

# Usability testing: a client-centred approach to innovation

Kat Clancy  
Library Web Developer  
Deakin University  
[kat.clancy@deakin.edu.au](mailto:kat.clancy@deakin.edu.au)

Michelle Watson  
Web Cataloguing Librarian  
Deakin University  
[michelle.watson@deakin.edu.au](mailto:michelle.watson@deakin.edu.au)

**Abstract:**

*Systematic usability testing of the library website was unheard of at Deakin University Library three years ago. However, over the last two years, a large scale usability testing program has evolved and various methodologies have been trialled and tested by the team. This paper will discuss the methodologies used by the team, and the changes that were made to the Library's search interfaces as a result of the studies. The paper will provide useful insights on what we did right, and on what we need to do differently in future usability studies.*

## Introduction

Deakin University's mission statement requires services to be "relevant, innovative and responsive" (Deakin University, 2009). In early 2007, Deakin University Library took on this challenge when it responded to client needs and redeveloped its website. In 2008, the Library started regular web usability studies and as a result, innovative products were introduced to the Library suite and were well received by clients. In 2009, the Library undertook a further round of testing to explore how well the changes introduced were performing. This paper will outline the background, methodology and lessons learned from the most recent web usability studies undertaken at Deakin University Library.

## Background

Well known web usability expert Steve Krug believes the first law of usability is "don't make me think" (Krug, p11, 2006). When visiting a website, users should know immediately what to do and where to look. They should especially know the objective of the website; in other words, it should be self-explanatory. If this is not the case, then the website fails. One way to test this law is to run usability studies on websites. Commonly, a usability study consists of sitting down with users of the website and getting them to undertake a set of tasks. Success of the website is measured by how successfully participants complete each task.

Conducting usability studies on library websites is not a frequent practice; or at least, not many usability studies by libraries are made public for the world to see. The University of Michigan has a Usability Group that runs regular, small studies on new web applications and designs of their website and gateway. The information found on their usability web page is very informative and links to other university libraries undertaking usability studies (University of Michigan Library, 2008). However, only eight other university libraries are listed. Are there more usability studies being undertaken or do libraries not want to share the problems of their websites with everyone else?

It takes time, organisation, and patience to conduct usability tests, and if run by professional organisations such an exercise can cost a lot of money that libraries do not have. However, in his book 'Don't make me think', Krug outlines a cheaper, less time consuming way of running web usability sessions that can be adapted to meet the average library's needs (Krug, 2006).

For libraries, one of the biggest challenges is working out how to conduct web usability sessions for their website, because unlike other websites, the major objective is to conduct research or find specific information on a topic. For university libraries in particular, the challenge is to provide clear pathways to sources of information for disparate user groups, ranging from undergraduate students who need quick access to unit related material, basic article searching and specific texts, through to academic and research staff, whose research needs are often highly specialised. What tasks should be used to best assess the success of a library website? What tasks should you create when such disparate stakeholders are involved? Do you create general tasks or should the tasks be tailored to reflect the

research habits of the stakeholder involved in the session? These questions have been of major concern when approaching the design of our usability tests.

## **First usability study: October-November 2008**

Our first web usability study compared three different layouts and designs of the Library catalogue. The aim was to find out which was the most successful for the majority of our clients. The layouts included the current catalogue, a new design on a development server, and a new product, Encore, which offers keyword-only searching with results in a faceted display.

The entire study was coordinated by two library staff members (the 'usability team' and authors of this paper): the Library's website developer, who acted as facilitator for most sessions and as well as having a degree in information technology with a particular strength in web accessibility had attended some web usability workshops and had a sound knowledge of the testing process; and the librarian responsible for the development of the public interfaces to the Library catalogue, who assisted in the creation of tasks and note taking. Both staff members collaborated in the analysis of data and the presentation of recommendations to library management. They were also the staff members responsible for implementing changes to the library website and search interfaces. Prior to the usability study, these staff members had relied on feedback from liaison librarians and other client services staff to obtain information about user behaviour and problems with the website and search interfaces. Whilst this had proven to be of tremendous use in the past, the usability team was keen to obtain information from various client groups first hand, and in a controlled environment.

