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EBLIP and Active Learning: A Case Study

Helen Buckley Woods
Information Specialist
Information Resources Group
Health Economics and Decision Science
ScHARR
University of Sheffield
Sheffield, United Kingdom
Email: h.b.woods@sheffield.ac.uk

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Abstract

Objective – To determine how librarians use evidence when planning a teaching or training session, what types of evidence they use and what the barriers are to using this evidence. The case study also sought to determine if active learning techniques help overcome the barriers to using evidence in this context.

Methods – Five librarians participated in a continuing education course (CEC) which used active learning methods (e.g. peer teaching) and worked with a number of texts which explored different aspects of teaching and learning. Participants reflected on the course content and methods and gave group feedback to the facilitator which was recorded. At the end of the course participants answered a short questionnaire about their use of educational theory and other evidence in their planning work.

Results – Findings of this case study confirm the existence of several barriers to evidence based user instruction previously identified from the literature. Amongst the barriers reported were the lack of suitable material pertaining to specific learner groups, material in the wrong format, difficulty in accessing educational research material and a lack of time. Participants gave positive feedback about the usefulness of the active learning methods used in the CEC and the use of peer

teaching demonstrated that learning had taken place. Participants worked with significant amounts of theoretical material in a short space of time and discussion and ideas were stimulated.

Conclusions – Barriers to engaging with evidence when preparing to teach may be addressed by provision of protected time to explore evidence in an active manner. Implementation would require organisational support, including recognition that working with research evidence is beneficial to practice.

Introduction

Library and information professionals, working in a variety of settings, invariably have to undertake some kind of teaching, whether it is called user instruction, training, lecturing or other variants of the term. Differing approaches are taken to planning teaching sessions and differing levels of experience and teaching qualifications exist in the Library and Information Science (LIS) community (Julien & Genuis, 2011). Although there is considerable literature on librarians as teachers, there is little research which investigates librarians' use of evidence in preparing teaching or "evidence based teaching." Questions arise such as what kinds of evidence LIS professionals use or whether there are particular barriers to using evidence that relate to the teaching role.

Inspired by constructivist theories of learning and active learning techniques (for example, peer teaching) the author was keen to learn more about the relationship between health librarians and their use of evidence when preparing to teach. The Jigsaw method of teaching that utilises group work and other non-passive approaches to teaching was used. This method is based on the "Jigsaw classroom" (Aronson, 2000). The author hypothesized that unless interaction with evidence is active then it will have little effect on the teaching process (Coomarasamy & Khan, 2004). She opportunistically used an international workshop at which she was a facilitator, to explore such a hypothesis.

Literature Review

This project examines three interlinked aspects of library and information practice. To situate the case study within an appropriate context a selective literature review will focus on these key areas: evidence based library and information practice, information literacy instruction, and active learning methods. It is important to review key evidence based library and information practice (EBLIP) literature in order to define terminology, examine what is meant by "evidence" and identify what the barriers to EBLIP are, particularly with reference to a librarian's teaching role. This case study is about librarians as teachers and as such it is important to define what is meant by "information literacy" and how practitioners engage with evidence in order to prepare to teach. Some explanation of the area of active learning is given as a precursor to the methods used in this study.

Evidence Based Library and Information Practice

Evidence based library and information practice is a way of working which evolved from evidence based medicine. Health librarians have been the initial and enduring champions of EBLIP playing a central role in evidence based medicine in particular in the development of systematic reviews. Subsequently they soon became aware that they could take an evidence based approach to their own work. The LIS community was not alone in this "nagging awareness" (Booth & Brice, 2004, p.7) with other

professionals, for example in social care and education, also engaging with evidence based practice.

In its broadest sense, EBLIP involves practitioners engaging with research to inform their practice. Anne McKibbin provided a focussed definition of EBLIP, which was the developed by Booth (Booth & Brice, 2004) into an understanding that

“Evidence-based librarianship (EBL) is an approach to information science that promotes the collection, interpretation and integration of valid, important and applicable user-reported, librarian observed, and research-derived evidence. The best available evidence, moderated by user needs and preferences, is applied to improve the quality of professional judgements” (p.7).

