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Engaging learner support: An investigation of faculty—library collaboration to provide live course-specific learner support in the online classroom environment

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Abstract

Collaboration between faculty and learner support can create seamless services for e-learners. Providing access to learning materials and activities with co-located tailored learner support creates an environment in which e-learners can easily access everything they need for an enhanced, supported, and more focused learning experience. The emerging practice of embedding live librarians in online tertiary classrooms provides a new avenue for such learner support, and forms a natural extension of the library links and resources which are routinely found on online campuses, library websites, and some online course pages. Embedded librarians can actively direct students to tailored library resources and tutorials and assist students directly, often in a library discussion forum, with their specific information and referencing questions. This paper reports on research into the nature and effectiveness of using embedded librarians in online classrooms in New Zealand, and takes a multi-faceted view of this emerging practice. Findings illustrate the benefits of this new form of e-learner support and identify potential pitfalls through increasing engagement with relevant and pertinent information resources to support their learning.

Keywords: e-learning; online classroom; embedded librarians; online library services; learner support

Introduction

Student engagement with learner support is needed in online education as much as it is in other forms of educational delivery. Placing support in the environment in which students actively learn—specifically inside the online classroom—is one such tactic for increasing students' engagement with learning support and bringing it to the students at their point of need. A more supported and focused learning experience can be delivered to students by combining or co-locating learner support with the learning materials and activities in a course of study. Thorpe (2002) identified that "[l]earner support in ODL refers to the meeting of needs that *all* learners have because they are central to high quality learning—guidance about course choice, preparatory diagnosis, study skills, access to group learning in seminars and tutorials, and so on" (p. 107). In this context, one aspect of learner support is the provision of library services to online and distance learning (ODL) students. That provision is the focus of this paper.

A librarian is defined as "a professionally trained person responsible for the care of a library and its contents, including the selection, processing, and organization of materials and the delivery of information, instruction, and loan services to meet the needs of its users" (Reitz, 2013). Current literature indicates librarians are no longer confined to the library and traditional library services, but are increasingly being strategically placed as participants in online courses where interaction with students is more immediate and tailored to individual needs (Brindley, Walti, & Zawacki-Richter, 2004; Florea, 2008; Guillot, Stahr, & Meeker, 2010). There are now also instances where librarians are not only helping to support learners in the online classroom, they are also collaborating with faculty for content suggestions, course assignments, and course design (West-Pawl, 2012).

The term 'embedded librarian' was coined only a decade ago, with Dewey being credited with first using the term in her seminal 2004 article where she states that "[o]vert purposefulness makes embedding an appropriate definition of the most comprehensive collaborations for librarians in the higher education community" (Dewey, 2004, p. 6). The practice of embedding librarians directly into various work units and operational groups in business organisations is now reasonably established (Shumaker, 2011). In online courses, an embedded librarian becomes an integral part of the online teaching space in which student learning happens (Xiao, 2012). This allows librarians to meet online students at their point of need. An embedded librarian who is included as a participant of an online course can deliver both standard library services and those that are tailored to the particular classroom and the students within it. Embedded librarians can actively direct the students to tailored library resources and tutorials that are suitable for their studies. They can also assist individual students, often in library discussion forums, with specific information and referencing questions.

This paper reports on current research in the area of embedded librarianship. The purpose of this research is to understand how this new embedded librarian model of learner support works, particularly in the New Zealand online learning environment. This research will allow opportunities specific to the presence of embedded librarians in the online tertiary classroom to be more readily and purposefully used, and help us to maximise the value of this form of learner support. It also aims to identify where we can make gains for increasing engagement with learner support in the online tertiary environment.

Literature review

This literature review is an outline of previous research in the field of learner support and embedded librarianship. While the field of learner support is well-established and developed, the nexus of these two fields is at present relatively small because the phenomenon of embedded librarians within online education is a recent innovation.

