Implementing AARLIN at La Trobe University with a focus on end user reception

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Abstract:

This paper describes the implementation of AARLIN, the Australian Academic Research Library Network, at La Trobe University with a focus on end user training and acceptance. The authors will also describe the impact on library staff of introducing a totally new library service.

1.   Introduction

In spite of technological developments, the task of libraries remains the same, to assist patrons to locate and use information resources effectively and efficiently. Recent surveys (Lim & Gow, 2003) have found that despite increased access to information, researchers find the task of locating relevant material difficult, as they first need to identify sources and then manoeuvre their way through a maze of passwords and search interfaces. Members of the Council of Australian University Libraries (CAUL) deliberated on ways to simplify this process for researchers at a planning workshop in 1999 and the idea of the Australian Academic Research Libraries Network (AARLIN) was conceived. The long-term vision for AARLIN, as described in the original grant application, is to develop "a national virtual research library system that will provide unmediated, personalized and seamless end-user access to the collections and resources of Australian libraries and document delivery services."(Roberts, 2003)

This paper outlines the experiences of La Trobe University Library in implementing AARLIN. While the implementation of AARLIN is in its early phases, there is much to be learned from the AARLIN Pilot. In this paper we will identify the background tasks and decisions for the technical side of the project, the issues faced by the Library in introducing and promoting a new service, and the response of University researchers to the AARLIN concept.

2.   La Trobe University

La Trobe University has been in operation since 1967, when it opened as Victoria's third university. It currently provides higher education to 26,575 students at its main campus at Bundoora, Melbourne, and across six regional campuses.

Distinct from other regionally based Universities, such as Charles Sturt University, or those with a strong distance education program, such as Deakin University, La Trobe University has adopted a hub and spoke model. Its campuses across Central and North-East Victoria – at Bendigo, Albury-Wodonga, Shepparton, Beechworth, Mount Buller and Mildura – enable regional students to access a University environment, with the resource and infrastructure support of a large metropolitan campus in Melbourne.

This model is made possible by employing academic staff and tutors based in these regions, and also having academics travel to deliver lectures personally or via remote delivery technologies, such as video conferencing.

3.   AARLIN – The National project

A project such as AARLIN is an attractive option for universities committed to supporting a wide range of programs and research interests across a diverse population and geography. It offers the functionality of the Internet with the authority of scholarly resources. It allows researchers to be presented with a customised range of resources via one familiar interface. This includes catalogues, subject gateways, distributed library collections, journals, books, databases, and full text and image resources. In addition, it provides a seamless method of requesting resources not held in their local collection.

One of the innovative features of the AARLIN system is its use of 'push' technology. AARLIN will push to researchers a suite of relevant information resources based on individual profiles of research interests. Researchers will be able to further customize their

suite to include their preferred resources, thus greatly simplifying the identification of relevant material for the patron.

Software
The AARLIN project utilises two types of software:

- MetaLib is the front-end search software that enables searching across a range of resources. MetaLib also allows researchers to personalise the portal environment and merge and deduplicate search results.
- SFX is a linking system, which connects MetaLib search results to full text documents and related web resources.

Both Metalib and SFX are produced by ExLibris, an Israel-based company with five fully owned subsidiaries in the United States, the United Kingdom, Germany, Australia, and Luxembourg.

Funding
In late 1999, the AARLIN Pilot Project was funded by an Australian Research Council (ARC) grant of $250,000 through its Research Infrastructure Equipment and Facilities Scheme (RIEFS). Nineteen Australian university libraries and the National Library of Australia contributed an additional $150,000.

The AARLIN Project received $2.8 million to develop the operational phase from the Commonwealth Department of Education, Science and Technology Systemic Infrastructure Initiative funding in 2001 so that the project could be implemented in participating Australian university libraries over the next 3 years.

4. Project Development
The AARLIN Project has been developed in two stages:

Phase 1 (including Pilot)
Phase 1 including the Pilot was conducted in 2001 and 2002. Six Australian university libraries were involved in Phase 1:

- Flinders University
- Murdoch University
- La Trobe University
- Swinburne University
- University of Canberra
- Victoria University of Technology

The Pilot phase involved reviewing, installing and configuring software to provide access to the databases, e-journals and catalogues in nominated subject areas of the six participating Australian university libraries. Selected researchers at the six universities were surveyed on their information-seeking habits and their use of the AARLIN portal software.

