

Engaging student spaces: library in the Deakin Online Learning Environment

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Abstract:

Recently Deakin University implemented a new Learning Management System, Desire2Learn (D2L). D2L is a new generation e-learning platform that offers an intuitive interface and allows for a flexible approach to learning. Deakin University Library partnered with faculties during the transition to D2L, and through that systemic collaborative approach, had the opportunity to embed library resources into the University's LMS. This paper concentrates on the work undertaken by Deakin University to integrate library resources and services into D2L. You will discover how the library created information widgets, and built systemic partnerships with academic staff and University divisions for the benefit of the wider student body.

Introduction

Learning Management Systems (LMS) are core to the academic life of students. It is important for students to have ready access to scholarly information sources in this space. It is essential for libraries to make their collections, services and support available in this online space. Academic libraries are outstanding in their ability to produce learning objects and subject or discipline based resource guides designed to teach students to search for and use information efficiently. However if students can't find these learning objects and resource guides, if they never take the time to look at them because they aren't a part of their core learning materials or they don't look at them at a point in time that is relevant to their learning experience; are we really being effective? Libraries have the ability to support curriculum, embed information literacy and enhance the student learning experience through technology, strategic planning and active involvement in online pedagogical initiatives. An LMS provides an online space where library resources can be linked directly into specific unit learning content and alongside students' other key learning materials.

In the experience of Deakin Library, embedded librarianship has received positive feedback. However, it has been provided on a demand basis, when a unit chair requests library support. There are many students who are not enrolled in a unit that receives such embedded library support. What about the students that are not receiving the benefit of an embedded librarian? How can libraries ensure that at the very minimum students are being directed to access appropriate library resources for their learning needs? Even if library support was embedded in traditional ways in a systematic manner across faculties, schools and units, how could the library itself sustain such a model without quadrupling its workforce? This paper illustrates how Deakin University Library combined strong relations with faculty, an LMS implementation project and library expertise to ensure students, whatever their course, have access to a wealth of relevant scholarly resources in their daily workspace.

Background

Deakin University was established in the 1970s, combining traditional teaching and learning values with new ways of developing and delivering education programs, referred to at the time as 'distance education'. Deakin is known for its connection to industry, enabling the curriculum to deliver practical and relevant skills to prepare undergraduate students for professional careers (Deakin University, 2011). Deakin University also has a strong reputation for providing high quality off-campus courses that offer accessibility and choice to a diverse range of international and domestic students. There are four faculties at Deakin University: Arts and Education; Business and Law; Health; and Science and Technology. Each faculty has multiple Schools and Research Centres across four university campuses. The academic year is split into three trimesters; each trimester is of equivalent length and runs for 12 teaching weeks plus 2 weeks of exams. Trimester 3 runs over the summer months with a small break for Christmas. Liaison librarians are aligned to faculties providing library

support to both academics and students whether they are located on or off campus. The University has long employed an LMS, referred to as Deakin Studies Online (DSO), to deliver course content, with every unit making use of an online teaching site to support all modes of study.

In 2010, Deakin University selected Desire2Learn (D2L) as its new Learning Management System (LMS). Moving to a new LMS with enhanced multimedia and web 2.0 capabilities, provides better opportunities for a combination of synchronous and asynchronous learning and is seen as a strategic move towards a holistic approach to education. Flexible education is high on the University agenda and Deakin believes the move to D2L provides an opportunity to support all students across all courses with a high quality learning experience. During the transition process, the University referred to the old LMS by its industry name of 'Blackboard', and the new LMS as DSO (D2L); this paper will do the same. The implementation plan for DSO (D2L) was a staged piloted process with four units transitioning from Blackboard into the new system in trimester 1, 2011. A limit of 60 units were transitioned and piloted in trimester 2, with all units making the transition process in trimester 3. This process ensures that when the full teaching period begins in trimester 1, 2012, experienced support teams and structures will be available and essential training will have occurred. During this process, the Library worked closely with University transition teams, in order to embed information resources and tools into the LMS. For the Library, the new LMS provided an opportunity to offer direct access to relevant information resources, through the building and embedding of customised tools that offer access to information sources and search tools.