Learner support

In tertiary education, it is recognised that not all learners will necessarily undertake or complete all of the tasks and activities they need for successful learning. They might need some support to complete some learning experiences and to gain skills for independent and lifelong learning (McLoughlin, 2002; Laurillard, 2002). Learner support in campus-based tertiary education has traditionally referred to services that are available to manage "personal difficulties which grow too great for the student to handle alone" (Thorpe, 2002, p. 107), and includes other services (such as academic advice and study skills) that apply to the wider student body (Thorpe, 2002). In online education, however, the support needs of students can encompass a wider range, and they might need traditional as well as new learner support. Learner support in the online environment focuses more specifically on complementing and enhancing the learning experience, and may include support outside the online classroom (such as academic advice,

study skills, information literacy, research advice, and guidance on accessing and making good use of services provided by the educational institution), support in the online classroom (such as learning materials, faculty or tutors, librarians and library services), and support for communicating in the distance and online environment (such as support for media and technology) (Keegan, 1996; McLoughlin, 2002; Thorpe, 2002).

Embedded librarians

The expansion of library and information services beyond the traditional library setting was identified by Smith and Sutton (2010), who state: "The classic notion of the library as a repository for materials must be superseded by the philosophy of the library as an active partner in the information experience" (p. 92). This change of perspectives is indicative of library services moving out of the library and into the spaces where students are, to provide assistance at the point of need and to bring more holistic library services into the learning experiences of tertiary students. In addition to Dewey's (2004) definition of embedded librarians, a more recent definition comes from outspoken embedded-librarian proponent David Shumaker, who describes the change in focus for librarians entering the online classroom as "shifting the model from transactional to high trust collaboration, and shared responsibility for outcomes" (Shumaker & Talley, 2009, p. 9). Shumaker therefore signals the change from external support on demand to proactive support from within the students' core learning environment. Embedded librarians in online tertiary education are often described in terms of their tasks and their roles, such as working closely over extended periods of time with non-library groups by joining a semester-long course, maintaining an ongoing presence in online courses, participating in broad curriculum planning efforts, or joining the staff of academic departments, clinic settings, or performing groups (Kvenild & Calkins, 2011).

While the literature on embedded librarians in online tertiary classrooms has been relatively small to date, this type of literature is growing as the uptake of online delivery of courses at the tertiary level expands. Xiao (2012) notes this 'surge' in the literature and identifies ways in which librarians are providing distance or online services, including facilitating access to the library's electronic resources, online research guides, virtual reference services, discussion boards, and embeddedness in faculty-led online courses. Although a growing number of case studies of online classrooms using embedded librarians are reported in the literature (e.g., Leonard & McCaffrey, 2014; Chisholm & Lamond, 2012; Hawes, 2011; Matthew & Schroeder, 2006), there are only a few empirical studies of the usage and effects of embedded librarians (Bennett & Simning, 2010; Barnard & Weaver, 2011; Kumar, Edwards, & Ochoa, 2010) and there are even fewer studies of the perceptions of faculty, librarians, or students in this context (Carrico & Neff, 2012; Edwards, Kumar & Ochoa, 2010; Yousef, 2010). To date, no studies have been identified that consider the viewpoints of all three groups together, or the nature of the relationships between them. This indicates a gap in the literature in this area.

The New Zealand context and experience of embedded librarians

Although references to embedded librarians in New Zealand are few, they have appeared more regularly in the literature in very recent years. One of the first to appear describes the work of librarians embedded in 40 online postgraduate courses at Massey University's College of Education (Chisholm & Lamond, 2012). Findings include the need for faculty endorsement and collaboration, together with careful selection and placement of library resources in the online environment, for this practice to work effectively. Another study describes the online embedded librarian programme at the Open Polytechnic of New Zealand, in which librarians perform a combination of reference work, user education, and placing of learning objects—all set within a partnership with faculty (Fields & Clarke, 2014). Again, the importance of faculty–librarian collaboration for the successful delivery and uptake of this form of learner support is acknowledged.