Phase 2 (Operational Phase)

The second phase of the AARLIN Project is being implemented over 2002-2004 and involves:

- rolling out the portal software to 22 Australian university libraries
- developing an administrative structure for AARLIN
- creating a legal framework that encompasses copyright, intellectual property and e-commerce
- developing and implementing a business plan

During the operational phase[i], the AARLIN prototype will be developed into a national system, and made available to staff and students of participating universities, and eventually most Australian universities.

5. The Researcher's perspective of the Pilot

During the Pilot phase, feedback from researchers at the pilot sites was sought that could contribute to the subsequent development of AARLIN as an operational service.

At La Trobe University, the health sciences and multidisciplinary resources were the first research resources to be configured. Ten researchers at La Trobe University, from each of the Faculties of Health Sciences and Humanities and Social Sciences at the Bundoora campus, were trained in using the AARLIN interface and feedback was sought on their expectations and experiences of using AARLIN.

Methodology

A survey of academics and researchers in Health Sciences and Humanities and Social Sciences was carried out January to May 2002 concurrently with user training in the AARLIN software. The survey forms, developed by the AARLIN Project Office, were administered in one of two ways:

1. an appointment was made with each of the respondents to demonstrate the features and functions of the AARLIN interface and a survey form was completed by the researcher as part of the training session;
2. some users were trained in a group; however to increase the response rate most of these academics also had a one-to-one session with the trainers to review the software and to encourage completion of the form.

AARLIN user guides were distributed to all pilot survey participants.

The return rate for the survey was about 50%, with five forms from Health Sciences and an equivalent number from Humanities and Social Sciences.

A post-use survey was administered to this same group at the end of the pilot phase, however there were significant problems in collecting the forms for the post-use survey including:

1. researchers not available because they were overseas,
2. academics had not used the software in the intervening weeks,
3. researchers were too busy to fill in another detailed survey form.

In the end only six post-use survey responses were received.

Differences were noted between the pre- and post-use survey responses, and between responses from researchers in the two Faculties.

How Researchers Used AARLIN (the Pilot Phase)

The majority of respondents planned to use AARLIN weekly (seven respondents), however post-use survey results showed they had used AARLIN only infrequently/rarely. Although the survey did not collect data on why the use was so infrequent, it seems that when users tried to logon to AARLIN, the system was unavailable, and this discouraged researchers from further attempts at use.

The most common reasons given for interest in AARLIN were for research purposes (ten respondents) and teaching (three respondents). The current awareness function was a much lower priority (one respondent).

Researchers expected to use AARLIN most frequently (daily/weekly) for searching indexing and abstracting services, e-journals, and library catalogues. Interestingly, post-use results showed that the La Trobe University library catalogue, Yahoo, Alta Vista, and Google were the most popular resources searched (eg searched daily or weekly) while indexing and abstracting databases, e-journals, other library catalogues and recommended websites were used less frequently. This may be because a limited number of resources were configured for the Pilot phase of AARLIN.

Skills of respondents

One of the findings from the survey was that academics were unsure of what a portal was, and only two "currently used other portal sites". Information was not gathered on what these researchers classified as portal sites.

Respondents were also asked to rate their current searching and document retrieval "processes". Amongst the Health Sciences group most rated themselves as acceptable or standard in this area, while the Humanities and Social Sciences responses varied with equal numbers reporting "efficient", "standard", "inefficient". Comments indicated that while their database searching skills were "OK", Internet searching was less efficient/successful.

Of the four valid responses to this question in the post-use survey, three indicated that their information and document seeking was more efficient within the AARLIN portal than "outside the portal"; with the fourth respondent feeling uncertain about the benefits of the portal. Half rated the portal as "acceptable" in meeting their needs, while the other half rated it as "highly satisfactory".

User comments on AARLIN features and functions

The following tables comprise comments from researchers about the useful/required features and functionality and how their research could be enhanced by using AARLIN. Some comments were common to researchers in both faculties. Certain features which were not available during the Pilot are available in the operational phase.

