% stated that problem solving in groups 'helped me to work better in a team setting and ultimately, in my work setting'. 38% stated that it improved their professional development skills, and 25% stated that it improved their communication skills at their place of work.

In line with the literature, when setting the EBL problem, it is important that a clear language and unambiguous terminology is used to define concrete concepts and goals, and acknowledge and reward successful outcomes (Wynne, 2014). Sophisticated problem solving requires strategies for planning and guidance with good quality scaffolds (Resier, 2004). The EBL 'forced us to structure our learning and to plan well'.

By contrast, some respondents were concerned with 'free loading', where weaker students gained an advantage by using EBL. 'By nature, group work tends to allow weaker team members to coast on the coat tails of others, so, perhaps, a certain structure within the group work scenario could be established to address this'. 'It could be easy for some students to be 'carried along' particularly in larger project groups'. On balance, however, students engaged well with the EBL. 'I loved working with actual companies and believe that these types of projects benefitted me most'. Overall, the participants were satisfied with the assessment strategy applied for the EBL (presentation to the relevant company and feedback from same), with 86% affirmation. However, concern was still expressed in terms of 'free loading' of students. This will have to be considered and reviewed.

Recommendations and Conclusion

Tell me and I forget, show me and I remember, involve me and I understand.
(Benjamin Franklin - politician, writer, scientist. In Spronken-Smith, 2012)

The findings of this research support Biggs (1999a) who believes that setting a problem and encouraging enquiry is a perfect way to assess students. Some graduates expressed a concern around the 'free loading' of others while working on the EBL; however, a solution to this can be found by offering a range of assessment methods, matching the complex open-ended nature of an enquiry (Biggs, 1999b). Macdonald (2005) notes that the real challenge is to make assessment rewarding, stimulating, and a fun learning experience! Assessments must be attractive to lifelong learners to encourage participation. This is mirrored in the research findings.

This research recommends the application of a Tripartite Assessment (Macdonald and Savin-Baden, 2004), while using EBL at master's level. Firstly, the group submits a report for which they receive a mark. Secondly, the individual submits the piece of work they researched. Finally, the individual

writes an account of the group process that is linked to the theory of group work. These three components are added together to form the overall individual mark (Macdonald and Savin-Baden, 2004). The advantage of this is that it does not privilege some students who do less work, and an individual student will be responsible for gaining two-thirds of the marks. Most students, therefore, perceive this grading as fair (Macdonald, 2005). This solution will address the 'free loading' concerns expressed in this research.

Participants also expressed the view that they are anxious to start the EBL as soon as possible in the term, before week four, for example. Given the short-term time of 12 weeks, if this is a future consideration for the masters, then the EBL, as defined by Barrett (2005), may well have to become a PBL where the problem can be presented prior to academic delivery. Theorists provide much debate around the ideas and philosophies for the use of EBL and PBL, with advocates for each providing compelling benefits in the literature. The benefits are especially evident for adults returning to education and for the future encouragement of lifelong learning. The use of any type of problem solving certainly provides new challenges for instructor and student alike, but, on balance, the case for its use in a blended format is compelling. EBL certainly presents benefits along with disadvantages but, holistically, the advantages have a clear recompense, as the students will reap the rewards of being able to undertake EBL interacting with a 'real life' team in an organisational setting. According to one student, 'projects where you work with real companies are supremely productive and invigorating!'. 'Lifelong learning can be rewarding and fun'.

As an adult, returning to education can be a daunting prospect for those who want to engage in lifelong learning. For lifelong learners, including EBL assessments can encourage participation and make the prospect less intimidating for such learners, especially as many of the EBL involves organisational work. This may be perceived as a comfortable environment for many adult learners when compared to traditional examination-based assessments. It is incumbent on HE Institutions to promote the benefits of lifelong learning by inserting even more EBL assessments into adult learning programmes for the future.

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