Initially, three stakeholder groups were identified: undergraduate students, postgraduate students and academic staff. Later, international students were added as a separate group, due to language difficulties and observed differences in relation to information seeking behaviour. The usability study was conducted during Deakin University's Summer Semester. Unfortunately, this limited the pool of potential participants for the study, due to most summer units being undertaken off campus. Steve Krug (2006) believes that when a number of different stakeholder groups are involved, you will need to test at least three from each stakeholder group for each round of usability testing. In our case, we needed to test at least three academic staff members, three undergraduate students and three postgraduate students for each layout being studied. Later this evolved to include three international students for each layout. Using Krug's theory, a total of thirty-six participants was required.

To recruit potential candidates, a news article was placed on the Library homepage seeking expressions of interest, and liaison librarians were asked to nominate any academic staff and postgraduate and undergraduate students they thought would be interested in participating. A twenty dollar book voucher was offered to each participant as an incentive and thank you for their time. Significant administration was required to ensure we had a representative sample that covered various disciplines, campuses, genders and age groups, and many emails were sent between the usability group and potential candidates to negotiate meeting times and book venues. The team realised that administrative support would have eased this

process, and as a result later usability testing included the use of other staff in this role.

Configuring the tasks was one of the biggest challenges. The team found examples of questions asked at other libraries and adapted them to Deakin University Library's website, (Wegener, D, 2003) collaborating with a highly experienced liaison librarian to ensure they were representative of the typical tasks performed by library users. When possible the team tried to use the same questions across each user group; this made it easier to compare user actions and behaviour when analysing the data. Questions that were irrelevant to a particular user group were eliminated; for example, postgraduate students were not asked to find unit material. After a sample set of questions was devised, the team asked casual library staff to carry out the tasks in a series of test run-throughs. This proved invaluable, as it helped the team refine some of the questions and make them easier for the participant to understand. Following this stage, the team ventured out and started usability sessions with students and academic staff.

The 2008 usability study was conducted at all Deakin University campuses except Warrnambool. However, due to the time of year and lack of on-campus students at every campus, a majority of participants were sourced from the Burwood campus. Many of the students recruited were international students studying Commerce. Each usability session was held in a closed room, with a facilitator, note taker and participant present. In some sessions, a liaison librarian attended as an observer. None of the facilitator, note-taker, liaison librarians or participants had ever participated or been present during a usability session.

As part of the recruitment process, participants were given a plain language statement, which explained in some detail the purpose of the session, their rights and what they needed to do should they decide to withdraw from the project. Participants were required to bring along the signed statement, which gave the team permission to take notes and share the results of the study in a conference paper. It also allowed the team to record the sessions, although this was not undertaken until the second round of usability testing in 2009.

At the start of each session, the facilitator informed the participant about the purpose of the session and what it would entail. The participant was encouraged to verbalise their thought processes – to talk about what section of the screen they were looking at, when they were confused, or when they were unsure about something. The participant was asked to read out loud directions printed on a card to get them in the 'thinking out loud' mood. This routine seemed to relax each participant and was similar to Krug's (2006) method. The facilitator reminded each participant to act as if they were completing the task in a normal situation; in other words, act as if Library staff were not present watching every click. Some participants found this hard, and although they were assured at the start of each session that it was the website that was being tested, not them, they would try longer than usual to try to complete a task. Initially the intention was to time each task. However, this was abandoned when it became apparent that it was difficult to record accurate timings, as well as facilitate or take notes.

The facilitator and note-taker initially found it very difficult to avoid behaviour or replies to questions that would lead participants. One of the major lessons learned from the Nielsen Norman Group workshop was not to lead the participants. If a participant asks a question, the facilitator can only reply with the stock standard "What do you think?". However, it is hard to extract information out of a participant if they do not 'think out loud'. Probing, without leading the participant, is a skill learned through experience. It was difficult to refrain from taking over and showing the participant how to do the task. Often undergraduate students did not understand that a journal article is found in a journal, which is found in a database. Many students would try to find the article by searching the catalogue, instead of finding the journal and then the database the journal is found in. It was very frustrating to sit, refrain from interrupting and watch a student scramble to find the answer.