Library and Learning Management Systems: a Literature Review

Library Services in LMSs

With so much emphasis placed on government initiatives such as the Review of Australian Higher Education, otherwise known as the 'Bradley Report', the Tertiary Education Quality and Standards Agency (TEQSA) and the Higher Education Participation and Partnerships Program (HEPP), the delivery of high-quality flexible education in Australian Universities is a priority. The use of an LMS enables the delivery of online learning anywhere anytime, enhancing the learning experience and shifting the pedagogical focus to be student-centred (Black and Blankenship, 2010; MacIsaac, 2011). The literature clearly states a need for library involvement in LMSs, in order to continue delivering effective library support (Black and Blankenship, 2010; Hoffman, 2011; Shank and Dewald, 2003; Xiao, 2010; York and Vance, 2009). Presenting library resources to students has always been a gigantic task, and again libraries must shift their focus and methods of support to suit the LMS environment.

Shank and Dewald (2003) suggest two different macro and micro methods of integrating library resources into an LMS. The first macro method involves a more general approach of adding the library to all units, usually by adding a link to the library website or list of helpful resources. The downfall here is that such an approach can be too broad and may not be relevant to any, let alone all students. The micro method focuses on the embedded librarian module where specific units are targeted by individual liaison librarians. Here the disadvantage is that not all students will be exposed to library support.

As well as providing traditional library support and information literacy classes, Deakin University Library was already providing support at the micro level. The Library presence in Blackboard consisted of linking to e-readings, unit-specific help sheets and video tutorials, liaison librarians in discussion spaces and graded library quizzes. This type of support was continued during, and will continue beyond, the transition process to DSO (D2L). However, the announcement of a new LMS caused the Library to review its presence and work towards a comprehensive and consistent form of library support throughout DSO (D2L), on a customised macro level.

York and Vance (2009) indicate that the easiest way to embed library into the LMS is to provide a default library link. They go on to explain that dynamic library portals linking students to relevant unit content is a more challenging task, but necessary, particularly to encourage students to consider conducting research beyond web searching. Corral and Keates (2011) concur with this approach, believing the LMS to be an effective way of managing access to unit-specific information, in particular in creating seamless access to library-subscribed resources. With this and Ohio University Library's approach, the 'toolkit approach' (Black, 2008), to providing library support in its LMS, Deakin Library began looking at providing direct access to library information resources.

Challenges with faculty

Corral and Keates' (2011) survey results found that librarians described having a limited role in online courses and that LMSs remain owned by, and the domain of, academics, causing a need for libraries to develop their own gateways to information resources, through integration with their library websites. Essentially this means that if students are logged into an LMS and discover the need for library help, they are forced to open a second or multiple systems. This leads to the popular professional opinion that libraries need to present their resources in the places most often visited by students (Daly, 2010; Kellam et al., 2009).

Corral and Keates also found that librarians struggle to be viewed as serious contributors to university curriculum, and that co-operation between library staff and academic staff is not well developed. Other authors support this point of view, believing that the reluctance of both academic staff and LMS administrators to grant access to the system is a failure to recognise the capabilities and expertise of the library (Daly, 2010; Kellam et al., 2009). The ramification of this is that academics do not think of integrating library resources directly into their online teaching spaces. As long as librarians continue not to be seen as consultants in teaching practices,

faculty members will not be willing to share editorial control of their online teaching sites (Shank and Dewald, 2003). To successfully embed a micro level of library support, academic librarians need to negotiate build rights and their own space within the LMS (Black, 2008; Daly, 2010; Kellam et al., 2009; York and Vance, 2009).

Throughout Deakin's LMS transition period, the Library worked to build relationships with all LMS administrators and Faculty staff. This has resulted in DSO (D2L) administrators giving Library staff greater access to the LMS and allowed for the design and building of student-focused solutions in providing access to library resources. The Library now has its own DSO (D2L) sites where it can create library support tools, become familiar with both the academic and student views and experiment with the LMS functionality. Langley et al. (2006) observe that "when library administrators support and encourage librarian-faculty collaborators they become a stronger player in the life of the university" (p.99).