This definition mirrors Sackett’s (2000) definition of evidence based medicine (EBM) “[the] integration of best research evidence with clinical expertise and patient values” (p.1), and draws together the three elements of evidenced based practice (EBP): evidence, knowledge and experience of the practitioner, and what is appropriate for the particular client/user/patient in question. A key characteristic of Booth’s definition is the way evidence is defined, in that it includes evidence from service users and practitioner observations. Booth and Brice (2004) also talk about a common misunderstanding about EBLIP and the library literature, with practitioners believing that they have to apply a traditional hierarchy of evidence in EBLIP where this is often not appropriate for the types of questions asked in library and information science (p. 9). The phrase “the best available evidence” refers to this aspect of EBLIP. The use of what Kelly et al. (2010) call “epistemologically and methodologically diverse evidence” (p. 1059) can be seen in professional areas much closer to the original EBM movement, such as

systematic reviews to answer complex public health questions.

Koufogiannakis (2011) considers whether, as suggested in Booth’s definition of EBLIP, the use of evidence is pluralistic and embraces evidence other than research derived evidence. She argues that in practice it does not, with the emphasis placed on research evidence and within that a focus on particular types of research evidence as demonstrated in the traditional hierarchy. She states “anything other than positivistic, scientific evidence has been demoted...the notion of a hierarchy and what is represented therein, is so far removed from the reality of practitioners’ experiences and what is valuable to them” (p.43). This raises two key points: firstly, the focus of EBLIP has centred on the “research evidence” aspect of the three elements, and that the local context and the practitioner’s knowledge and experience have been wrongly undervalued and under promoted. The second point is that within the research element aspect of EBLIP, qualitative research is not being given its rightful value as high-quality formalised research and this is a cultural problem which needs to be addressed. The message is clear that all elements of the EBLIP model are important and all types of evidence need to be engaged to arrive at the best decisions in practice.

As part of EBLIP, librarians will have questions to answer about user instruction, such as “What is the best way to structure my small group sessions on critical appraisal with post graduate students”, “What is the best way to conduct an induction lecture to 200+ new users?”, and “How do I engage my year 7 boys with the fiction collection in our weekly supervised reading session?” To answer such questions librarians face the challenge of engaging with a variety of types of research evidence from multiple disciplines aimed at different audiences with different purposes.

These questions may also be answered by focussing on what Koufogiannakis (2011) calls

local evidence (e.g., evaluation forms from teaching sessions) and professional knowledge (e.g., in a practical session it becomes clear to the facilitator that some students need extra support with their IT skills in order to participate fully). The literature beyond that of EBLIP will now be considered to contextualise this case study and reflect how information professionals fulfil the need for evidence to improve their practice in this area.

Information Literacy

“Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations” (High-Level Colloquium on Information Literacy and Lifelong Learning, 2005, p.3.).

This text, taken from the “Alexandria Proclamation” written by international information literacy (IL) stakeholders, provides an indication of how far reaching the concept of information literacy has become in many contexts across the world. Through this proclamation and the work of the earlier expert meeting in Prague in 2003, IL was linked to concepts such as the knowledge economy and the information society. A humanitarian element may also be clearly perceived within the IL movement with the concept linked to, and practice developed under, the banner of “lifelong learning” and “social inclusion” (Webber & Johnston, 2003).

The main focus of activity in IL practice is within the education sphere, particularly within higher education (HE). In HE, library and information professionals and faculty staff are engaged with teaching students information skills. Library staff also train researchers to make the best use of the academic resources they need. Due to the

high level of activity in HE, including numerous papers on best practice in teaching information skills and “how to” books, this focus on information skills is sometimes confused with the wider concept of IL. Lloyd (2010) examines the concept of IL in various areas, defining it as more than a “textual practice, as we commonly conceive it to be in the library or educational setting” (p. xvi). She describes it as a social practice which involves people reaching shared understandings and engaging with information in particular cultural environments.

