

## **The Electronic Information Literacy Cocktail: a mix of online training, information, and support using multiple technologies.**

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### **Abstract**

Over the past two years Deakin University Library has introduced new online technologies and re-designed existing online support material. Our aim has been to develop a more interactive approach to how we provide information literacy training and support in the electronic environment. A mix of complementary training and support services has been introduced. A synchronous web conferencing application, Elluminate, has been used to deliver training, and RSS feeds in a portal environment have provided ready access to new journal contents and news services. In addition, existing online tutorials have been redesigned to encourage active participation from learners.

Diversity is the key to meeting student needs and a choice of technologies provides students with the best learning and informational outcomes for the time, location, and technical infrastructure environments in which they work. This paper will present an analysis of student satisfaction with, and usage of the various initiatives.

### **Background - History of Deakin Library services at a glance**

Deakin University Library supports 32,374 individual students (21,110 on campus and 11,264 off campus) over 5 campuses in the Melbourne, Geelong and Warrnambool regions of Victoria.

Over many years, Deakin University Library has been leading the way nationally and internationally in its provision of off-campus or distance education library services. This has been well-summarised in the literature Carty (1991), McKnight (1998), Slade and Kascus (1998), Cavanagh (2001) and Zeegers (2002). Its achievements in this area were recognised in November 2005, when the Library was awarded an Australian Award for University Teaching for *Provision of Support Services that Assist Student Learning—Library Off-Campus Services*:

*'If this works for off-campus students, then it will work for all students'.*

Students who choose a course with an off-campus mode of study have needs and challenges in using libraries that are located a considerable distance from their home. Increasingly, students enrolled in on-campus courses have work and family commitments that limit the time that they can be present at a

campus.. In focusing on meeting these needs, the Library provides a comprehensive blend of information resources (print and electronic) and services that allow students to overcome some of the difficulties of distance and time. That same blend is applied to the information literacy training and support that the Library offers to its students. Providing students with choices – for requesting and accessing information, for support materials and training, and in information and communication technologies – has been essential to the success of the Library and the students it supports. Barriers to library use have been overcome wherever possible.

In the past, Deakin University has made a reputation for excellence in the provision of print based distance education, and the library also supported its students within that paradigm. However, over the past 15 years, the growing availability of electronic resources, the Internet, and exponential advances in the technology supporting them, has seen a fundamental shift in the way libraries operate, and the types of services and resources offered to students.

### **Current environment**

Whether enrolled for on campus or off campus study, Deakin students are all required to undertake online units and they require access to materials, services and resources that can be delivered to them at a time and place that best suits their needs.

Teaching and learning spaces are being remodelled through technological developments and enhancements (Al-Mahmood, Goodacre, Applebee, 2006). We are working in an environment characterised by newer and better communication technologies, and reconceptualised physical library spaces that aim to better meet a new generation of learners' expectations and needs.

In recent years the Library has embraced new technologies that have been seen as offering effective and economical options and choices to our students. These technologies represent choices – how learners' want to use the technology; how it fits with their lifestyles; how it matches their learning styles. Some of these developments are evaluated in this paper

### **RSS feeds within the Deakin University Portal**

Several years ago, Deakin University introduced an internal portal environment as a means of presenting targeted information to its students and staff. The portal environment allows individuals to view information and resources provided by the university that are specific to their own personal situation and status within the institution. It additionally allows an individual to customise their view of that information, and in some instances select the content most useful or interesting to them.

Because the portal is a strategic and important initiative of the University, the Library has been conscious of the need to both incorporate its services and content, and to make use of some technical advantages offered by the portal environment.

The portal developers originally launched a “News Channel” that incorporated RSS feeds from some popular media outlets like the ABC, BBC, and major Australian newspaper publishers. It became evident that the Library could offer an enhanced range of resources by making RSS feeds of the latest journal issues available in the Portal as well. These were launched in late 2005 as part of the “Library Channel” on the Portal with the heading “My Online Journals”.