For the students' sake

Often students do not understand the difference between information resources made available through library websites and resources located through internet search engines, or they simply find library websites too hard to search (Hoffman, 2011; Shank and Dewald, 2003; York and Vance, 2009; Xiao, 2010). Therefore it is essential that seamless linking to library resources is offered through the LMS; if students are able to readily access quality information resources they are less likely to use a search engine (Shank and Dewald, 2003; Xiao 2010). Academic librarians, such as Shank and Dewald (2003), reason that in order to remain relevant and increase visibility, libraries will find it necessary to take services to students via LMS platforms. However, it is not just the relevance of the academic library that is of concern. As Hoffman (2011) argues the primary concern of academic libraries should be what benefits the students. If students will not come to the library then how will they get access to essential information and how will they ever develop information literacy skills? Academic libraries need to be in the student space for the benefit of student learning.

It is not access to information itself that is always the problem. The ready accessibility of an enormous volume of information can be overwhelming. As providers of information, academic libraries must collect information resources to cater for all client demands and perceived needs. This results in collections containing millions of unknown singular information resources, which must be located through the library catalogue or by navigating a series of library web pages. Both these methods are likely to lead students to another information retrieval system that requires further searching. Students can then conduct a search, hoping they have chosen correctly and will find useful data. All too often, students find they have chosen an incorrect pathway and search results will not meet their desired needs. "Even when librarians point out these resources students can still have trouble accessing them" (Hoffman, 2011). Undergraduate students particularly have trouble realising what it is that they need, let alone trying to find it. It is the responsibility of librarians to customise options in order for users to acquire the

needed information. They can best do so in a supportive familiar environment, such as an LMS, which is designed to catalyse student engagement with their discipline of study (Chen & Lin, 2005).

Most information, especially in the case of the internet, is unfiltered and requires considerable skill to evaluate. Students do not arrive at university with the skill of selecting, evaluating and applying information, they must learn it. Before they can do this, they must be able to find the relevant information search tools. With so many available, students are often frustrated and de-motivated by the volumes of resources before they even begin. MacIsaac (2011) believes that part of this frustration comes from students' need for instant gratification when seeking answers; they expect to be led to relevant resources with little effort required on their part. Students are likely to be studying within one discipline and only need access to a handful of resources relevant to their studies. Deakin University Library recognised the need for a student-centred approach to information discovery that incorporates a level of discipline customisation.

Negotiation and Decision Making

Multiple transition group teams were set up across the University, each feeding into an operational group that reported to the department of the Vice Chancellor. Of these groups, the Library became involved in each of the four faculty transition teams, the evaluation group, the e-portfolio group and the University-wide transition group. Once included in each of these membership teams, the Library was able to establish working relationships with each faculty, the University's Knowledge Media Department (KMD), the Institute of Teaching and Learning (ITL) and the Web Development Team. Staff from KMD were responsible for the technical and strategic rolling out of DSO (D2L). Faculty transition teams were chaired by their Associate Deans of Teaching and Learning (ADTLs), and included academic developers, academic representatives and faculty-employed DSO support.

Before attending any of these transition team meetings, the Library had already met several times with KMD to discuss the possible DSO (D2L) spaces for library support. The University Librarian quickly negotiated top-level access to the Library homepage, in the form of a link situated in the DSO (D2L) navigation bar. The Library formed its own team to discuss exactly what type of support it could offer to students at a macro level through DSO (D2L). The Flexible Education Librarian, Teaching and Learning Librarian, Faculty Manager Librarians, Liaison Librarians, student Rovers and Research Services Officers (post-graduate students) discussed appropriate library services. Interestingly enough, Deakin librarians and students employed as library staff had a very similar view of what was needed in terms of library support in DSO (D2L).

The Library team briefly considered a separate library DSO (D2L) site in which students could either be automatically enrolled or choose to enrol. Once enrolled, the Library site would have been accessible on the students DSO (D2L) homepage, in a list with all other subjects a student had enrolled in. This raised questions about whether this site would actually ever be used. Why would a student click here

instead of going directly to the Library webpage? What could be put in this site that would not be a direct duplication of what is already on the Library website? Instead of taking the risk of undertaking a project that risked being a recreation the Library website, only on a different platform, it was decided a tool for customised information discovery, focusing on the student experience, would be more appropriate. It was KMD that suggested the space on individual unit sites and introduced the idea of the Library Resources Widget. A widget or web widget is a small portal like application containing snippets of specific information or links to larger sources information that can be installed on any web page.