In truth, library and information science practitioners are focussed on providing for the needs of their user communities, whether this is to equip undergraduates to complete their degree, to help a member of the public access travel information on the Internet, or to support a researcher seeking evidence for a systematic review. Despite the growing EBLIP movement, which advocates the use of research evidence by practitioners, there is a divide between the LIS academic community’s research into IL (which provides the theoretical framework) and the needs of practitioners in the LIS community. This divide was highlighted by Eve and Shenk (2006), in their qualitative study about the impact and use of research by LIS practitioners. They found that typically practitioners are reluctant to engage with research material and have little time to undertake their own research or publish examples of best practice. Conversely, researchers are perceived to be guilty of a lack of engagement with the practitioner community and of limited dissemination of their work. The Research in Librarianship – Impact Evaluation Study (RiLIES) report found “a disconnect between LIS research and the practitioner Community” (Cruickshank, Hall & Taylor-Smith, 2012, p.4). Suggested recommendations to ameliorate this included: involving practitioners in research projects at an early stage, making research evidence more accessible and practitioners, employers and the UK professional body offering support and encouragement for engagement with research.

Librarians as Teachers

A plethora of papers examine all aspects of the teaching role that information professionals inhabit. Two recent papers examined this aspect of librarian's work and consider how librarians prepare for teaching. In a national survey of Canadian librarians involved in information literacy training, Julien and Genuis (2011) explored librarians' experiences of the teaching role. As part of this survey participants were asked how they prepared for teaching activities, including mention of a specific category of reading professional or research literature; 75.1% of respondents used professional reading as a method of preparing for their instructional role. These researchers found a beneficial effect for those respondents who undertook professional reading in that they were more likely to feel prepared for teaching work and were more comfortable with the teaching aspect of their role (p.107). Participants were given the opportunity to provide additional open comments; and particular interpersonal challenges were noted by the researchers. For example, participants described their lack of knowledge of educational theory, teaching methods, and curriculum design. Only 39.7% of those surveyed had received any formal training in teaching (p.106).

Bewick and Corral (2010), focussed on U.K. subject librarian's acquisition and use of pedagogical knowledge. Their findings concurred with those of Julien and Genuis, (2011) with participants' primarily acquiring knowledge informally, through on the job training and trial and error. Less than a third of respondents had undertaken an extended course or training programme, but more than half had participated in a short course to improve teaching knowledge and skills. A minority of respondents mentioned personal reading as a method of gathering pedagogical knowledge, but the exact number is unknown as this was reported within a wider category of "other methods". The authors report that most

participants "felt confident about teaching and thought their knowledge sufficient" (2010, p.97).

Librarians then are faced with a vast array of different types of evidence to help them prepare for information literacy teaching and there is evidence that there is a general lack of engagement with research by practitioners both in terms of research consumption or production. However, professional reading has been cited by practitioners as a preferred way of preparing for teaching and it has been found to have a beneficial effect in how they felt about teaching, (Julien & Genuis, 2011). This paper will now move on to look in more depth at the barriers to engaging with evidence and the use of active learning as a method to engage with research.

Barriers to EBLIP

Eve and Shenk (2006) research anticipated barriers to EBLIP later cited in the literature review by Booth (2011). Booth's review identified seventeen themes, including lack of time, poor access to the evidence base, lack of organizational support, and inappropriate orientation of research. A study by Turner (2002, as cited in Booth, 2011) is examined in more detail with "time constraints" being cited as the number one barrier to practitioners consulting the research literature. Booth unpacks this barrier and suggests two concomitant parts: what the time is needed for (e.g., to acquire, appraise and apply research), and the reasons why the time is lacking (e.g. workload and management responsibilities). While acknowledging "the competing horizons of short-term deliverables and longer-term professional development" (p. 11), also implicit within this tension is the prioritisation of EBLIP and whether motivation is lacking to engage with research evidence. Indeed Booth states, "there remains an ongoing need for more success stories so that practitioners can realise the value of the evidence-based approach, particularly when ranged against more established alternatives for library decision making and planning" (p.15). The review

examined barriers and facilitators to using evidence in all aspects of library and information practice, so Booth's findings can be applied to the use of evidence in user-education, but due to the generic application there were few examples specifically related to information literacy support.