## **Second usability study: August-September 2009**

In February 2009, after extensive usability testing of the three layouts and designs of the catalogue, the Library chose to implement the development version of the library catalogue, as well as introduce a number of new features to the 'Search for' section on the Library home page. The most significant change was the introduction of Encore as an alternative version of the catalogue, and making it the default keyword search. The decision to introduce a simple, keyword-only search option was based on the results of the usability study, which revealed that undergraduate students in particular struggled with aspects of the traditional catalogue, including incorrect use of the author and subject indexes, and generally found the range of options and choices overwhelming. It was thought that Encore (now re-named Quick Search) would meet the needs of this user group, whilst the traditional catalogue (now re-named Classic Catalogue) would continue to be favoured by academics and postgraduate students. The other significant change to the 'Search for' section was a link to Easy Article Search, the Library's federated search tool. It was hoped that the introduction of a federated search would assist in the discovery of journal articles, particularly for undergraduates.

The second usability study was intended to be a lot broader than that of the previous year. Instead of focusing on individual search interfaces, participants were asked to complete a series of everyday information gathering tasks starting from the Library homepage. The aim was to find out how well the various search gateways 'hung together' on the Library home page. What pathways were clients choosing when using the Library home page as their starting point? Was it clear or confusing to have so many gateways? Did the changes help clients find the resources and information they need? And had the usability issues identified in earlier testing been addressed?

The testing also included a section aimed at determining how well clients were finding basic information on the Library home page, such as opening hours and how many items they could borrow. Tasks were devised to test how well clients could locate the most commonly sought information. In particular, the team was concerned to test the visibility of links in the Quick Links section, navigation within the Deakin web environment, and navigation within the Library website. The team was keen to observe the pathways and connections made when the user, having arrived at a particular destination, attempted to navigate to the next task.

In addition to task-based testing, the team added another dimension to this usability study: two-hour observational testing of researchers whilst they conducted their research. This type of unobtrusive testing involves silently viewing and intensive manual note taking, selected users in a setting of their choice. It was the first time the Library would observe first hand the research habits and information-gathering techniques of this key stakeholder group in their home environment, rather than a controlled test environment, and it was hoped that the results would enrich our understanding of how our users go about finding research information.

Half way through the second round of usability testing, the facilitator was given access to specialist software which enabled the recording of sessions using Camtasia Studio for the Mac. This software allowed the participant to be filmed while simultaneously recording what happened on the screen. The recording allowed the facilitators to critically analyse their role in the session and make improvements, and as well allowed other staff members to watch at a later time. The recordings provided evidence and support for proposed changes to the website and search interfaces. Recording proved a valuable tool in many different ways, and every usability session was recorded once the software was available.

The same two staff members undertook similar roles to the first study. However, this time the team was joined by an administrative assistant, who took on the job of liaising with participants to coordinate times and places. The stakeholder groups remained undergraduate students, postgraduate students, academic staff and international students. Because the study involved access from the Library homepage, the number of participants required from each user group was increased to five to ensure 85% of issues were identified

## Findings

One of the main aims of the usability study was to determine how well users could navigate from the various pathways provided on the Library home page. Although the three divisions were clear and logical to the library staff who designed them, and accurately reflect the three main categories of material sought by the average user, there was concern that the home page was cluttered, with users forced to negotiate through a certain amount of 'noise' in order to find the bits relevant to them. Unit material searching is useful for the average undergraduate but has no relevance to postgraduate researchers. Is a databases link a help or hindrance to undergraduates whose article searching needs could be satisfied by a federated search solution? And are specific links to e-journals and e-books helpful to one user group but distracting for others? Is it possible to design a gateway that services the needs of all of our stakeholder groups?

Helping a variety of client cohorts navigate seamlessly and intuitively to relevant resources is a complex challenge, but one thing was certain: instead of one clear pathway to resources, the user was being forced to negotiate a total number of eleven options, including three search boxes, seven separate links to specific types of material, and one drop down menu. The Library home page by any measure appears to have broken Krug's fundamental law: we make our clients think, and as a result, access to some categories of material was not as seamless as we would have liked.