Table 1: Most useful features

Health Sciences	Humanities & Social Sciences
More efficient searching if you need to search multiple databases	Locating information in scattered obscure journals and other sources
More efficient access to online journals	Saving searches and records
Timesaving	Emailing of search results
Increases number of resources searched with same effort – one stop shop	One interface for many databases
Searching a wider number of databases	Personalising the AARLIN environment
Interlibrary loan linking	

Table 2: Least useful features

Health Sciences	Humanities & Social Sciences
Learning how to use AARLIN was time consuming and labour intensive	E commerce
Web page searching	Promising features (such as linking to full text) without delivery
Information overload/excess information	Long frustrating delays and crashes of software
	Still need to use print

Table 3: Additional features wishlist

Health Sciences	Humanities & Social Sciences
Ability to search concurrently using a thesaurus (eg from an experienced Medline user)	Search commands and functions listing
Searching MORE than six resources at a time	Direct access link to full text
Search contents pages of new journals for current awareness	Additional options for field searching
"Mark all" function Sort and enter to Endnote PDF files added for print journal articles Faster system response Clearer indication of full text availability	

Table 4: Potential value-adding of AARLIN

Health Sciences	Humanities & Social Sciences
Personalisation One stop shop Standard format of results Access to full text no matter the supplier	
Increased ease in accessing relevant local or electronic resources	Increased awareness/ease in accessing relevant local or electronic resources/databases
Increase search efficiency	Increased ease in requesting delivery
Increased efficiency in locating items of relevance	Increased awareness of availability - print and electronic resources

This feedback,[ii] along with feedback from other pilot sites, informed the subsequent development of the AARLIN operational phase. Such comments provided Library staff with information to plan the training and promotion of AARLIN to La Trobe University patrons during the operational phase.

6.   The AARLIN Project at La Trobe University

La Trobe University has been the lead institution in the AARLIN project since it was initiated in 2000 and is the base for the AARLIN Project Office.   Consistent with La Trobe University's early commitment to supporting this project, the Library has been a leader in the implementation process during both the Pilot and the operational phase.

During the Pilot an AARLIN Coordinator role was established and undertaken by one of the reference staff in addition to normal duties. The AARLIN Coordinator liaised with the AARLIN Project Office, attended SFX and MetaLib training, and coordinated the Pilot implementation at La Trobe University Library. Staff across a variety of library departments assisted the Coordinator during the Pilot. This experience in the Pilot assisted the Library in planning the organisational aspects of the implementation of the Project during 2002.

Formation of an Implementation Team

As a totally new library service, AARLIN needed to be promoted to both library staff and patrons. With this in mind, a La Trobe University Library AARLIN Implementation Team was established with representation across the three major campuses of Albury-Wodonga, Bendigo and Bundoora campus libraries and three library sections: Cataloguing, Reference & Information Services, and Systems. Members of the Team retained their substantive roles. The role of AARLIN Coordinator was re-established to include convenorship of the Team. See Appendix One for the Terms of Reference of the AARLIN Implementation Team.

One of the first activities of the Implementation Team was the creation of a webpage for patrons and library staff, providing information such as contact details of the Implementation Team, background information on the project and funding, and a FAQ list. During the Pilot phase the website also provided a link to the pilot AARLIN login screen.

The Implementation Team also co-ordinated the activities of other Library staff who were co-opted to work on AARLIN activities. For example, three cataloguing staff (two from Bundoora and one from the Bendigo campus) commenced work on 'cataloguing' and configuring resources. Systems staff also contributed HTML and basic UNIX programming skills. A member of the Implementation Team was involved in these activities and provided progress reports at monthly meetings.

Implementation schedule

An implementation schedule was prepared to provide a project overview for Implementation Team members. This schedule indicated a timeline for activities and the Team member responsible. The implementation schedule commenced in March 2003 when the first group of five participating universities, including La Trobe University, attended SFX training.

Training was provided by the vendor, ExLibris, in two sessions for the first group of participating universities: two days of SFX training in March followed by three days of MetaLib training in April 2003. The La Trobe University AARLIN Coordinator attended both training sessions. One additional staff member attended SFX training and two additional staff members attended MetaLib training. On their return, these staff conducted in-house

training of other La Trobe University Library staff who would be involved in the implementation.

There were delays in meeting the initial timeline set down in the implementation schedule. The complexity of the system required a very steep learning curve after the formal training prior to work commencing on implementing SFX and MetaLib, and many processes and procedural issues had to be resolved.

As implementation proceeded, it was found other steps were required which had not been anticipated. Additional mechanisms to facilitate communication between Team members were developed, for example, a configuration testing table was developed and loaded onto the Library's intranet to provide an up-to-date account of the databases being tested and their testing status. This assisted Implementation Team members maintain an overview of activities and their changing status and report on such to the AARLIN Project Office.

The schedule was also amended to fit in with local needs. For example, the roll-out to a pilot group of patrons was initially scheduled for late July 2003, when cataloguing and systems staff had 'catalogued' and configured a sufficient number of resources. However this date coincided with the HECS census date and feedback from Reference staff on the Implementation Team indicated that it was not practical to expect academic staff to take on additional work at this busy time. Consequently, the schedule was amended to reflect this situation.

Early Decisions – 'classifying' AARLIN resources

In order to customise the AARLIN interface, resource categories and resource types needed to be identified. Staff from various sections of the Library assisted with this process. 'Resource Categories' are similar to subject headings and allow the end user to locate resources by selecting resources from a pre-defined list. An 'expert group' was formed to help inform this decision comprising the technical services manager, the head of cataloguing, cataloguing staff, and members of the Implementation Team. Various models were considered including Library of Congress Subject Headings, discipline names used in the University handbook, and Australian Standard Research Classification featured headings.

A subcommittee drafted a list of resource categories after first comparing those used by other institutions using MetaLib, and the final list was largely based on the discipline names used in the La Trobe University Handbook. This was the most relevant terminology for La Trobe University researchers.

'Resource types', which describe a category of resource, for example library catalogues, also needed to be identified. While a default list of resource types existed, a member of the Implementation Team examined those used in other Australian universities which have implemented MetaLib and prepared a list appropriate for La Trobe University.

Following these early decisions, text files were prepared of resource categories and resource types and uploaded to the AARLIN Management interface with the assistance of Systems staff.

Promoting AARLIN to Library staff

Throughout the Project a number of introductory sessions were conducted for Library staff. Some of these were general overviews to demonstrate the functionality of AARLIN, especially the uniform search interface allowing simultaneous searching across library catalogues, databases, internet resources and electronic full text journal collections. These general overviews allowed staff across every section of the Library to develop a greater understanding of the new service.

To build on this general overview, further sessions were scheduled early in 2003 to demonstrate the management interface. This was of particular interest to cataloguing and systems staff who would be involved in the 'cataloguing' and configuration of La Trobe resources. Following Ex Libris' SFX and MetaLib training, members of the La Trobe University AARLIN Implementation Team presented more detailed sessions to a target audience comprising library managers who would supply the necessary staffing to implement AARLIN, as well as those staff who would actually be involved.

The AARLIN Project has also been promoted within La Trobe University via the Library's regular newsletter, **Library News**, and a feature in the 2002 Library **Annual Report**. Within the Library, AARLIN has also been promoted via reports in the internal newsletter **Library Link**.

During the implementation phase, reference staff were consulted at many stages for input into decisions which would impact on end-user acceptance. This was seen as a way of promoting an understanding of AARLIN amongst staff who would be involved in end user training. For example, feedback was sought from reference staff on 'division' names which describe the subject background of patrons. This was a useful way of involving a wider range of staff in AARLIN decisions and allowed valuable Library expertise to inform the project.

It was important to include a wide variety of staff in this type of decision-making to encourage a sense of "ownership" in the project. The Implementation Team sought to avoid a silo effect where knowledge of the new service was held by only a small group of staff. It was considered early in the implementation, that communication between sections, and ownership of the project by the entire library staff would be key elements in the overall implementation and promotion of AARLIN to patrons.