In an article that looks at embedding librarians in face-to-face teaching programmes, librarians Brebner and Reid (2012) outline their experience of delivering information literacy programmes in two different subject areas at Auckland University. Their work was readily accepted in Law—the law librarians teach undergraduate zero-credit legal research courses and provide more general support for law students in other courses. In contrast, the Fine Arts and Art History faculty showed less enthusiasm for embedded library services because they perceived less relevance for information literacy in a discipline that focuses not so much on the written word as on visual orientation (Brebner & Reid, 2012). There is a growing acknowledgement that the methods and level of collaboration between faculty and librarians is influenced by the nature of the subject (Brebner & Reid, 2012; Krkosa, Andrews, & Morris-Knower, 2011; Matthew & Schroeder, 2006; Mounce, 2010) and, as a result, approaches tailored to each discipline may be warranted (Brebner & Reid, 2012).

In summary, the literature demonstrates an acceptance that library 'embeddedness' in the student learning space of the online classroom is a welcome addition for effective learning. In addition, partnership and collaboration between faculty and librarians is cited as necessary to maximise the value of this form of learner support. More importantly, three further areas for consideration have been identified. Firstly, because the practice of embedding librarians is a relatively recent development in this new environment, there are specific opportunities to identify and exploit. Such opportunities can be found in the education environment, but others may be identified by examining the roles of librarians who are fully embedded in business and corporate teams beyond academia (Shumaker & Talley, 2009). Secondly, relationships (including creating and managing expectations and perceptions) are vital for understanding and successfully delivering embedded library and information services. These relationships require real and ongoing communication to be built and maintained, and warrant further exploration (Carrico & Neff, 2012; Hoffman, 2011; Shumaker, 2011; Yousef, 2010). Thirdly, different approaches may need to be taken for considering student–faculty-embedded librarian relationships and embedded library services in different disciplines so they cater for these classes, and to deliver the services in the most appropriate ways. Disciplines have different information needs and different approaches to searching for and using information (Brebner & Reid, 2012; Brower, 2011; Krkosa, Andrews & Morris-Knower, 2011; Mounce, 2010).

Methods

A multi-faceted approach was taken to data collection. First, an overview of the academic literature and current professional discussions on the use of embedded librarians gave the context and underlying understanding of this new form of learner support. This overview was followed by a case study of the practice of embedded librarians at the Open Polytechnic of New Zealand. A variety of data-gathering methods was designed to produce a fuller picture of this new practice. Aspects that may be particular to any of the groups of participants may be more fully explored using a combination of methods. Additional New Zealand tertiary education providers will be researched in future to gain an overall picture of this new practice in the New Zealand context.

Although the literature has a global focus, this research is set largely within the context of New Zealand and focuses only on tertiary education institutes, so these two parameters form the initial limits of the study.

Literature review

The review of the literature (outlined above) placed embedded librarians in the broad context of learner support and operation specifically in the environment of the online classroom at tertiary level. The review was conducted across an international range of peer-review journals and

conference websites in both education and library science. From New Zealand, the reported literature included both peer-review and non-peer review journals and conference presentations in education and library science. More general journal databases with high New Zealand content were also considered to gain a fuller picture of the local understanding and use of this new practice. Although descriptions of embedded librarian practice have not generally predated Dewey's seminal 2004 work, key articles concerning learner support were drawn from a much longer time period.

Professional mailing lists and blogs

To supplement the formal literature, a scan of major professional mailing lists was also conducted. This scan focused on mailing lists concerned with online education, online learner support, and distance library services. Discussions relating to embedded librarians featured sporadically in some, but others provided a good deal of information, and showed the concerns and practices of those working in this area. The most relevant and fruitful of these mailing lists were nz-libs (Discussion of library and information services in New Zealand) and dls-l@ala.org (Discussion list for members of ACRL's Distance Learning Section). A few professional blogs, including Shumaker's *Embedded Librarian,* were identified and scanned to glean further revelations of the current professional concerns and directions of this relatively new learner support service.