In answer to this, the notable finding of this round of usability testing was the importance of providing consistent navigation within the Library website. Despite offering a number of gateways to various types of material and to various interfaces, almost all users could successfully navigate well within the Deakin template. Most users demonstrated a strong sense of 'home' by consistently navigating back to the Library home page to begin the next task. Usually the client selected 'Library home', or alternatively, used the browser back button or the LibX add-on to navigate back to the home page. Search interfaces that did not offer this type of consistent navigation were quickly identified, including Quick Search, which not only has a different look and feel to the Deakin style, but has the home link on the opposite corner of the screen.

The study revealed that changes introduced earlier in the year had indeed successfully addressed a number of usability issues. As the first search box listed on the Library home page, Quick Search had become a key gateway to resources. However, although the Library received very few complaints from clients when the interface was introduced in February 2009 (always a good sign that the introduction was seamless and well received), we were keen to get some real feedback on how clients were interacting with the interface and what the usability issues were. These issues could then be forwarded onto the vendor, since at January 2009, the Library had no control over the interface, and is reliant on the vendor for making changes.

It was observed that Quick Search handled author searching particularly well, regardless of whether or not the author's name was entered directly or last name first. One client used the left hand facet to narrow to author. A couple of clients took advantage of the 'Did you mean?' functionality within Quick Search, which offers intelligent alternative suggestions if it thinks a spelling mistake was made. Usability testing also showed that, as expected, Quick Search had become the default search for most users, particularly when they were looking for books and journal titles. When asked to locate a specific journal, to find a book they have read before, or to find a book written by a certain author, Quick Search was the search of choice.

A number of issues were identified, however. The most consistent related to the use of a 'toggle' featured in the browse display of online resources. Instead of selecting the link to the e-journal or e-book, every user tested selected the text labelled 'Available online'. This would then either display/or not display (toggle) the available databases that could be used to access the journal. Although the user usually realised their mistake and eventually selected the correct link, this was noted as an irritant and an impediment to seamless access to the resource.

Continued next page

**Example 1: Journal of sport management in browse display, with the toggle open. Clients consistently selected the 'Available online' link to access the journal, instead of clicking on the date, which would have linked them to the journal.**

The screenshot shows a search results page with a yellow header bar containing the text "Searched: journal of sport management (1-5 of 5)". Below the header, there are sorting options: "Sorted by Relevance | Title | Date". A progress indicator shows four yellow squares, with the first two filled, and the text "(1 - 2) Most Relevant". The main result is for "Journal of sport management" with a date range "c1987-Explore". A toggle for "Available Online" is open, showing a link to "SPORTDiscus with Full Text" dated "01 Jan. 1987-". Below this, there are three action buttons: "Add to cart" (with a shopping cart icon), "More info" (with a checkmark icon), and "Request it" (with a checkmark icon).

It was also observed that users tended to focus on the middle section of the screen and generally avoid the left and right facets. At a search results screen one participant declared "Where am I? Amazon or something?"; when asked at the end of usability testing why she thought she was in Amazon, she said it was because of the use of colour and the presence of an icon labelled 'Add to Cart'. Interestingly, the testing also revealed that in three cases, the results indicated the user had located the item in Quick Search, but not seeing the item in the results had quickly navigated away. The reasons for this are unclear, and the issues will be addressed in a more focussed way in the next round of usability testing.

In addition to highlighting a number of issues, usability testing has demonstrated that more work needs to be done to promote Quick Search as a discovery tool that can be used to find not only traditional types of material such as books and videos but journal articles as well. It was observed that no-one used Quick Search to find articles, and when asked to find books written by a certain author, one user even decided to navigate away from Quick Search and completed an Author search in the Classic Catalogue instead. Clients also need to understand that a keyword search, combined with a faceted browse, can replace index-based searching such as author, ISBN and title. This is something that the Library will focus on addressing during 2010.

With regard to the Classic Catalogue interface, usability testing vindicated the decision to move away from the previous version of the catalogue, which used the vendor-prescribed layout of menus and look and feel, and to implement the development version, which completely mimicked the Deakin University template system. By adopting the same 'header' as the Library website, and offering links down the left hand side, users were presented with a consistent navigation they were used to and comfortable with; for example, they could rely on the link to Library home being in the top left hand corner all the time.