Based on library team discussions, a list of options for a Library Resources Widget was drawn up and presented to faculty transition teams. Faculties were able to see the basic functionality of a Library Resources Widget and choose the content that best suited their students. While creating this list of options, the Library decided that the most efficient and sustainable way of catering for all faculties was to link through to discipline-based Library Resource Guides. This would mean the links in the widget would always remain consistent and any needed changes could be made to the Library Resource Guides. Library staff would not constantly have to make changes in unit sites or faculty development sites. The Library had a flexible outline of what the Library Widget would look like, and spent the months between November 2010 and the first piloted transition period of Trimester 1 2011 working with KMD and faculty transition teams to find a solution that worked best for all parties and especially for Deakin students. The only prerequisite was that the final outcome had to be something that the Library could easily edit and make changes to without placing too much responsibility on unit chairs and faculty DSO (D2L) support teams. Each faculty had a different set of requirements, which meant that more than one type of Library Resources Widget would have to be created. However, every faculty realised the need and advantage of having a Library Resources Widget and it was unanimously decided that there would be one available as a default on every unit site in DSO (D2L).

Mechanisms for Providing Student Support in the LMS

The top half of the Library Resources Widgets provides access to select discipline-based resources via links to Library Resource Guides, discipline-specific databases and, in some cases, new resource RSS feeds and specific journal titles or specific e-book titles. The bottom half of the Library Resources Widget consists of a library catalogue pass-through search (Encore, Quicksearch) and links to liaison librarian contact details, library Facebook site, A-Z database and e-journal list, and library help sites.

As at November 2011 there were 90 discipline-based Library Resource Guides available through the Deakin University Library. These guides are created by liaison librarians with specialist subject knowledge. There are four common tabs across all Library Resource Guides, which are: home, articles via databases, e-books and e-journals. The most common feature of the discipline-based Library Resources Widgets are the four links that lead students to these tabs containing lists of discipline-specific information resources. Figure 1 shows the type of links a Library

Resources Widget might contain, depending on decisions made by each faculty, and the type of resource that is linked to. A student enrolled in a law unit can log into the DSO (D2L), click on the 'databases for law' link (from inside the Library Resources Widget) and will be taken to the 'Articles via Databases' tab within the Law Library Resource Guide. With only one click, the student is able to see a small select list of databases where they can find law-related information resources. This eliminates the need to know the often obscure names of a database, search the catalogue, stumble around a website looking for help, look for a Library Resource Guide or contact a librarian asking where to start.

Academic libraries have a history of making available online Library Resource Guides, also known as Subject Guides; these are often promoted to students in information literacy classes. However, students must attend one of these classes or be motivated enough to explore and understand the Library website in order to find a Library Resource Guide relevant to their area of study. In contrast, providing a link from an LMS direct to these guides legitimises and increases the likelihood that students will access this information. Figure 2 highlights the increased usage of Deakin Library Resource Guides since Library Resources Widgets were loaded into DSO (D2L).