Interviews with faculty and embedded librarians at a New Zealand tertiary institution

In 2013, a number of semi-structured interviews were conducted with faculty and embedded librarians at The Open Polytechnic of New Zealand to seek their understanding and experience of the embedded librarian service. These interviews were conducted in collaboration with the Open Polytechnic's Library Manager. Respondents gave helpful and often frank replies, discussed the benefits and drawbacks of embedded learner support, and identified areas for future research.

Results and discussion

Results that emerged from the gathered information and data fall into several categories—some results bridge categories, and others have a more specific focus. These categories include the express need for learner support at the point of learning or the point of students' need; the importance of faculty–librarian collaboration for successful results; the increasing range of roles that librarians can take to complement learning already taking place in the online classroom; the importance of developing and maintaining relationships between all parties in the online classroom; and some practical difficulties and sticking points which have been encountered in the online classroom. These results are outlined and discussed below, together with a discussion of the importance of each in this emerging field.

The express need for learner support at the point of learning

The theory on learning support is well documented in the literature, and there are arguments for providing skills and support ahead of time (just in case) as well as at the point of learning or the point of need (just in time). One point that came clearly out of the professional mailing lists and blogs is that, in the online learning environment, students are seeking assistance from traditional library sites and links in far smaller numbers, and are spending more time on their course pages and less on other online pages on their institution's site. A burgeoning debate in the American Library Association's Distance Library Services mailing list began by identifying this trend with a plea for ideas to address the challenging situation:

> As much I as love creating online [information literacy] tutorials, I am at the point where I know that the no. of tutorials are [*sic*] getting unwieldy and the tutorials are in silos. I have an info literacy page [URL removed], but I know that students are not accessing this page.
>
> Does anyone have ideas for moving this info into places where students can access it. A few of these tutorials have made their way onto subject guides.
>
> Virtually any of these tutorials could be put on each subject guide, but the pages would get cluttered.
>
> Have any of you been successful at promoting your information literacy tutorials to your students. Is there a better way to present the information than collecting the links to various pages/videos on one page? (Allen, 2014)

A flurry of responses followed, all confirming the issue and identifying tactics that have been successful in other institutions. These tactics included working with faculty to embed the tutorials in courses, or assigning them as homework; organising the tutorials around subject themes and placing them strategically in courses just before assignments are set; and placing the tutorials under new names and in new places in the course. An example of this last tactic was a reply describing "similar tactics by embedding in LibAnswers—our subterfuge reference engine under the HELP button". This posting carried on to identify associated student behaviour: "It gets about 25K hits a month. Not sure of impact on our Info Lit resources, but those trend about 5,000 views a month" (Stielow, 2014b). This strategy showed the effect of carefully placing the resources where the students are likely to search (i.e., within their own courses), and identifying them less directly as library resources and assistance and more as general assistance and answers that aid the student in their learning. The art of 'packaging and selling' appeared to be crucial in delivering learning support that students will readily access and use. It is also recognised that with access to the web and a variety of search engines, students do not always view the library as the first port of call for locating information assistance, and that this can be best overcome by placing pertinent assistance within the curriculum (Stielow, 2014a).

This research identified that this form of learner support would not be equally relevant in all online tertiary courses. Students of some programmes of study, such as Arts and Law, are traditionally heavy library users because these subjects are based on the written word and information is vital to their study. Others, in the pure sciences and mathematical fields, have a different experience. One statistics lecturer interviewed on this topic of library resources, assistance, and learning support identified:

> As a numerically based course, students are not encouraged to use other resources. Statistics books often tackle topics in different ways and it is confusing for students if they move away from the materials provided. (Fields & Clarke, 2014, p. 74).

Students in some of these fields might still need learner support at the point of learning, but in a more tailored and specific form for their particular requirements and those of the subject area.

Faculty-library collaboration needed for success

Library support cannot be provided as a tailored service to students without some collaboration with faculty. The need for faculty to be willing to allow embedded librarians into their online teaching spaces to provide assistance and information resources within the place of learning has already been identified above. In addition to this access, faculty endorsement of the embedded librarian's services sanctions the students to make wider use of this assistance and promotes it as a useful addition to the course by supporting the learning process (Rodrigues, 2014).