Although Quick Search had been adopted by many users, it was observed that Classic Catalogue remained popular, with a good proportion of 'loyal' clients preferring to use this as their primary interface, and making good use of the additional functionality offered in the new version of the catalogue. These included easy navigation to various types of material via the left hand navigation; noticing and reading the prompt in the main menu to "Search for books and journals BUT NOT articles", and easily spotting the new My Library login button (now based on the same button used on the Library home page). It was also noted that clients were making effective use of the Databases page, including the A-Z browse, subject based searching, and searching by database name, to successfully navigate to relevant databases.

However, despite these positives, the inherent problems of the Classic Catalogue interface, and many that were previously identified in the first round of usability testing, remained prominent. In total, Classic Catalogue scored the highest number of usability issues. The most common problem occurred when participants attempted to use the search functionality available on search result screens. A number of participants were tripped up after they had searched for a specific database, and were then asked to find a journal. Most failed to change the index in the drop down menu. When confronted with irrelevant search results, one simply gave up, while another struggled on for some time and then finally spotted the Journals link from the left hand navigation.

**Example 2: Use of incorrect index**

Num	Mark	RESOURCE NAMES (1-24 of 24)	Year	Entries Found
1	<input type="checkbox"/>	<a href="#">Factiva</a> : <a href="#">Factiva</a> ; <a href="#">Connect</a>		1
2	<input type="checkbox"/>	<a href="#">Factiva Subset</a> : <a href="#">Factiva subset</a> ; <a href="#">Connect</a>		1
3	<input type="checkbox"/>	<a href="#">Fairfax</a> : <a href="#">Fairfax</a> ; <a href="#">Connect</a>		1

Usability testing also revealed that a number of participants were still occasionally using the Classic Catalogue to search for specific article titles or authors, although it was observed this was often done in a last ditch desperate attempt to find a specific article, after all else failed.

Problems with the e-journal search and other third party software not under the Library's control were also identified. Watching a client attempt to navigate to the 'Journal of Sport Management' using the A-Z browse in the e-journals search interface was painful, as the multiple Jou – Jou options are not helpful. The implementation of spell check functionality would also avoid minutes of fruitless searching when the client inadvertently includes a typo in the search.

### Example 3: Unhelpful browse in e-journals screen

---

[0-9](#) [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [Other](#)

Title begins with  Search

-- Please select a subject category --  Search

---

4596 records retrieved for the search: A-Z List "J"

[Skip navigation links](#)  
Search results 301 - 400 of 4596  
(201-300) [Prev](#) [J. - Jap](#) [Jap - JIL](#) [Jin - Jou](#) **Jou - Jou** [Jou - Jou](#) [Jou - Jou](#) [Jou - Jou](#) [Jou - Jou](#) [Jou - Jou](#) [Jou - Jou](#) [Jou - Jou](#) [Next](#) (401-500)

**Journal for juvenile justice services** ([1932-5789](#))  
from 01/03/2004 to present in [Academic search premier](#)

**Journal for nature conservation** ([1617-1381](#))  
from 2002 to present in [Freedom Collection](#)

**Journal for nurse practitioners** ([1555-4155](#))  
from 1995 to present in [Freedom Collection](#)

**Journal for nurses in staff development** ([1098-7886](#))  
from 01/05/1998 to 31/12/1999 in [Lippincott William & Wilkins Journal Legacy Archive](#)

**Journal for Party and Administrative Cadres** ([1672-2426](#))  
from 1994 to present in [China Academic Journals - Politics/Military Affairs/Law \(Series G\) - English](#)