It was a difficult time to introduce a totally new service requiring significant training for patrons because it coincided with the rollout of LIDDAS, another new service for patrons which also required significant planning and training. The planning involved in rolling out these services to patrons and training them in their use, was a significant issue to be resolved.

7.   Conclusion

As in the development of any new service, there have been challenges and lessons to be learned. AARLIN offers exciting possibilities to libraries in delivering more streamlined methods of searching multiple resources, the ability for researchers to build a personal profile of favoured resources, and sophisticated options for accessing the results of a search, often in full text. The Pilot survey results indicated that end users were appreciative of those new features and were keen to adopt the interface when it was further developed.

The work involved in implementation has been significant, requiring careful consideration of the preferred set-up options and resources to be included in the La Trobe University interface. Some difficulties have been largely overcome by the establishment of an implementation team to plan and monitor each phase, by close collaboration between library sections, by utilising the expertise of existing staff and by regular updates communicated to all Library staff.

The AARLIN service will be introduced to researchers at La Trobe University in early 2004. A combination of surveys and interviews will be used to gauge reception by patrons. A preliminary analysis of end user expectations of portal systems will be available at the conference presentation.

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Appendix One

LTUL AARLIN Implementation Team – Terms of Reference

The role of the AARLIN Team is to assist the LTUL AARLIN Co-ordinator in the implementation of the roll-out of AARLIN to La Trobe University.

Purpose

1. Develop an action plan with timeline for the Library's participation in AARLIN Phase 2.

2. Gather information required by the AARLIN Office.

3. Participate in training provided either by the AARLIN Office or by other members of the Team as appropriate. Train other library staff as needed.

4. Undertake specific tasks for the La Trobe implementation of AARLIN, including "Catalogue" databases and websites. Configure context-sensitive access to e-journals and test the configurations. Ensure that e-journal subscription and database subscription details are updated when required.

5. Promote the AARLIN portal within the Library and to the wider University.

6. Train researchers and provide assistance as required.

7. Provide an enquiry point for researchers and library staff using AARLIN and address problems as they arise.

8. Through the AARLIN Coordinator, liaise with the AARLIN Project Office.

9. Liaise with the University Information Technology Services, particularly in relation to authentication requirements.

10. Seek and gather feedback from library staff and researchers regarding AARLIN and where appropriate, forward to the AARLIN Office.

Meetings and mode of operation

The Team will meet monthly initially, with additional meetings being scheduled as required during the role-out of AARLIN to LTU. In consultation with the Deputy University Librarian, the Team may appoint task forces or working groups to undertake particular tasks, and co-opt additional staff as required, during the role-out.

Reporting

The Team will report to the Deputy University Librarian.

Membership

The team will comprise staff from across the campuses and include staff from information systems, reference and information services, and technical services. The Team will be

appointed by the Deputy University Librarian, in consultation with the Associate Librarian, Bendigo and the Albury-Wodonga Campus Librarian.

In 2003 the Team comprises

- Liz Burke, Reference and Information Services, Bundoora (AARLIN Team Coordinator)

- Clayton Bolitho, Information Resources & Systems, Bendigo

- Eva Fisch, Reference and Information Services, Bundoora

- Vincent Galante, Information Systems, Bundoora

- Linda Sheridan, Reference and Information Services, Albury-Wodonga

- Kris Valenta, Reference and Information Services, Bundoora

- Barbara Paton, Deputy University Librarian (ex officio)

The role and membership of the team will be reviewed at least annually, and adjusted as required during the life of the AARLIN Project.

Notes

[i] The twenty-two Australian universities participating in this operational phase of the AARLIN project comprise:

- Australian Defence Force Academy
- Central Queensland University
- Deakin University
- Edith Cowan University
- Flinders University
- James Cook University
- La Trobe University
- Monash University
- Murdoch University
- Northern Territory University
- RMIT University
- Swinburne University
- University of Adelaide
- University of Ballarat
- University of Canberra
- University of Melbourne
- University of New England
- University of South Australia
- University of Southern Queensland
- University of Tasmania
- University of Wollongong
- Victoria University of Technology

[ii] The La Trobe University data was included in the pilot project report by Parker, Gow & Lim (2002).