The nature of the learning support that is given, and its relevance to the course in which it is delivered, stems from the individual requirements of the subject area and the assessed work to be

undertaken in the classroom. Without faculty collaboration, embedded librarians can find it difficult to tailor their support services to individual classrooms—this, in turn, reduces the uptake and effectiveness of these services (Shumaker, 2011). The efficacy of this form of learner support appears to depend on strong collaboration between faculty and embedded librarians.

Collaboration between faculty and embedded librarians can also be effective in course design. Because librarians deal with information seeking, information use, and information resources, they can also assist faculty in the course design process. Courses that require students to use information literacy skills tend to also boost their critical thinking skills which, in turn, promote lifelong learning (West-Pawl, 2012). Collaboration between faculty and librarians in the course design process can help to create good delivery and assessment of subject content with the addition of information skills for a more comprehensive learning experience.

Roles for librarians that complement the online classroom

A number of librarians' roles complement the teaching and learning that takes place in the online classroom. These roles include providing links and direction to resources and tutorials which will lead to skills and information that students need to effectively conduct and enhance their learning (Shumaker, 2011). These links and resources can often be identified before the class starts, and messages can be prepared ahead of time to deliver this information to students. Some standard library responses to probable questions can be prepared ahead of time, based on patterns of questions raised in previous course offerings.

A more personalised reference service may also arise in some of the interactions between embedded librarians and students. Students have the opportunity to ask some quite specific questions, and some of these might apply to individual students rather than the class as a whole. Although responses to these questions represent a more individualised service, they can raise awareness of course topics or peripheral subjects for other students as well as directly assisting the student who asks the question (Fields & Clarke, 2014). A balance between widely applicable reference services, more individualised reference services, and other library or information support to students might need to be made.

Another area in which embedded librarians might be able to assist is with the correct formatting of references and questions of writing style. Adherence to formal style guides and referencing systems often concerns students, and by using librarians to answer questions of formal referencing, faculty can be kept free for questions of content and subject. One faculty member identified the best thing about having an embedded librarian as:

> Knowing that you've got back-up, especially for the technical questions. For example, APA and referencing questions, using the databases and helping students find information. (Fields & Clarke, 2014, p. 73)

This strategy can work effectively, and perhaps works best when librarians are embedded in the class rather than being at another site where students may be less likely to encounter them. When these discussions take place in the online classroom there is the added benefit of them being available to other students who can 'lurk' or 'listen in' on these online conversations. Tailored library and learner support are therefore brought into an environment in which many students can benefit from the interactions of embedded librarians with a few of their classmates without having to make any more interactions.

The importance of building relationships

Fostering good relationships amongst all classroom participants is important. Faculty–librarian relationships have already been discussed in terms of collaboration, but they also have a wider aspect outside the classroom. Relationships between faculty and their embedded librarians can

often have other class-related benefits, including the procurement of information not otherwise gained by the faculty. An example of this came to the fore in an interview with a member of faculty:

> I was contacted by my embedded librarian who told me that holds on a particular book … suddenly increased and that he knew some students would not get a chance to view the book prior to the assessment it was being used for falling due … He suggested alternative texts and made online copies available, then gave the new list to me and I gave it to my class. It makes everyone look good! (Fields & Clarke, 2014, p. 73).

This building of trust and sharing of expertise complements the roles of faculty and the embedded librarian, and adds value to the provision of quality learning.

In addition to this team approach to providing information to students, embedded librarians can also assist faculty outside the classroom. Roles in this context might include providing updates on texts and articles in the relevant field, identifying updated course readings and new editions of works for acquisition, developing and updating courses and their supporting materials, and searching for information to support faculty research. These are all roles currently undertaken by many subject specialist librarians or liaison librarians, and these skills make these particular librarians suitable candidates to also work as embedded librarians. In this role they can gain a fuller insight into the nature and extent of faculty's information requirements.