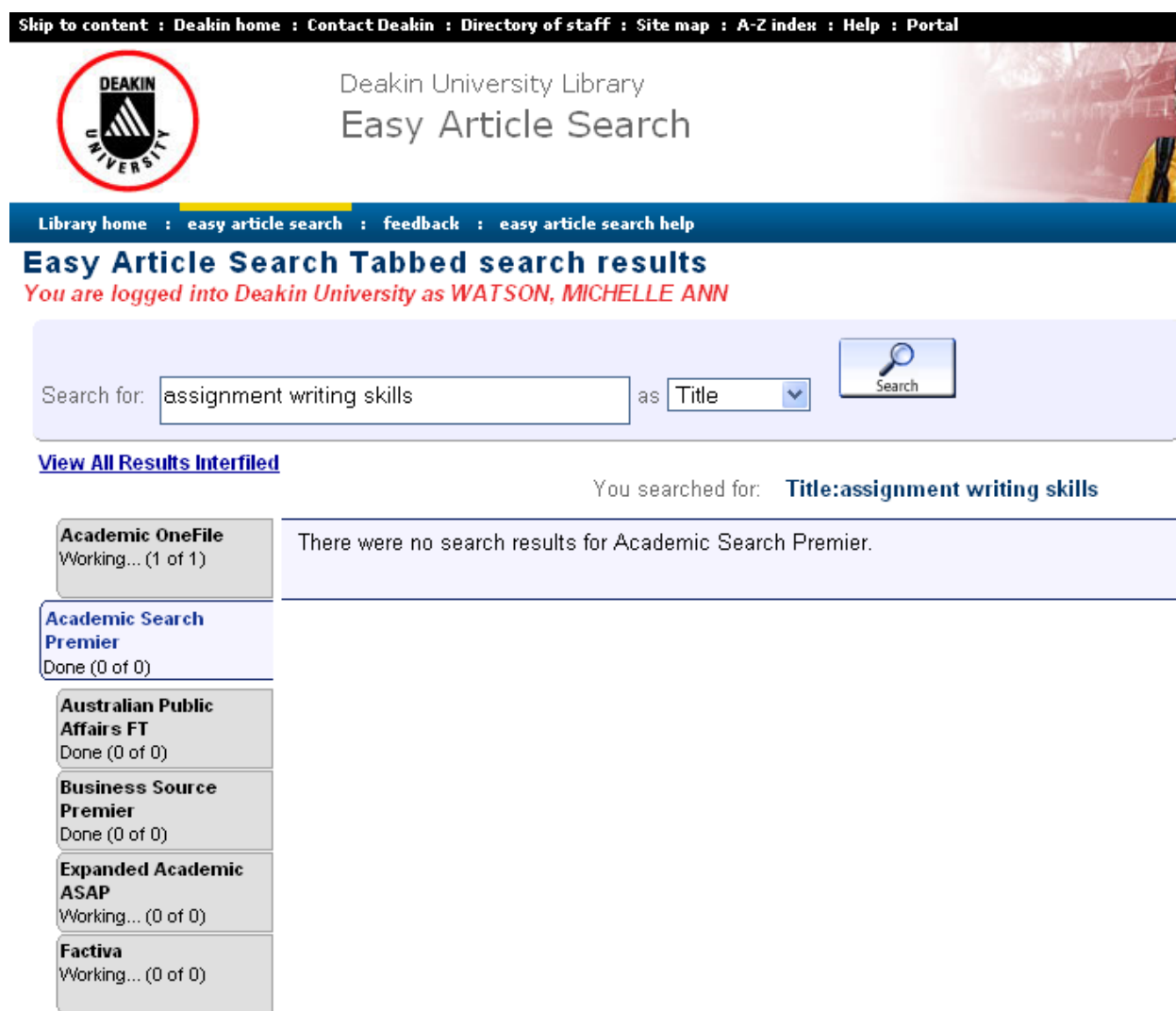
**Journal for quality and participation** ([1040-9602](#))  
from 01/01/1992 to present in [ProQuest Central](#)  
from 01/01/1995 to present in [Academic search premier](#)  
from 01/01/1995 to present in [Business source premier](#)  
from 01/01/1995 to present in [MasterFILE Premier](#)

The Library was also keen to get feedback on how clients were faring with Easy Article Search. The introduction of federated searching was contentious, with some library staff expressing their dislike of the product and doubt that it could offer anything useful. Unfortunately, the test results were disappointing. By far the biggest problem for participants was the way Easy Article Search delivers search results. This is in the form of a tabbed display, and unfortunately the active tab represents the database that has begun processing the search first, not necessarily the one that has delivered an actual search result. For one of the tasks, the active tab actually delivered a zero search result (see illustration below). Presumably used to the quick results delivered by Google and Google Scholar, most participants did not have the inclination to patiently read the screen to see what the results are telling them. When they were confronted with this screen, they generally abandoned the search by navigating to the Library home page and trying an alternative search strategy.