Active Learning as EBLIP Method

Active learning refers to a learner-centred approach to teaching that is based on constructivist theories of learning, developed most prominently by the work of Bruner who posited that learners are active participants in any learning situation; they work with new information to process and construct new meanings. Bruner also highlighted the importance of social interaction in the learning process (Culatta, 2013). The constructivist theory of learning and its practical applications are succinctly encapsulated by Chickering and Gamson.

"Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves" (Chickering & Gamson, 1987, p.4).

When using a Constructivist approach, learners also need to engage in higher order thinking tasks such as analysis, synthesis, and evaluation (Bonwell & Eison, 1991). Bloom's taxonomy provides a useful theoretical underpinning for the Jigsaw method used in this study. Bloom classifies three different aspects of learning; the cognitive domain, which is about the use of knowledge, the affective domain, which is about the use of values (for example listening and respecting other's views in the classroom, (Clarke, 2004) and the psycho-motor domain which is about skill development. They are sequential in their use, so for example it is not

possible to synthesise facts until you know what those facts are. It is also possible to use the different domains in order to build up the levels over a period of time for example throughout a module or course (Atherton, 2011). So far so good, but is there any evidence that librarians use active learning methods themselves in their own preparation for their teaching role?

Young and Vielle (2011) report that librarians use multiple methods to keep up to date with current research, policy and practice, for example by accessing social media, using email lists, as well as personal reading and attendance at training days, conferences and other continuing professional development (CPD) activities. Another approach to keep research part of practice is to introduce a discussion group around particular journal articles or professional materials. Such discussions can happen within an existing meeting or, in a more formalised way, can take the form of a journal club thereby mirroring medical professional groups that follow the "five steps of evidence based practice" (Centre for Evidence Based Medicine, 2009). It is within this method of professional development that we see an opportunity for practitioners to engage with active learning.

Several authors report case studies and reviews of journal clubs and discussion groups for LIS practitioners (Haglund & Herron, 2008; Young & Vilelle, 2011; Kraemer, 2006; Pearce-Smith, 2006). The wider medical literature reports a variety of different methods employed under the banner of "journal club". A recent review (Harris et al., 2011) found that common elements in journal clubs in medical settings included "using principles of adult learning" which was defined as "promoting active learner participation" (2011, p.38). Another common element was "using multifaceted approaches to teaching and learning" (2011, p.38) which are basically active learning methods e.g. small group discussion. They conclude that one element of a successful journal club is to design

the club using principles of adult learning, however they report that:

“Adult learning was an ingredient in some studies across all areas, but the influence of adult learning is difficult to assess because it may have been underreported when the educational intervention was described. This may also be the case with multifaceted approaches to teaching and learning...” (2011, p.9).

This selected review of the literature has explored different areas of research in order to contextualise and inform the aims of the case study presented. To summarise there is little literature on how librarians use or don't use evidence (including practice based evidence, secondary sources and primary research) to prepare for teaching; although there is well-documented evidence to suggest that there is an overall research practice gap. Professional reading and informal “on the job” learning are reported as preferred methods of preparing for teaching (Julien & Genuis, 2011; Bewick & Corral, 2010). Key barriers to EBLIP are a lack of time and opportunity, but specific barriers which pertain particularly to “evidence based IL instruction” are unknown. There is some evidence to support the effectiveness of active learning as an EBLIP method.

Aims

This study investigates the following research questions:

- How do librarians use evidence when planning a teaching or training session?
- What types of evidence do librarians use when planning a teaching or training session?
- What are the barriers to using evidence when preparing for a teaching session?
- Do active learning techniques help overcome barriers to EBLIP and therefore improve teaching practice?

Methods

To investigate the relationship between active learning and EBLIP the author conducted a Continuing Education Course (CEC) at the European Association for Health Information and Libraries (EAHIL) 2011 Workshop, “Active Learning and Research Partners in Health,” held at Koç University, Istanbul, Turkey. As this small case study was practitioner led action research it was not necessary to obtain ethics approval, however participants granted permission to use their feedback and comments in a publication or presentation about the CEC. An example of the consent form can be seen in Appendix A.