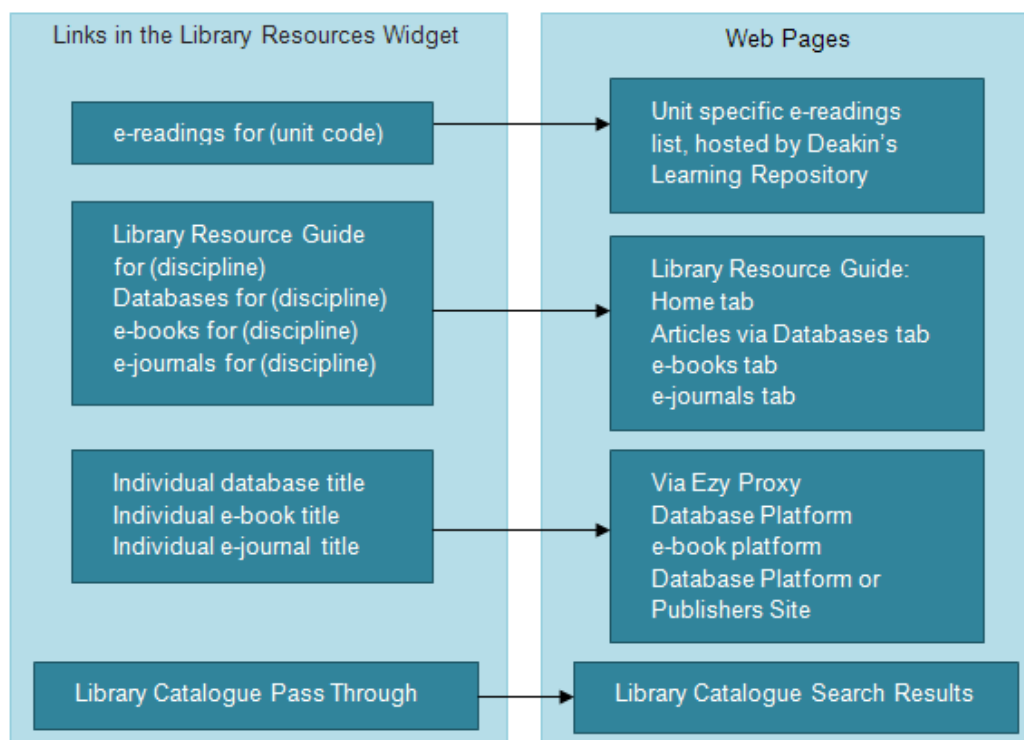


Figure 1: Example of Library Resources Widget Content

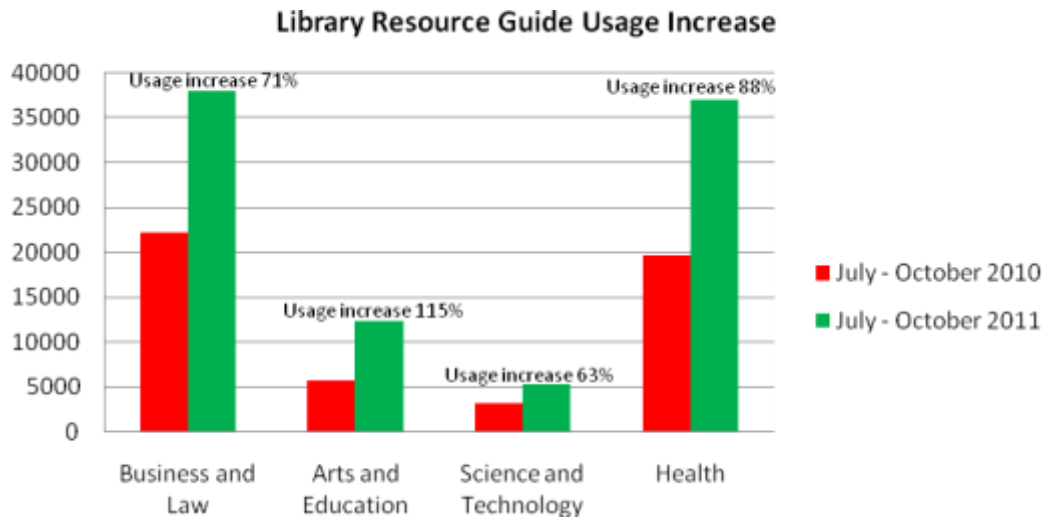


Figure 2: Library Resource Guide Usage Increase.

Ultimately, the Library Resources Widgets are designed to break down the barrier between locating a relevant information resource (e.g. database) and locating discipline-specific information. Experience shows that if students struggle to find the correct information resource, they are less inclined to persevere and develop the information literacy skills needed to search that information resource. When a student enters a professional workplace, they will have access to a limited list of relevant information resources. For example, a law firm might provide access to Lexis Nexis and Australasian Legal Information Institute, or a hospital access to PubMed and CINAHL. In a workplace, they will not be expected to navigate their way through thousands of irrelevant databases, but will be expected to know where to go to find information. By the time they graduate, the Library Resources Widgets will have assisted them in becoming familiar with professionally relevant databases.

Building Support in the LMS

The Flexible Education Librarian and KMD were involved in looking at the technical aspects of building the widgets. The Desire2Learn platform comes with a Widget editing tool; however, the Library found the functionality of this tool did not meet all of its needs. In order to build a design appropriate for Deakin University, it was necessary to use the Widget building tool's easily-accessible HTML source editor. This put the Flexible Education Librarian in the position of quickly having to learn some HTML basics and building an even greater relationship with Faculty DSO support teams that have HTML skills. The Library and KMD had envisioned building one dynamic Library Resources Widget, which was capable of recognising the unit it was loaded into and pulling in the appropriate discipline resources. However, this proved to be a project that would need greater expertise than either team possessed and could not be organised before the beginning of trimester 1, 2011. A future

project involving KMD, Information Technology Services Department (ITSD) and the Library is being discussed. One dynamic element that was able to be achieved was the linking to e-readings; every Library Resources Widget in the Arts and Education Faculty links through to unit specific e-readings.