The other relationship that brings benefits is that between the embedded librarian and the student. The placement of an embedded librarian in the online classroom gives students another person to contact for information pertinent to their learning, and positive experiences with a librarian in this setting often facilitate further contact with other library services. This will, in turn, result in more learning support being given to those students who seek it.

There are also benefits to both the librarian and future students. Working directly with students in individual classes increases the librarian's understanding of students' specific needs and attitudes, allowing the librarian to anticipate the needs of future classes. Donaldson and Valenti (2014) have identified "When students conceive questions but are reluctant to ask, embedded librarians can identify some common questions and promote clarity by providing the answers that will help students to succeed in their efforts to navigate library resources" (p. 31). Proactive packaging of information for student consumption becomes more relevant and targeted as the embedded librarian understands the needs of particular classes in relation to their skills and their subject material, so increasing the vitality and relevance of the embedded librarian service.

Practical difficulties

None of the workings and benefits outlined above come without practical issues, and these need to be identified and considered in the process of delivering a practical, scalable, and worthwhile library learner support service. Difficulties fall into three main categories: the specific needs of students and subject areas (which are different in each online classroom), the management of good relationships between all of the participants in the online classroom (which is not always easy), and the technical constraints of working in an online environment.

No one-size-fits-all approach to providing effective library learner support can be delivered into online classrooms at different levels and in different subjects. The nature of students' information literacy and their information needs range widely due to factors that include students' prior knowledge of information-seeking tactics, the particular requirements of the subject area being studied, and the focus of the assignments set by faculty. A tailored approach for each class results in the most effective delivery of this form of learner support. Providing this support requires additional time, resources, and effort.

Managing good relationships in the online classroom is vital, and has been discussed in more detail above. In addition to this, some system constraints and technical issues might need to be considered. When interviewed about their appraisal of the success or not of the online discussions between the students and the embedded librarian, one faculty member remarked:

> I'd question the pedagogy of the forum process. There's a large class [around 140 students] and a lot of posting… The expert's post—i.e. librarian or tutor—gets lost in the noise or comes in the middle of a whole lot of other postings. (Fields & Clarke, 2014, pp. 73–74)

This issue of 'noise' is particularly troublesome in classes that are run asynchronously and/or delivered to students in different time zones. These difficulties arise when students are unable to discern the postings that are relevant for their own needs, or when information overload deters them from finding the relevant posts or continuing to use the discussion forums at all. There is also a risk of making it too easy for students to post their questions without considering possible answers and working through a process to determine an answer before they see the expert's post. Faculty and embedded librarians need to strike a balance in their postings: to answer useful questions, divert or otherwise deal with unhelpful questions or comments, and answer students' questions in a timely fashion without building an expectation of instant answers to easy questions.

One possible way to overcome some of these issues is for embedded librarians to gain formal skills in online education or e-learning so they can engage with appropriate pedagogy. This brings the embedded librarian closer to the role of a teaching assistant, because they can complement faculty's teaching by supporting students in their information seeking and use.

Conclusions

Embedded librarians are proving to be a workable and valuable addition in the provision of tailored learner support for students in a growing number of online classrooms around the world. Locating these embedded librarians to provide learning support within the online classroom rather than outside it can help raise student engagement, thereby increasing the effectiveness of the library service and the number of students it reaches successfully. Using embedded librarians is not without a few possible downsides and practical issues, but the benefits appear to far outweigh the drawbacks, and careful handling of the roles and relationships between embedded librarians and students can contribute to positive outcomes for student academic success.

There is an evidenced need for further study into this growing area of direct learner support inside the online classroom. Three aspects identified in the literature as requiring further exploration are: identifying and exploiting new opportunities for providing effective learner support; managing relationships in the online classroom to make the best use of services and synergies; and tailoring learner support approaches and services to meet the specific needs of individual subject and discipline areas, class levels, course requirements, and student capabilities. Each of these three aspects may lead to fruitful efforts in maximising the learner support benefits of using embedded librarians. The author plans further research to identify and quantify some of these issues by conducting case studies across multiple online classrooms in additional New Zealand tertiary education institutions.

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