The case study took the form of a CEC with five participants. Individuals were required to read journal articles or book chapters before the session and worked with these texts to discuss, teach, and reflect on ideas and concepts elicited from them on the day of the workshop. The author facilitated the CEC, presented on the concept of active learning, and led the group-work that included feedback and reflection on the CEC method and the content of the texts. The session closed with a focused discussion providing feedback regarding the method. This conversation was recorded, transcribed, and analysed. Please see Appendix B for the questions used to lead this discussion. Immediately after the close of the CEC participants answered a short questionnaire about their use of educational theory and evidence in their planning work, shown below as Appendix C.

The case study focused on active learning and used an adaptation of an instructional method, originally employed with school children called, the ‘Jigsaw classroom’ (Aronson, 2000). The Jigsaw method describes a method of working with small groups and is designed to be participatory for learners and to encourage deep learning (Fry, Ketteridge, & Marshall, 2003). It is recognised to develop the learner’s cognitive and affective domains through its collaborative

nature (Wong & Driscoll 2008; Robledo-Rella, Neri, & Noguez, 2010). Teachers can select from a variety of collaborative methods when working with small groups, such as discussion, answering/asking questions, and peer teaching. The Jigsaw method is very rich in that it incorporates a number of methods and develops a number of skills within one exercise. It maximises potential learning (Bloom's cognitive domain) but also encourages and develops other skills in the learners, such as presentation skills, listening skills, organisation skills, and time management skill (the affective domain), (Chapman, 2009). This multifaceted learning method enables the teacher to provide an opportunity for all the learners in their group to be engaged at some point in the exercise. This is achieved by incorporating diverse aspects and demands on the students that require different skills and engage different learning styles.

A Jigsaw exercise enables participants to assimilate significant amounts of new information in a short space of time by engaging with such material using a variety of active methods. The basic structure of the Jigsaw exercise can be adapted to different numbers of participants or to different settings. In the CEC, the session began with participants sitting together where they chose, but each person had been previously allocated to a different "expert group" reflecting the material they had. As there were only five participants in total, the participants were assigned to a group of three and a group of two. Each small group worked on two topics.

After initial introductions and setting the context and purpose of the CEC, including a reflective exercise, the Jigsaw then began with delegates having time to review the materials they had read individually before moving to their "expert groups". Each group discussed the material they had read and then planned how they would teach this material to other delegates. Participants then paired with someone from the other "expert group" and

taught their peers about what they had learned by delivering a short presentation.

The author selected reading materials for the session that fulfilled several criteria. The aim was to use diverse materials in terms of type of material and its intended readership, and it was important to mix content to include both original research and summaries or syntheses of theory, in order to use a broad range of evidence. Four distinct groups in the Jigsaw exercise were assigned materials indicated on these topics: planning learning (Webb & Powis, 2004); working with small groups (Jaques, 2003; Kaufman, 2003); working with large groups (Cantillon, 2003; Verlander & Scutt, 2009); and motivating learners (Newstead & Hoskings, 2003). Of these, three short papers were taken from the *British Medical Journal* series "ABC of Learning and Teaching in Medicine" (Cantillon, 2003; Jaques, 2003; Kaufman, 2003) and gave a good introduction to the topics of teaching small groups, large groups and applying educational theory in practice. The BMJ papers were examples of pithy writing that provide a topic summary and are underpinned by theory. Such articles can be useful materials to introduce into this type of training session, as they provide a good introduction to a broader theoretical landscape that can be further explored at a later date. It is not always necessary to use papers which can be straightforwardly applied to practice or papers which are aimed specifically at an LIS audience. Concepts and ideas from other disciplines can spark ideas for use in LIS practice. Articles from other disciplines can also provide a further intellectual challenge and enjoyment for the reader. However, articles should not be chosen for novelty value, and there must be a core of meaning which is relevant to the LIS practitioner.

The author also selected two book chapters. One chapter was aimed at higher education practitioners and discussed learner motivation (Newstead & Hoskings, 2003). This chapter provided a broad overview of the key theories and concepts related to student motivation, with

many links to further reading. As it was aimed at an HE audience, it had more breadth than a text aimed at IL practitioners. The other chapter, by Webb and Powis (2004), was infused with educational research. This book is aimed at an LIS practitioner audience and was also a good example of how to introduce some pedagogical theory into a discussion at an appropriate level, and therefore complementary to the Newstead and Hoskings chapter. The final reading was Verlander and Scutt's (2009) article wherein the link between evidence and implementation in practice was clearer to envisage for the reader as the research was practitioner based. Together, these diverse readings served to raise participant awareness of the kinds of materials that were available, or reminded participants of the types of suitable sources to inform their teaching roles.

