The Library engaging with UWA online learning environments

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1 Introduction

Online learning environments are being embraced in the tertiary education sector as they increasingly provide the opportunity for delivering enhanced learning in a more flexible way. As Kayama and Okamato point out:

“Learning needs are dynamic and vary in the computerization age. As a response to this society advance, e-learning is here to stay, as it involves the methodology of instruction, cooperative and collaborative learning, self study, and all kinds of media, and furthermore, it engages various evaluation ideas” (Kayama & Okamoto 2005, p. 1004).

The UWA Library strategic plan (University of Western Australia Library 2008) recognizes the significant impact new online technologies will have in shaping the way that various communities within UWA will meet, interact, and learn. As the plan states:

“The greater fluidity that these technologies provide requires the Library to place less emphasis on delivering information into static learning environments and more on providing tools which will enable learners to incorporate information into their own learning environments. The Library will facilitate and encourage such use of its services while ensuring appropriate security and confidentiality.” (p. 8), and

“Working with academic colleagues, the Library must provide a range of services that will provide as much freedom and flexibility as possible to teachers who wish to incorporate library resources, services and teaching materials into their own ‘learning spaces’” (p. 9).

If the Library is to engage students in online learning environments in this way it faces a number of challenges. As Morrison points out there is a structural and a pedagogical challenge in delivering e-learning:

“To take full advantage of the potential of e-learning, institutions of higher education not only have to radically change how they are organised to support technology-enhanced learning (infrastructures and organizational models), but also face the challenge of creating a more appropriate pedagogical foundation upon which to build revitalized educational systems necessary to meet the demands of current and future knowledge users and creators” (Morrison 2007, p. 105).

In short, the Library will need to ensure it has the right supporting infrastructure and clear pedagogical aims in order to be effective in engaging with UWA online communities.

The purpose of this paper is to explore how the Library should develop and support services for communities who are engaged in learning through these online environments.

2 What do we mean by online learning environments?

In this paper the term online learning environment is being used in its broadest possible sense. That is, it includes any virtual online space where individual or group based learning is taking place. Such spaces may include managed learning environments such as WebCT; computer based learning objects delivered via the web; online blogs, wikis or email; or online communities which share social, educational, research or professional purposes.

These online environments offer a number of advantages to learners:
• They can potentially offer richer learning environments that would not be possible in a traditional classroom or lecture setting. By using online technologies digital learning objects can be created which through simulation and interaction can provide new ways of learning.

• They cater for a wider array of learning styles.

• Unlike physical learning environments, they are not necessarily limited by traditional time, geographical, or organisational constraints. Users can access them from anywhere and at any time.

• They empower the learner in many cases to explore, discover and create knowledge by themselves or peer to peer, rather than relying exclusively on the guidance of a traditional teacher-student model.

• They allow learning communities to be formed around a common interest, idea, goal, or relationship which in many cases may differ to the various community structures which are defined by the organisation which they belong to. So, for example, a postgraduate student may participate in an international blog relevant to their discipline, and as such, belongs to a broader community than those as defined within the UWA context.

In addition, the use of online learning environments can offer advantages to organisations in terms of scalability and reusability.

The Centre for the Advancement of Teaching and Learning in their Academic Council Resolution 39/01 identified six key characteristics of online learning environments:

• Administration – online support for learning in the form of outlines, notices, etc
• Communication – between students, teachers, discipline experts, etc via email, discussion boards, chat rooms and so on
• Delivery of content – via iLectures, handouts, etc
• Assessment
• Resources – support material (eg movies) or Library materials
• Interactive learning activities – digital learning objects which require the student to interact in some way (eg. simulations)

3 Online learning environments at UWA
Some of the more common learning environments that UWA learners participate in include:

Managed learning environments (eg WebCT)
These allow students to view course material and reading lists, discuss course content, complete quizzes, and submit assignments. These managed learning environments are normally facilitated by the Unit Coordinator, or Librarian, and are supported by the Centre for the Advancement of Teaching & Learning (CATL).

Online communities via social software
Social software is the term normally used to describe those programs which allow online communities to interact and share information which each other (Boyd 2006).1

1 Stowe Boyd, in his online article “Are you ready for social software” defines several key characteristics that social software share:
Social software sites developed at UWA include MyResearchSpace and NODE. Other sites used by UWA staff and students include Facebook, MySpace, Youtube, LinkedIn, and a variety of blogs and wikis. These spaces fall into online learning environments because they can potentially deliver content and interactive learning activities, facilitate communication, and provide access to resources.

**Figure 1: Durham University Library Facebook Page**

- Support for conversational interaction between individuals or groups
- Support for social feedback - which allows a group to rate the contributions of others which directly leads to the formation of a digital reputation
- Support for social networks to create and manage a digital expression of peoples’ personal relationships, and to help them build new relationships.

Social software can be categorised into two separate community formations:

- **Bottom up social software** - “supports the desire of individuals to be pulled into groups to achieve goals” (Boyd)
- **Top down social software** - is the opposite in that these place individuals into groups as defined at an organisational or functional level. Eg Groupware or WebCT

OCLC in a recent report “Sharing, Privacy and Trust in Our Networked World” identify a further distinction within the bottom up categories of social software:

- Social networking sites are those "primarily designed to facilitate interaction between users who share interests, attitudes and activities" and include sites like Facebook, MySpace, and blogs (2-2)
- Social media sites are those that "allow individuals to share content they have created" such as Youtube, Flickr, and Wikis (2-2).

Social networks are very popular. According to the Alexa statistics reported in the OCLC report, Youtube, MySpace, Orkut, Wikipedia and Facebook are all ranked in the top 10 global Web sites (2-3). The report also found that 61% of the total general public surveyed were users of MySpace and 77% used YouTube.
Web search spaces
Increasingly web search engines are no longer just searching tools but can also be personalised and used to deliver a range of web applications and “mash up” services to learners. Examples include the various widgets and gadgets on iGoogle. These sites are especially useful as online learning environments for the purposes of providing access to resources.

Figure 2: Bringing together (mashing up) a number of services within iGoogle

University Policy
There is currently no University policy which specifically deals with online learning environments, see (Arfield, Hammond & Spadaccini 2008, p. 2):

“The group could discern no policy distinction that could usefully be made between online, blended, or distance learning and more traditional forms of on-campus delivery. Any policy that is developed can and should be applied equally to all modes of learning”

However, this paper recommends a policy statement for blended learning at the University:

This policy is a statement of general principles that apply equally to all the University’s teaching regardless of the location or the mode of teaching.

The University encourages staff to select from the full range of available teaching modes those which provide a learning experience which is student-centred, appropriate and effective.
Through its staff training and development programmes the University will support its staff in the acquisition and development of relevant skills.

Through its provision of technical and physical infrastructure and of resources the University will facilitate the adoption of the full range of teaching modes.

Through its student support services the University will ensure that all its students have the skills necessary to fully engage with the learning modes which are employed. (Arfield, Hammond & Spadaccini 2008, p. 6)

There are a number of other broader relevant policies to be considered:

- UWA Library Personal computer software packages: [I:\Policy_and_Procedure_Manual\Policies\Information_Technology\Personal_computer_Software_Packages.doc](I:\Policy_and_Procedure_Manual\Policies\Information_Technology\Personal_computer_Software_Packages.doc)
- Information literacy policy: [I:\Policy_and_Procedure_Manual\Policies\Information_Services_Coordination\Information_Literacy_Policy.doc](I:\Policy_and_Procedure_Manual\Policies\Information_Services_Coordination\Information_Literacy_Policy.doc)
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4 UWA learning communities

At UWA learning communities can be segmented in a number of different ways, with individuals in many cases belonging to more than one. Each of these communities to a greater or lesser extent participates in online leaning environments.

At the broadest level:

- Undergraduates
- Postgraduates
- Staff
- Alumni
- External Community

In between:

- Particular course – ie. Genetics
- Particular discipline – ie. Communication Studies
- Particular school – ie. Music
- Particular faculty ie. Arts
- Particular part of the University – ie. Graduate Research School, Finance, ITS
- Endnote users
International students

At the most specific:

- Particular teaching unit
- Particular research group
- Particular group of students within a unit

5 Library engagement with online learning environments
There are four possible dimensions in which the Library could engage with UWA communities in the online learning environment.

Figure 3: Possible Dimensions of Library Engagement with Online Learning Environments

5.1 Inreach
The Library can create online learning environments with Library defined purposes. The Library is already involved in this dimension in a number of ways, especially in regard to the creation of Library information literacy programs which are delivered through WebCT. UWA communities in these cases are required to find and join in the Library’s learning environment. This dimension is very much about providing a space
for Librarians to communicate with students, deliver content, provide interactive learning activities, conduct assessment, and promote and provide access to resources for UWA learning communities.

The way in which the Library currently engages with this dimension presents a number of challenges:

- A student needs to know about the environment to engage with it
- There is not a lot of online content being shared or being developed to be shared

This dimension could be further developed by:

- Reviewing current initiatives to ensure best practice in terms of pedagogical design; for example by increasing interactivity, and ensuring appropriate methods of assessment and evaluation
- Developing a core group of best practice online learning objects that could be shared
- Ensuring that any new online initiatives that are developed with a view to sharing if possible

5.2 Outreach

This is the reverse of the inreach dimension in that it involves the Library participating in or joining learning environments which have been created by the UWA communities themselves. This may include:

- A Librarian joining the MyResearchSpace postgraduate forum and / or NODE and providing information or responding to posts relating to library and information services.
- A Librarian working collaboratively with a School or Faculty to incorporate Library learning objects into WebCT courses.
- The Library delivering resource discovery / Instant Messaging gadgets into web search engine spaces like iGoogle.
- The Library providing a page on Facebook or other social software sites to promote Library services.
- The Library providing high quality learning objects in the Learning Objects Repository that could easily be linked to in a WebCT unit by an academic staff member

Currently, the Library's involvement in this dimension is limited. Like the 'inreach' dimension it is principally about the Librarians communicating with learners, delivering content, providing interactive learning activities, conducting assessment, and promoting and providing access to resources for UWA learning communities, except in this case it occurs in pre-existing learning spaces created by the communities themselves rather than ones provided by the Library.

Engaging in outreach into non-library learning environments in this way presents a number of challenges:

- There are a multitude of possible online environments which UWA communities are involved in. The Library needs to identify which are the key ones so as not to over extend itself in creating and supporting these services.
- These online environments are outside of the Library's secure, stable, and controlled systems environment. Delivering content into these spaces may mean working on systems which are not as secure or stable and having to learn and use new technologies which may not be supported by the Library in a formal way.
- Users may not want to mix their social / university lives. There are a few studies which show student would prefer that “authority figures” do not enter their social space:
5.3 Providing infrastructure for learning communities to create their own online learning environments

There is currently a range of social software tools available in the market which can be used to facilitate the creation of online learning environments for communities, see for example edna Groups: Community spaces for Australian educators (http://www.groups.edna.edu.au/) or WebJunction (http://www.webjunction.org/getting-started). These range from open source solutions to commercial products. However, there is not a great deal of information available to communities as to what these tools are, how to access them, or how to use them. There is a potential role in this dimension for the Library to both provide access to the tools for the UWA community and to teach or promote their use.

If the Library were to provide infrastructure for learning communities to create their own learning environments there are a number of challenges:

- Potential cost associated with the purchase of system
- The system may be resource intensive in terms of support (including management of access and training)
- Potential licensing issues

Instead of implementing its own system, the Library could promote / provide information about tools that could facilitate learning communities to collaborate online. Examples of these tools include Google Groups (http://groups.google.com.au/) or open source wiki packages available on the web (see http://mashable.com/2007/07/16/wiki-toolbox/). As there is a crossover with academic literacy here, there may be an opportunity for the Library to work with Student Services / Graduate Research School in making this kind of information available to students.

5.4 Providing infrastructure for managing digital expression

UWA communities through their online learning environments have the potential to produce various forms of digital outputs whether in the form of traditional articles, research data sets, or other more informal modes of publication. The Library has a potential role in capturing and storing these outputs through technologies such as an institutional repository. This dimension may also involve the Library providing advocacy or tools for digital self-publishing in an open access environment.

If the Library were to provide infrastructure for managing digital expression there are a number of challenges:

- Setting up an institutional repository brings with it a number of challenges in terms of policies and practices
- Identifying what types of materials may be generated in the online environment, whether they should be captured and how they can be captured and stored
6 How should the Library proceed in engaging with online environments?

The Library’s Strategic Plan for 2008 - 2010 ‘Learning Together’ emphasises the importance of the Library developing services which can be embedded into a range of learning environments by both students and academic staff. Depending on the resources available for these initiatives, the Library may not be able to target every learning community.

In order to successfully engage with online communities in an effective and efficient way the authors feel that four components are required:

Figure 4: Components for developing engagement in the online environment

6.1 E-learning Framework

Effective engagement with online learning environments can be time-extensive and require high level technical skills. It is no longer sustainable for each subject library to develop their own e-learning initiatives and individually engage with online learning environments. In addition, this does not take advantage of the reusable and scalable advantages opportunities presented by e-learning or make the most effective use of the Learning Resources System. To ensure the Library is adequately meeting the needs of students and academic staff and obtaining the best possible return on investment for engaging with the online environment, an E-learning Framework is required.

It is important that the Framework is aligned with the strategic direction of the Library and that resources are allocated appropriately to achieve objectives.

It is recommended that the Online Services Team create the E-learning Framework in close consultation with the Reader Services Management Team.

6.2 Action plan

Once the E-learning Framework is identified it is recommended that an existing team develop an “Action Plan” of initiatives to be completed. Given the Reader Services Management Team has overall responsibility for teaching and learning and can allocate resources within subject libraries it would be logical for RSMT to take on this role. This Action Plan could be created on an annual basis.
6.3 Roles and skills
In order to achieve a strategy to ensure effective online engagement the following roles and skills are required:

- Teaching and learning coordination to ensure that the Library’s information literacy strategy is implemented effectively and consistently, and to ensure relevant staff have the necessary skills and tools to carry out work in this area.
- Educational / instructional design to input into the pedagogical framing and delivery of learning objects
- Information literacy skills to input into the objectives and content of learning objects
- The ability to liaise effectively with academic staff and students to obtain feedback on requirements and market and promote the use of initiatives
- High level technical skills in the development of tools which can be embedded in a variety of learning environments
- The ability to provide training and support as required

These roles and skills either need to be developed within existing staff resources or brought in to the Library.

Some Librarians have already attended the e-learning course, conducted by the Graduate School of Education, which covers pedagogy and technology associated with the online learning environment. The Library should also proceed with the “23 Things” training programme for Library staff. However, further action is required to achieve this important strategic direction for the Library and ensure there is a coordinated and sustainable approach to the development of e-learning initiatives.

A number of options have been identified which may achieve this:

6.3.1 Teaching and learning coordination role

6.3.1.1 The Library creates a senior level position to coordinate the implementation of the Library’s e-learning strategy, and in general to coordinate and oversee Library teaching and learning initiatives, including the implementation of the Information Literacy Strategic Directions Statement.

The Library has recently recruited two new Reader Services wide Senior Library Officer 2 positions “to provide support in the delivery of reference and information services across the Reader Services Division with a particular emphasis on online learning developments”. Currently one of these positions resides in HSS and one in Business, and although they have a Reader Services - wide focus and have worked on Library-wide initiatives, the Library lacks one position to coordinate both positions. The Teaching and Learning coordinator, if created, could take up this role.