As mentioned previously, all four faculties had different requirements for Library Resources Widget content, meaning more than one widget needed to be created. This meant building three levels of widgets and for enhanced customisation, multiple widgets at each level. Library Resources Widgets at level one gave the option of highly customised unit specific resources, level two customised discipline-specific resources and level three contained more general faculty-based resources. During trimester one and two, when limited units were undertaking the piloted transition, the supply of level one Library Resources Widgets was sustainable. However it was quickly realised that when all 1500-plus units were transitioned over to DSO (D2L), the supply of level-one-type widgets would not be practical.

Three faculties gathered a list of preferred library resources based on discussions with academics and knowledge of students' learning and information needs. Based on these lists, academic feedback and Library Resources Widgets from trimesters one and two, the Library built 53 discipline-based Library Widgets for trimester three and beyond.

Staff of one faculty felt that if a dynamic widget could not be created then it was not worth trying to create multiple discipline-based Library Resources Widgets. This Faculty opted for a general widget containing a link to a list of Faculty-specific Library Resource Guides and the catalogue pass-through search. Two units from this Faculty made a special case, and were granted permission to have unit-specific Library Resources Widgets built for them. This Faculty is now considering the merits of discipline-based widgets.

Fifty-six Library Resources Widgets are currently available in DSO (D2L); the Library provides the coding for these widgets to faculty based Academic Developers, who load them into the appropriate unit sites. Every single unit site in DSO (D2L) has a Library Resources Widget embedded in the homepage, meaning every single undergraduate student in the University has access to discipline-specific resources at their fingertips.

Overview of the Advantages of Current Library Support in the LMS

The advantages to having a customised Library Resources Widget available in each unit DSO (D2L) site are similar to those mentioned by Shank and Dewald (2003), in both their macro-level and micro-level descriptions of library involvement in LMS. The Library already had a website with many complex approaches to providing access to information resources anywhere, anytime. By linking directly to discipline-specific resources from DSO (D2L), the Library is providing a holistic online education experience that is student-centred. Since the Library Resources Widgets link through to Library Resource Guides, information can be updated outside of DSO (D2L) without interruption to academic or student. As Library

Resources Widgets are customised at discipline level, students will only be linked to resources most likely to provide them with relevant search results. Liaison librarians will not have to approach individual academics to ensure minimum level library support is available, as each unit site will have an appropriate discipline-based Library Resources Widget built into it. A sound level of customisation can be achieved without faculties having to give site access to all liaison librarians. Furthermore, students have access to information resources when they are ready to use them, instead of when a librarian has had a chance to tell them.

Library involvement in DSO (D2L) has seen an increase in collaboration with faculty staff at all levels, both administrative and academic. Faculty staff have embraced the opportunity to express difficulties they and their students have in accessing information resources. Liaison librarians have seen an increase in academics' willingness to recommend resources that they would like to see in the Library Resource Guides. In fact, four discipline groups within faculties have requested Library Resource Guides be created, so that they can have an associated Library Resources Widget for their unit sites. The Library has been privy to discussion centred on pedagogy, curriculum development and best practice in flexible education. This has enhanced the Library's ability to supply contemporary, relevant and highly sought library support. The Library is seen as part of the team in most faculty transition meetings, with library being recognised as a professional collaborator in curriculum matters.

Limits of Current Library Support in the LMS

Creation of a library widget requires some technical knowledge, including HTML skills; this limits the number of Library staff who are able to create new and edit existing widgets. However, through basic Library Resources Widget training, liaison librarians are learning how to edit and customise widgets. As some widget links bypass Library Resource Guides and lead directly to individual resources, liaison librarians will need to check these each trimester to ensure they are working correctly and are up-to-date. The Flexible Education Librarian will have to ensure that the pass-through catalogue search mimics any changes made to the catalogue search on the Library's website. The Flexible Education Librarian will also have to consult with faculty DSO (D2L) support to ensure Library Resources Widgets reflect the current needs and practices of both students and academics. However, this could also be considered an advantage, as it ensures that collaboration between the Library and faculties continue.