After the Jigsaw exercise, the group reformed as one, and participants were then invited to take a few moments to reflect individually on the technique. Participants then shared comments with one another regarding the effectiveness of the method and the likelihood they could utilise the method or an adaptation of the method in their own teaching. They were also asked to describe how it felt to be a participant and whether they had identified any particular messages or points for discussion from the literature used in the session. The resulting group feedback was recorded with the participants' permission. After this the session was brought to a close and participants completed a short questionnaire about the use of evidence and educational theory in the preparation of teaching sessions. The group feedback was transcribed and the author used this transcription and the recording to organize the responses into simple categories that reflected the four research questions stated above.

Demographically, the participants represented from five countries: Cyprus, Norway, Slovenia, Poland, and Australia. Participants served as mid-career health information professionals and

service managers at both academic institutions and health care settings.

Results

How do librarians use evidence when planning a teaching or training session?

What types of evidence do librarians use when planning a teaching or training session?

Some participants reported that they did use articles or papers when preparing to undertake a teaching session, but they felt unable to pursue extensive research. One respondent noted: "I use these articles sometimes as I have many different tasks to do and didn't have time to go more in depth in this matter." Participants also reported using evaluation questionnaires and materials to support a specific project, such as creating a web-based tutorial. Current awareness services were also cited as a method of keeping up to date on all professional areas. A number of participants commented that the session had raised their awareness of materials and ideas that could inform their information literacy work which they would investigate after the session.

Participants described superficial attempts to incorporate educational theories in planning learning. Some respondents reported using techniques that were derived from a theoretical base, but did not report a familiarity or comfortable use of theory. One respondent reported increased awareness of using educational theory in practice but suggested that preparing teaching materials was given priority due to time constraints:

"I should put more attention for using theories of learning in teaching. I have concentrated more on learning material because lack of time and engagement in different activities."

An experienced professional reported that they had knowledge of a constructivist approach to

learning but that in practice it was difficult to keep sessions true to this methodology, noting

“I try to have a constructivist approach but it is easy to slip back into old-fashioned lecturing. The need to be in control ... [a] lack of confidence in using active learning techniques.”

What are the barriers to using evidence when preparing for a teaching session?

Participants presented several barriers to using evidence to prepare for teaching via their questionnaire responses. Several issues related to the material itself, and a lack of suitable material pertinent to the particular characteristics of the students to be taught was felt to be a barrier. The level of material available was also felt to be a barrier, as review articles would be more useful to read than primary studies. Difficulty in locating articles was also cited as a barrier, which may seem unusual coming from information professionals, but working in a health information environment meant that some participants were unable to access non-medical databases. One participant noted:

“A barrier to finding evidence in articles is locating them – having access to a suitable database, we only have medical ones e.g. Medline, CINAHL and PsychINFO, so articles would be already medical teaching orientated.”

Participants also reported the challenge of understanding educational research articles when coming from a librarianship background, and of not having undertaken a teaching qualification. More than one respondent reported lack of time as a barrier, particularly in the face of competing priorities. One respondent suggested the need for high quality review articles as a solution to this barrier. A lack of confidence to utilise teaching methods reported in the research literature was another barrier to EBLIP.

Do active learning techniques help overcome barriers to EBLIP and therefore improve teaching practice?

Feedback about the methods used was very positive, although participants noted that it was challenging and quite demanding, with one delegate reporting that it “certainly took me out of my comfort zone” but that “it was good, it engages you straight away”. The role of the facilitator was noted as key to the success of the method in terms of time management and creating a comfortable atmosphere for the group. “I think that is one of the roles of the facilitator to make the learning space comfortable and people willing to come forward rather than staying back.” The same delegate reflected that the whole group had been disciplined with the time management and also committed to the spirit of the exercise, being enthusiastic and respecting each other’s views:

I must say I felt very secure in this group. I mean I know x, I know you from before, but even so I don’t know either of you and I think everybody is very pleasant and kind to each other. You know there are no problems with the group. That makes it feel more secure and be prepared to open up more.