6.3.2 Instruction Design role

6.3.2.1 The Library could expand the role of Senior Web Coordinator to provide instructional design and technical support to the information literacy experts (librarians). It would be essential that a
learning focus is maintained in this model and training in pedagogy and instructional design may be required.

6.3.2.2 The Library could create a new educational / instructional design role which also provides technical skills and support. In this model, librarians would remain “information literacy experts”, with initiatives being developed in consultation with the instructional designer. It is essential that the librarians continue to develop an understanding of e-learning pedagogy and technology to be effective in designing content. The educational / instructional designer would play a key role in assisting in this development.

In addition, this position could interact with the CATAlysts network, interacting with other instructional designers and staff interested in e-learning around the University. It could also take on the Teaching and Learning Coordination role.

6.3.2.3 The Library recently recruited a Librarian at the Medical & Dental Library with an instructional design focus, however there is nothing in PD about instructional design. The Library could look at further developing this position to take on this additional role. It is not clear whether there would be scope in the current position for this to be possible.

6.3.2.4 The Library explore opportunities for how other services external to the Library might be used to support the instructional design needs of the Library

6.4 E-learning tools
The Library already has access to a number of e-learning tools. These include:
- WebCT
- Hive
- Dreamweaver
- Respondus
- StudyMate
- Lectopia
- Viewlet Builder
- Raptivity

It may also be necessary to obtain access to further tools to provide an “e-learning toolkit” – a range of tools to facilitate engagement with the online environment.

6.5 Ensuring flexibility in the model
It is important to ensure that there is some flexibility outside of the annual strategy described above. One way of achieving this would be the implementation of a pathway for developing services to engage in the online environment outside of the normal process. In order to implement effective and sustainable e-learning initiatives outside of the annual e-learning planning cycle it may be necessary to adopt a pathway for the development of initiatives (see Appendix).
7 Recommendations

7.1 The Online Services Team develops an E-learning Framework in consultation with the Reader Services Management Team (RSMT), with reference to the four dimensions of online engagement outlined in this document.

7.2 RSMT in consultation with the Library identifies actions that fit within the E-learning Framework to develop an annual “Action Plan”

7.3 The Library appoints a position to lead teaching and learning initiatives in the Library. The two Senior Library Officers (Reader Services) report to this position. These staff form an e-learning team which has responsibility for:
   - coordinating the implementation of the Information Literacy Strategic Directions Statement and the E-learning Plan,
   - training and development of librarians, and
   - developing specifications for e-learning tools
   - maintenance of the e-learning toolkit

7.4 The Library explores further how instructional design expertise might be bought into the Library

7.5 The Library proceeds with the “23 Things” training programme for Library staff (2008 Operational Plan)

7.6 Specifications are developed for e-learning tools (hardware and software) required to implement the E-learning Plan

8 References

Arfield, J, Hammond, G & Spadaccini, N 2008, Discussion paper and draft policy on Blended Learning, Teaching and Learning Committee, University of Western Australia.


University of Western Australia Library 2008, Learning Together: Library Strategic Plan 2008 - 2010, Perth, Western Australia.
Appendix – Pathway for the development of e-learning initiatives

In developing the new e-learning proposal a series of questions should be considered:

- What are the characteristics of the learning community?
- What are the learning objectives of this proposal?
  What is the intended mix of information and engagement (ie. discussion)?
- What is the extent and nature of contact between students and the Library in this community?
- How much ongoing Library staff involvement is required to sustain / maintain what is being proposed?
- What impact will it have on staff / section in terms of workload?
- Is this proposal replacing something else or is it a new initiative?
- Should this just be a local (ie. section) or is there a use at a broader library-wide level? (ie. could this be of interest to a larger community of users?)
- Is there going to be assessment?
- How will this proposal be evaluated?
- How is this proposal going to be delivered? ie. on Library server using current software, on University server using current software (WebCT) or on the web?
- How is this resource going to be accessed ie. from where does it fit in with other initiatives / resources?