The RSS feeds include a range of high use journal tiles from online publishers including; Oxford University Press, Blackwell Synergy, Cambridge Journals Online, and CSIRO Publishing, along with feeds to news and general interest publications. Individual users may select from 119 titles currently available within the Library Channel according to their interests. Their selection is displayed in their view of the Portal. Other titles are effectively turned off until a user elects to review their selections.

As of December 2006, the top fifteen RSS feeds (those with the most Portal subscribers) were:

- ABC News - Top stories
- The Australian - Higher Education
- National Geographic News
- BRW
- New Scientist
- The Economist
- Nature
- Review of International Studies
- ELT Journal
- Nature
- BBC World News
- Community Development Journal
- BMJ.com - British Medical Journal Headlines
- Health Education Research
- IEEE Communications Magazine

The titles represent a mix of news, popular and academic resources. These 15 RSS feed titles total 2,779 (or 46%) of the total 6,045 individual feed subscriptions to the 119 titles available in the Portal as of December 2006. This indicates that people have actively chosen to add a specific RSS feed title to their individual portal view on 6,045 occasions.

The provision of RSS feeds of journal contents pages exemplifies the Library’s commitment to providing flexible information support to its users. Journal alerting services via email have been available to library users for some years, and the Library has maintained a web page supporting and promoting this service. However, students and researchers have differing preferences and approaches to their work in an online environment. Regular email notification of the availability of a new table of contents does not suit everyone. Some researchers prefer to make a portal or web browser interface

their default working environment. Automatically updated RSS feeds sit very well in this environment, and allow an immediacy of desktop access not achieved so readily with an email alert. For our library users, the choice is available, and exercised depending on their need and preference.

The period from October 2006 to December 2006 saw a 13.35% increase in the total number of RSS feed subscriptions within the Portal, from 5,333 to 6,045. A “Did you know” banner was used within the Portal during November and December to advertise “My online journals”, and this contributed to increased subscriptions outside of the semester peak demand.

An advantage of offering RSS feeds within the portal environment is the ability to provide automatic proxy authentication to students wishing to view the full text content identified in the feed when they are not on campus. While on campus and within the Deakin University internet domain, IP range authentication permits users to readily access online resources. However, individuals who independently set up an email alert or an RSS feed within RSS aggregator software will usually find that the full text content within a licensed title is unavailable to them if they are not on campus. User frustration is the result.

The University portal programmers have developed scripts to apply the Library’s EZproxy authentication to the RSS feed links displayed in the portal. Once a student has logged in to the Portal, any link to a full text resource that is identified in an RSS feed will be available to them – regardless of their location. This enhancement removes barriers to information, and avoids the need for an additional FAQ or user training on ‘what to do when you can’t follow a RSS based link to an article’.

The initiative to offer the RSS feeds of the latest news and journal issues available in the Portal environment has proven popular. Students need only select the titles they are interested in, without the need to know anything about RSS feed technology, aggregator software, or publisher specific authentications.

### **Synchronous communication supporting e learning**

New and progressively more sophisticated applications of communication technology are continuously emerging. They provide opportunities for educators to explore innovative ways to deliver curriculum and engage a new generation of learners in the learning process.

Asynchronous methods of communication are increasingly giving way to synchronous or real-time applications that are being used to enhance peer-to-peer and teacher-learner dialogue, and to foster collaborative learning. These applications also have the capability to flexibly deliver real-time training and assistance directly to learners.

Synchronous communication isn’t a new concept. Direct communication via the telephone, chat and web conferencing are well known and recognised

examples. However, there are now more sophisticated or "... Rolls Royce equivalents of the synchronous conferencing world – tools like Elluminate, HorizonLive, and Centra – with superb two way audio, the ability to push slides and URLs, share applications, poll participants in instant quizzes and more, all over 56k connections. If you have a broadband connection you can throw video into the mix" (Coughlan, M. 2004, para. 2).

### **eLive used to deliver real-time interactive training and support**

In 2005 Deakin University piloted Elluminate, referred to within the University as eLive, to provide synchronous content to existing courses delivered through WebCT Vista, and to facilitate cross-campus teaching across our 5 campuses. The Library participated in the pilot to test the potential of eLive to provide real-time interactive training and support for off-campus students, and to deliver professional development to faculty staff. A key aim was to experiment with the application sharing facility of the software to assess its value in delivering training and support to the student population.

A review of the pilot indicated that eLive was technically robust and user-friendly, the essential underlying Java Webstart software was easily accessible, and the sharing of applications between participants was particularly suited to helping students learn about accessing and using information resources.

Academics began to use eLive more widely in 2006 and the Library also expanded its use of the application. Existing programs of information skills student support and training were easily modified and delivered using eLive. It quickly became possible for liaison librarians and other Library staff to conduct, or using eLive terminology, moderate, small group student training that reached Deakin students based locally, interstate and all around the globe.

eLive as a delivery platform has been incorporated into the following programs:

1. Library run orientation or training program/s open to students irrespective of discipline and mode of study. The session content in 2006 focused primarily on Library orientation, accessing and using online information resources and on the use of EndNote. Approx. 180 students booked in for sessions. 50% participated.
2. Unit/course based activity organised by academics. Sessions on specific online resources, such as databases or EndNote, were conducted in 2006 at the request of faculty staff and for a range of units in Business and Law, and Arts disciplines.
3. Library internal cross-campus staff development programs and meetings. Regular staff development activities which aimed to provide the Library's liaison librarians with a cross-campus forum for discussion and training were conducted throughout 2006

In addition, the Library managed a collaborative internal University funded pilot project to investigate the benefits of providing training to geographically isolated Australian-based Deakin postgraduate students. The project supported University strategies to improve retention rates for this at-risk group.

In August 2006 61 postgraduate students in the Faculty of Arts and the Faculty of Business and Law (comprising the highest number of geographically isolated students), were invited to participate in a 4 week program designed to improve students' academic and study skills; enhance their library research techniques; and better inform them about their faculty and their career options.

While participation in the program was disappointingly low with 9 student registrations, the project team noted several factors that had adversely impacted upon student involvement. The main criteria defining the target group was isolated students, but it may have been of more value to target students new to the University and to run the program in semester one. The timing of the funding application precluded a semester one start time. Therefore, the program will be re-run in Semester One, 2007 and will be open to the broader group of isolated students studying at all year levels. The program will only target new students enrolled in that semester.

### **eLive moderators' reflections and evaluation of program outcomes**

As part of the process of exploring innovative ways to deliver real-time training, we reflected upon our own instructional experiences as session moderators and evaluated the students' learning experiences.

Short surveys were emailed to a random group of participants. The surveys sought to gauge satisfaction with the program and obtain students' self assessment of their achievement of learning outcomes. Learning outcomes were not formally tested or measured as part of the programs.

#### **1. Student email survey**

21 survey responses were received. Feedback was both positive and enthusiastic. Students noted the benefit of using the application to deliver training to their desktop at a time and location that suited their needs. Their comments highlighted the value of the technology for collaborative learning, and for immediate and personalized interaction with other students, with librarians and with their lecturers.

*"Thank you for the opportunity – I was excited to connect and talk to other people – I really hope that more subjects become structured this way because it provides another medium for students to engage and learn together."*

All but one survey respondent agreed that as a result of participating in a training program their knowledge and understanding of University services, resources and facilities had improved. All agreed that they:

- had greater confidence in accessing online information resources
- could locate full-text journal or newspaper articles
- would take part in other Deakin University training programs in the future using eLive.

Those who participated expressed few concerns about mastering the technology and, as indicated by the following student comment, most found sessions enjoyable and rewarding

*“ ... It is a most useful ... stimulating and fun option. It is convenient, and Deakin should look to make use of the technology that will allow students (esp time constrained and off campus students) to stay connected and informed.”*

## 2. Moderators' observations and reflection

Moderators, who were primarily liaison librarians, were a little surprised but excited by the strong positive participant response, both during and after sessions. Despite concern over low participation rates with an average of only half of the people who book into an eLive session actually logging in on the day, they were buoyed by feedback from those who did connect in and are keen to employ strategies to improve participation in the future.

Participants required little training in the use of the application, but some technical problems did occur to prevent students connecting in for their booked session. Firewall issues were commonly reported as a problem, and slow download of required Java Webstart software another. These and other technical issues were referred to the University IT division for investigation.

In 2007 eLive will become more widely used within the University and more fully integrated into DSO (Deakin Studies Online), the university-wide WebCT Vista based learning management system. Students' familiarity with the application and their confidence in communicating via online conferencing systems will no doubt increase. Students will be required to use DSO and will be accessing eLive through this application. As they will find it essential to overcome any access or other technical issues involving their day-to-day use of DSO, they should be more familiar with the problems that may occur in the use of eLive.

Students participation in unit or course based eLive activities is also likely to also increase, providing greater opportunities for the Library to integrate information skills training into students' key online learning space.

In 2007 liaison librarians are keen to investigate particular eLive features that enable more active participation from students during the sessions. Effective use of the technology and equipment, such as encouraging the use of microphones and allowing shared use of applications between moderator and learner will encourage greater communication between learners, eventually enabling them to lead or direct session content.

### **Tutorial development and re-development**

As part of the mix of information assistance and support provided by libraries, online tutorials are an accepted and expected service

In 2006 in partnership with UNILINC, vendor of Web-ezy shell software used to deliver interactive web based information skills programs, we undertook a major revision and re-development of our existing tutorial, *Smart Searcher*. *Smart Searcher* is a Web-ezy product and had been in use at Deakin since 2000. Although the modules had been regularly up-dated, we had not undertaken a major review of content since the program's introduction. The aims of the re-development were to provide content that would enable learners to gain greater confidence and skills in locating quality e-resources and evaluating information, and also to increase their engagement in the tutorial by increasing the degree of active learning incorporated in each module.

This re-development was made financially possible with a proportion of funds received as part of an institutional Australian Award for University Teaching (now Carrick Awards) that the Library received in 2005.

At the time of writing this paper detailed tutorial usage data was not available. Although the University had contracted an external company to pre-process web logs and to derive reports from the data, Deakin firewall and other network issues delayed its full implementation until December 2006. It is anticipated that regular standard reports can be produced monthly for the Library website and will also provide analyses on demand for different parts of our website, and shed more light on user website behaviour.

The AAUT funds also supported the internal development of *Smart Researcher*, an associated research focussed tutorial designed to facilitate information literacy training for researchers and higher degree students. The Library was granted permission by the University of Queensland Library to re-develop their information skills course, Researchers and Postgraduates Information Discovery (RAPID), to create a Deakin-specific version. The Library re-developed RAPID into a web-based set of 6 learning modules.

In Semester One, 2007 *Smart Researcher* will form the basis of a collaborative partnership involving academic staff from the University's School of Psychology and librarians in the development and integration of a program

of information skills training into the curriculum of professional doctorate students.

## **Summary and conclusion**

This paper has focussed on Deakin University Library's delivery of services and student training via RSS feeds of journal contents, online synchronous conferencing applications and online learning materials and tutorials. These initiatives have been positively received and initial assessment and evaluation of RSS feeds and synchronous conferencing indicates a high level of user satisfaction.

RSS feeds are a technology which offer future potential for libraries. As popular web browsers provide for the viewing of RSS feeds, technical difficulties will diminish and public awareness and demand will grow. These developments are still likely to need library documentation and support on RSS within the web browser environment. Deakin University Library will extend the RSS titles it offers within the University Portal, and will investigate the potential of using RSS feeds to alert users to new acquisitions and subscriptions.

Student reported technical problems and lower than anticipated participation for eLive delivered student training will be addressed in 2007. As eLive is integrated into Deakin Studies Online and its use is mainstreamed throughout Deakin University, students' familiarity and ease with the application will increase. The Library will continue to provide training delivered via eLive and will work towards tying that training more fully into the academic curriculum.

The Library has been carefully tailoring services to meet students needs since the establishment of the University in 1977. Since that time, it has earned an international reputation for the innovative and responsive services it offers.

Today's teaching and learning environment and student needs have changed considerably since those early days. Now whether enrolled in on campus or off campus mode, new generation students are looking for choice and flexibility. Ensuring that students have choices – for when, where and how they access information, services, support and training via the technology that suits their needs best – is essential to meeting learners' needs in an evolving teaching and learning world.

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