The peer teaching element of the exercise was felt to be a useful part of the process, with one delegate commenting: “I think it was effective... if I read it and then I have to talk about this, to pass my knowledge is more effective than just reading.” This is the essence of why active learning is a useful technique, to “teach” the article, even in terms of a brief summary, the participant needs to understand the material better than they otherwise would by just reading it.

The group feedback elicited several comments regarding the significant amount of material covered in the session: “In a way we have learnt or we have read six articles when in fact we

have only actually had to read three each” and “We have sort of got the sort of summary of three more.” One participant commented that it was reassuring that they were “all in the same boat” another noted “And also the realisation that you are then going to listen to your colleagues who are equally not familiar with the topic is good.” The session also piqued the interest of one delegate to investigate the papers they hadn’t read in more detail: “And I also feel that I am now curious. I would like to read the other three articles.”

Participants reflected on how they could adapt the method and whether it would work in their own work teaching situations. The session gave participants insights into how it felt to be a learner again and what kinds of activities were useful to learners. One participant identified on the peer teaching aspect and how they could use this with their groups:

“Well I thought I could adapt it and therefore using different strategies for the group. I teach small groups. It is different strategies to get them involved instead of me talking and then them doing little exercises. I could talk and then they perhaps could do a little presentation back and then maybe that’s a way of learning.”

Another delegate thought the method could be usefully applied to staff training at their institution:

“Because we are on four sites and we don’t get together very much and we actually use a Skype type system ... I think you could even adapt it to that...we have different channels, so you could say you go to that channel and talk about that and then people come together again in the main channel.”

The delegate commented that this approach would work well and be a welcome alternative

to sitting “passively with earphones on and you just fall asleep.”

The group discussed how well the reading material had been chosen to reflect key areas of interest and make the best use of the time available. One participant remarked:

“I think that this material was really very carefully chosen and that I can get some main themes, large groups, small groups, various situations. So maybe I know these things but this session we get the themes very concentrated.”

Another delegate commented that engaging with the material had enabled them to “think more... deep[ly], about certain topics, so then I think it is easier to understand our learners.”

The group also felt that the material had given them insights into both their own practices and that of their learners. For example, one person commented on the usefulness of doing an “audit” as described in the Webb and Powis (2004) chapter. The group also discussed the issue of learner motivation that had been the focus of one of the expert groups. They felt that this gave them a useful insight into what was going on beneath the surface with their own learners.

Discussion

Findings of this case study confirm the existence of several barriers to evidence based user instruction identified previously (Booth, 2011; Eve & Shenk, 2006). Respondents also cited specific examples of these barriers, including a lack of suitable material pertaining to their specific learner group, the lack of review level material, and a difficulty in accessing educational research material, while overall a lack of time was the main barrier reported. The lack of pedagogical training for librarians was also reported and expressed as a difficulty in interpreting and understanding particular forms

of evidence. Some of these barriers to EBLIP (regarding materials) could be overcome in a workshop, journal club, or by the use of a facilitator responsible for choosing and circulating appropriate materials before discussion sessions.

The group feedback on the usefulness of the Jigsaw learning method was positive. The group felt they had learned a significant amount, both about theory and teaching practice, from the material itself and also from the meta-learning aspect of reflecting on and experiencing the method in practice. They also reported an emotional element to the experience, such as feeling what it was like to be a learner again, feeling actively engaged with the session, and a sense of camaraderie with the other participants. Such elements made the experience richer and more likely to resonate and remain with participants, as they had to give something of themselves to participate in the session. The positive comments from participants about the material and how they would use the ideas in practice concur with Julien and Genuis' (2011) findings that reading had a positive effect on a librarian's role as teacher.