Occasionally the Library is asked whether it believes it is 'spoon feeding' students and preventing them from learning to find library resources on their own accord. Maclsaac (2011) also implies that there is sometimes a conflict between the librarians' goal of building students' information literacy skills and the seamless delivery of relevant information resources. However, scaffolding pedagogy relies on the building of skills from foundation level through to the development of independent learning. So what is the foundation level of information literacy skills? The literature shows us that students are easily dissuaded from conducting any research, no matter how minor if they do not know where to begin in the first place (Black, 2008;

Xiao, 2011; York & Vance, 2009). The Library Resources Widget is providing students with a place to begin. However, they will still need to build information literacy skills to make best use of these resources, evaluate and apply their research findings.

Conclusion

The advent of a new LMS provided an opportunity for the Library to embed student support and maximise access to student centred quality information. Both the Library and faculty transition teams feel that the Library Resources Widget sits well with the learning styles of students as it allows them to access information at point of need and creates a personalised learning experience. The Library Resources Widget has assisted in filling the gap for those students who had not been fortunate enough to enrol in a unit that provides an embedded library experience. As information providers in an academic environment, Library staff were aware that one of the biggest barriers and frustration for students is not knowing exactly what resources would lead them to relevant sources of information. A Library Resources Widget, providing students with clear pathways and direct access to discipline-specific library resources, help and services, removes this barrier. Library Resources are now accessible from within the student space, and the Library will continue to work as a part of faculty transition teams to ensure students receive library support and a holistic educational experience.

References

Black, Elizabeth. L 2008 'Toolkit approach to integrating library resources into the learning management system'. *The Journal of Academic Librarianship*, vol. 36, no.6, pp. 496-501.

Black, E. L. & Blankenship, B 2010, 'Linking students to library resources through the learning management system'. *Journal of Library Administration*, vol. 50, no.5, pp. 458-467.

Kuan-nien, Chen. & Pei-chun, Lin 2011, 'Information literacy in university library user education'. *Aslib Proceedings: New Information Perspectives*, vol. 63, no. 4, pp. 399-418, viewed 4 November 2011, <<http://dx.doi.org/10.1108/00012531111148967>>.

Corrall, Sheila, & Keates, Jonathan, 2011, 'The subject librarian and the virtual learning environment: a study of UK universities', *Program: electronic library and information systems*, vol. 45, no. 1, pp. 29-49, viewed 4 November 2011, <<http://dx.doi.org/10.1108/00330331111107385>>.

Deakin University 2011, *About Deakin University*, viewed 1 November 2011, <<http://www.deakin.edu.au/about/>>.

Hoffman, Starr 2011, 'Embedded academic librarian experiences in online courses: Roles, faculty collaboration, and opinion', *Library Management*, vol. 32, no. 6, pp. 444-56, viewed 4 November 2001, <<http://dx.doi.org/10.1108/01435121111158583>>.

Kellam, Linda M, Cox, Richard & Winkler, Hannah 2009, 'Hacking Blackboard: Customizing access to library resources through the Blackboard Course Management System', *Journal of Web Librarianship*, vol. 3, no. 4, pp. 349-63, viewed 2 November 2011, <<http://www.eric.ed.gov/ERICWebPortal/detail?accno=EJ870664>>.

Langley, A, Gray, EG & Vaughan, KTL 2006, *Building bridges: collaboration within and beyond the academic library*, Chandos information professional series., Chandos Publishing, Oxford.

Maclsaac, Peggy Lynn 2011, *Maximizing library presence while minimizing online maintenance*, Athabasca University, viewed 1 November 2011, <<http://hdl.handle.net/2149/3036>>.

Shank, John & Dewald, Nancy 2003, "Establishing our presence in courseware: Adding library services to the virtual classroom", *Information Technology and Libraries*, vol. 22, no. 1, pp. 38-43.

Xiao, J 2010, 'Integrating information literacy into Blackboard: Librarian-faculty collaboration for successful student learning', *Library Management*, vol. 31, no. 8, pp. 654-68, viewed 4 November 2011, <<http://dx.doi.org/10.1108/01435121011093423>>.

York, Amy C & Vance, Jason M 2009, 'Taking library instruction into the online classroom: best practices for embedded librarians', *Journal of Library Administration*, vol. 49, no. 1-2, pp. 197-209, viewed 4 November 2011, <<http://dx.doi.org/10.1080/01930820802312995>>