Continued next page

### Example 4: Tabbed search result within Easy Article Search

Skip to content : Deakin home : Contact Deakin : Directory of staff : Site map : A-Z index : Help : Portal



The screenshot shows the Deakin University Library Easy Article Search interface. At the top, there is a navigation bar with links: Skip to content, Deakin home, Contact Deakin, Directory of staff, Site map, A-Z index, Help, and Portal. Below this is the Deakin University logo and the text "Deakin University Library Easy Article Search". A blue banner contains "Library home : easy article search : feedback : easy article search help". The main heading is "Easy Article Search Tabbed search results" with a sub-heading "You are logged into Deakin University as WATSON, MICHELLE ANN". A search box contains "assignment writing skills" and a dropdown menu is set to "Title". A "Search" button is visible. Below the search box, there is a link "View All Results Interfiled" and a message "You searched for: Title:assignment writing skills". A vertical sidebar on the left lists search engines: Academic OneFile (Working... (1 of 1)), Academic Search Premier (Done (0 of 0)), Australian Public Affairs FT (Done (0 of 0)), Business Source Premier (Done (0 of 0)), Expanded Academic ASAP (Working... (0 of 0)), and Factiva (Working... (0 of 0)). The main content area shows "There were no search results for Academic Search Premier."

During the testing, one participant, frustrated with the performance of Easy Article Search, simply typed the title of the article in the Google search box at the top of the box and successfully navigated to the article that way.

### Conceptual problems: what is an article?

A key outcome of usability testing was the understanding that, despite our attempts to make access to articles seamless and intuitive through a link to Easy Article Search on the Library home page, our efforts were hampered by a serious conceptual problem that affected each of our stakeholder groups to varying degrees: a poor understanding of the connection between articles, journals, and databases.

Participants in the study especially had difficulty completing two tasks that required them to find the full text of two specific articles from two specific journals. Of the stakeholder groups surveyed, the best performing group was academic staff, with 80% of participants successfully finding the correct article. The next best performing group was international students, with 67% successfully completing the tasks. The relative success of this group compared to the results of the previous usability study

could be attributed either to the fact that they performed better using this gateway, or that our recruiting process was not consistent. None of the international students who participated during this round of testing came from the Burwood campus, whereas previously the vast majority were based at Burwood. Of the remaining user groups who participated, 65% of undergraduates successfully completed the task, with 50% of postgraduates the group most challenged by the task. The fact that in this round postgraduates were less successful than undergraduates is an unexpected result that will be explored in future usability testing. One explanation could be that we only attracted four postgraduate clients who participated in the testing, which is one less than the desirable sample of five.

One of the major findings that has come out of this latest round of usability testing is the knowledge that the Library still has some work to do to make access to journal articles intuitive and seamless: to achieve Krug's (2006) first law of usability which is to "not make people think".

## **Observing clients in their natural environment**

Due to the intensive nature of this type of research, only six clients were selected to participate in observational testing. Undergraduates and international students were excluded from this first round of observational testing, because it was felt that this type of intense research activity was not typical for these students. All the participants were academics or postgraduates undertaking research, and most had also participated in the usability testing exercise. This was because, unlike the set web usability tasks, the observational tests were not promoted on the Library website, so it was easier to directly contact anyone we felt would be interested in participating. As with the recruitment process for the usability tests, effort was made to ensure that selected candidates were from a range of faculties, campuses, and genders. Although most of the time two library staff members were present during the study, with both of them observing and taking notes, the team found that the study could be completed with just one person observing. At the time of writing, the usability team had observed four researchers, with two more to go. Although the data is still being collected and analysed, some observations can be made. Obviously, subject areas are very specialised, but the types of resources sought can differ: one academic involved in law research used the Library to get to a specialist law database to find citations, whilst another involved in educational research made good use of the Classic Catalogue to find a range of relevant material including videos. One researcher typed large chunks of text into Google then accessed relevant texts via Google Book Search. This was quite interesting and demonstrates the growing presence of Google Book Search as a research tool.

Not only has observational testing complemented the usability study in the sense that it gives a more complete understanding of how clients use the Library's resources to conduct research, it will also assist in the creation of more appropriate and relevant tasks for future usability studies. The Library is looking at extending this type of observational analysis to the cohorts that were missed: international students and undergraduates. Some modification of the process may be necessary to suit the type of research being conducted, since the information needs of the average undergraduate would almost certainly differ from those of academics or researchers.

The team may look at adapting the methodology by observing undergraduates as they search for resources at the library workstations.

## Conclusion

Usability testing has enabled the Library to identify key navigational and usability issues within the Library website. However, it only provides part of the picture in terms of getting an overall understanding of the way users naturally search for information and resources.

Asking set questions and getting study participants to complete them in an unfamiliar setting, often using a computer that is different to the one they are used to, whilst monitoring and recording every movement and thought process, may help identify major usability flaws in the website, but will not reflect how the users normally go about finding information that is relevant to them. And, although the team had spent some time trying to ensure that the tasks set were relevant and typical, this was sometimes not the case. This became apparent after one session with an undergraduate, who managed to complete all the tasks without once using Quick Search. When asked at the end of the session whether they had ever used Quick Search, the participant replied it was all they used! Somehow the tasks, and/or the way they were phrased, bore no resemblance to the usual information seeking behaviour of that client.

When it comes to usability testing, the Library is still on a learning curve. Lessons reinforced during this round of testing include:

- Do use an assistant to send out invitations, arrange meeting times, book cars and rooms, and to ensure the Plain Language Statement is signed. This was of tremendous help and saved the team lots of time.
- Do make sure that everyone who is participating in the testing is aware of their role and what they are meant to do.
- If the tasks are being timed, ensure this is done for every single question and every single participant; otherwise, the data will be imperfect.
- Create a spreadsheet to collect data and have this ready before testing commences.
- Do input observational notes directly into the spreadsheet you are using. This saves having to input the data later. If this cannot be done, then ensure the information is transferred into the spreadsheet in a timely manner.
- Do ensure everything is set up prior to the meeting time, including having the website and the spreadsheet you are using to record the information, up and ready.

- Do make sure that the facilitator and note taker both have a clear view of the participant and the screen. Ensure that the note taker has actually finished taking notes before moving onto the next question.
- Do use recording software. Playing back a video of a session provides evidence of why changes need to be made and is a great way to make sure your notes reflect what was actually undertaken in the session.
- Do realise you are never going to design the perfect website that will please everyone! Aim to please as many users as possible.

The Library is also in the process of formalising the usability testing process further, by setting up an expanded and permanent web usability group that includes representatives from various library stakeholder groups, including liaison librarians. The group will look at establishing a more fixed schedule of testing that takes into consideration the new trimester system that was put in place within the University during 2009, and identify the most appropriate opportunities for the implementation of both minor and large scale changes, should they be required.

## **Next steps**

As at October 2009, the usability team was still analysing the results of testing, conceptualising problems and evaluating possible solutions. In addition to communicating findings to key stakeholders within the Library, work will be done to address the list of 'quick fix' problems that arose during usability testing. Attention and further consideration will be given to the more complex challenges, including optimising use of Quick Search and providing more intuitive access to e-journal titles and journal articles.

For Deakin University Library, usability testing has become an iterative process where we test, implement changes, then test again, in the effort to improve user experience of our website, and how we assess it.

## References

Deakin University Strategic Plan: Delivering effective Partnerships (2009) Deakin University, Available: <http://www.deakin.edu.au/vc/docs/strategic-plan.pdf>. Last accessed: 28th September, 2009

Krug, S (2006). Don't Make Me Think! A Common Sense Approach to Web Usability. 2nd ed. Berkeley, California: New Riders Publishing.

Usability in the Library: Resources (2008) University of Michigan Library, Available: <http://www.lib.umich.edu/usability-library/usability-library-resources>. Last accessed: 15th September, 2009

Wegener, D (2003) Web usability testing in a polytechnic library Australian Library and Information Association, Available: <http://www.alia.org.au/publishing/alj/53.2/full.text/wegener.html>. Last accessed: 30th September, 2009