Two key barriers cited in the literature were lack of time and also lack of motivation to undertake EBLIP activities. Using active learning methods increased understanding and made more effective use of the time available. Such methods also led easily into a discussion on the relationship with practice both in terms of methods and materials that had been covered. This gave participants the opportunity to consider the local context and professional experience elements of the EBLIP model. Participating in this type of session necessitates an investment and therefore rewards participants with a feeling of achievement. It also effectively creates or strengthens the connection between group participants through shared experience. Often some humour is generated at the end of the session quite naturally, when participants reflect on the experience. These components all help to create

a positive experience and therefore one which participants would be more likely to repeat. This is especially beneficial when practitioners are labouring under a heavy workload and need additional motivation to make time for EBLIP activities. The chosen method needs to maximise benefit to participants and their organisation.

Limitations

This case study conforms to the mode of action research (Stenhouse, 1981), an exploratory investigation by a practitioner. The group was small, with only five participants, and as such the findings from this study cannot be generalised. However the theories and ideas generated can be used when working with larger groups and can be further developed. The investigation was confined to the original workshop setting, as there was no follow up with participants, and therefore no further data was collected on the links between the workshop and participants' subsequent practice. However, the initial reflections related to potential impact on practice were collected during the session.

Conclusion

Information professionals have a wide variety of evidence to choose from to assist in preparation for their role as information literacy practitioners. Respondents reported the use of journal articles and evaluation questionnaires specifically in their preparation to teach. Other materials were used for general current awareness or to undertake a specific task, such as creating a web based tutorial. There are numerous barriers to EBLIP documented in the literature, and respondents reported a number of barriers that concurred with those found in the literature. Specific examples include the challenge of finding materials that related to a particular group of learners and the difficulty in understanding educational research papers without the benefit of a teaching qualification. This study found some evidence to support the effectiveness of active learning methods as an

EBLIP tool. Professional reading was also found to be beneficial to how librarians feel about their teaching role.

This case study provides a snapshot of common issues information professionals face in their practice, and identifies barriers to EBLIP which are specific to the IL teaching role. In a small case study such as this, it is not possible to prove or disprove a hypothesis about the effectiveness of active learning and EBLIP, but the aim of exploring these themes was met. The feedback from participants endorses the evidence from the literature that active learning is a useful EBLIP tool. Barriers to engaging with evidence when preparing to teach may be addressed by provision of protected time to explore evidence in an active manner. Organisational support would be required to implement such an intervention, with a recognition that working in an evidence based way is worth pursuing, and that it will make a difference to practice.

Several conclusions can be drawn from the case study. Participants worked with significant amounts of theoretical material in a short space of time, and teaching one another about this material, they were able to demonstrate that some learning had taken place. Through discussing ideas, they created a very positive atmosphere in the room, not a bad thing to engender at work. This type of method creates an opportunity to engage socially and individually with different types of evidence.

Further Research

The author is presently taking this initial experience forward within a workplace-based "active journal club," with plans for further evaluation on the impact on practice by following up participants use of evidence after the group sessions. A larger study to compare an active journal club or discussion group such as described in this case study with a more passive format would strengthen the results of this research. This type of study would help answer the question of how effective active

learning methods are in helping to overcome barriers to EBLIP and improve IL practice.

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Appendix A
Permission to Use Contribution in Journal Article

I plan to write a paper about evidence based practice and teaching methods. I would like to include your comments and contributions from our session today. I will be undertaking an analysis and synthesis of the discussions from today and will use these to support the writing of the paper. I will anonymize any comments used and acknowledge all the workshop participants at the end of the article.

If you are happy with the above, please sign and date below to show your agreement with the statement.

I am happy to have my contributions (written or verbal) used anonymously in a journal article. I understand I will be acknowledged in any such article.

Signed:.....
Date:.....

Appendix B
Questions for Group Reflection Following the CEC Session

1. How did it feel to be a learner?
2. Was it effective?
3. How useful would it be for you as a facilitator?
4. How would you adapt the session?
5. Consider the four themes – what was notable for you about the material we looked at?

Appendix C
Post-session Questionnaire

Please answer the four questions below:

1. Do you use articles on teaching methods in your practice? For example papers which emphasise the practical application of theory in a teaching scenario?
2. What are the barriers to using evidence in your practice? What would make this easier?
3. Are you aware of using theories of learning in your teaching? For example do you have a particular theoretical approach in mind as you prepare?
4. Please give any other comments or feedback on this Continuing Education Course below: