

## **The use of the WWW in training: technolust or value-added?**

Sally-Anne Leigh  
University of Canberra  
Program Manager, Information Access and Library  
sal@cts.canberra.edu.au

*In recent years there has been a focus on new methods of course delivery, flexible delivery and teaching using the World Wide Web (WWW). Traditional training skills and levels of interaction are being downplayed with the focus shifting towards the value and adaptability of the technology. This paper seeks to explore some of the key elements in assessing whether we have become overwhelmed with the promise of using the WWW for the development and delivery of courses at the expense of client satisfaction, sound educational principles and adding value to the educational and training arena. Should training programs in information literacy and in the use of information resources be "cyber-training" programs or be added to a traditional face-to-face training program?*

## Introduction

In recent years, there has been a focus on new technological methods of flexible course delivery and teaching utilising the ever increasing features of the WWW. Products such as WebCT, TopClass and Lotus Learning Space have increased the options for electronic course delivery. Traditional training skills and levels of interaction are being downplayed with the focus shifting towards the value and adaptability of the technology. Support organisations such as libraries and student service organisations, are increasingly being asked to provide client training using new and alternative methods of delivery. The provision of this new client training also requires significant investment in staff training and development. This paper seeks to explore some of the key elements in assessing whether we have become overwhelmed with the promise of using the WWW for the development and delivery of courses in the library environment (ie client education, student information literacy and/or reader education) at the expense of client satisfaction, sound educational principles and adding value to the educational and training arena. While the focus will not be on the discernible overlap with the delivery of courses in an academic environment, many of the issues however, will co-exist.

Should we be looking at IT training and the use of the WWW as a complementary phenomena or as a dichotomy? “Is Web-based training new hype in old wineskins?” (Fritz 1997). Are we so enamoured by the “technolust”, that we are losing those human skills in training delivery and the value of human interaction by developing programs for the WWW? Should these programs be added to a traditional face-to-face training programs or should they be used instead of this human interaction?

Can you really learn how to use the Internet via the Internet? Have we taken this too far - isn't it a bit like advertising a course on “Introduction to Email” using email as the advertising medium. Computer based training has for many years provided a valuable resource for remote access but now the Internet and Intranets can and should take on this role.

The complex issue of staff development and training has becoming increasingly important particularly as librarians and library staff seek to move in the “wired-age”. How do we train our staff to maximise the use of the available technologies, to their best advantage?

## Cyber-training

Advances in hardware, software, computer networking, multimedia and the power and allure of the WWW means that while traditional classroom style delivery is still the most prolific, it is decreasing. Organisations are still cautious, as to how much of the delivery should be technology based. Video and computer based training (CBT) products have been available and popular for some time adding value when used appropriately. At the University of Canberra, dozens of teaching programs are now being conducted electronically using WebCT [http://teaching.canberra.edu.au:8900/webct/public/show\\_courses/](http://teaching.canberra.edu.au:8900/webct/public/show_courses/) and for the first time there is a fully online Graduate Certificate in Information Access. At TAFE South Australia <http://www.tafe.sa.edu.au/top/> they envisage that by 2000, 50% of students will be studying on-line.

"Just-in-time" not "just-in-case" training using the WWW allows an "information-pull" philosophy which lets course participants access training materials in their own time, at their own place and in a location of their choice (Bushell 1996 p. 8). The most effective type of WWW training include a wide variety of hyperlinked reference material. Tools such as Sun's Java and Macromedia's Shockwave add interest rather than educational value. Virtual training colleges such as "Virtual University" and/or global internet campuses <http://vetweb.net.au> now exist although there is no physical location. The reality is that the world only needs one "Virtual Library" with a comprehensive collection. As time and resources become scarcer, training has become much more target-specific allowing staff to focus their time and attentions on what they actually need to know at a time that they need to know it ie. "just-in-time" and/or "just-what's needed". Traditional training programs must be replaced by modular, flexible programs focussed on specific needs using the most appropriate technology, not the WWW just for the sake of it but rather because it "adds-value".

Prior to the introduction of a new products, the Internet provided an appropriate mechanism for rolling out upgrade training "just-in-time" not weeks in advance but as the modules became available. Despite the pressure to produce an all encompassing application with all the possible bells and whistles, a WWW based training programs does not have to contain more than what adds value and explains concepts. It offers great advantages over traditional diskette and CD-ROM training, as there are limited costs in courseware reproduction/reprinting. The real-time capacity for upgrading and changing the material makes the Internet an adaptable medium.

Materials that can be used later as a refresher and reference tool and that have a series of self-paced exercises provide the most flexibility. Given the fact that the content has to be created any-way for traditional face-to-face delivery, some organisations are attempting to maximise their training dollar by looking to the WWW to provide the most flexible delivery possible. Cyber-training allows for non-linear based programs that enable staff to jump around the program to suit their own needs. In a trial conducted by US technology provider Claremont Technology, they estimated that online training resulted in an approximate saving of US\$150 per person in training costs and the availability of material (Bushell 1996 p. 12).

Return on investment for any training program is vital but because web based training demands more up-front return on investment data than other training delivery methods it is often hard to quantify. Trainers must ask themselves the following questions: what is the life cycle of the training program, how many people will use it, and how much money is involved (Webb 1999). Anderson Consulting has cut their base level employee training from 65 to 40 hours using web based training, saving an impressive \$10 million (Caudron 1996). In America both Lexis-Nexis and Dialog are running their own Faculty Institutes to let staff and accredited Library schools learn about their products and how to use the services offered. Most of this is delivered on-line. The Gartner Group estimates that US companies spend \$5.4 billion on training and that in 5 years web-based training will account for more than 50% of all training delivered (Steen 1998).

While the Internet offers many new ways to increase learning, link resources and share valuable internal and external sources, WWW training must still be developed along core competency lines and be value-added. It must serve a purpose and often developers who get caught up in the multi-media capabilities forget this. The Internet can be used to deliver training in a variety of ways including:

- Email for accessing course material and sharing information;
- Bulletin boards, electronic discussion forums, newsgroups for posting comments and questions;
- Interactive tutorials that let trainees take courses online; and
- Real-time conferencing placing all participants in the same virtual classroom. (Marquardt 1996 p. 56).

Some useful delivery methods for WWW based training programs include: computer based training; artificial intelligence, hypertext, embedded training, video clips and interactive CD-ROMs (Munger, P. 1996). Laurillard (1993) introduces categories of teaching media forms: audio-visual media, hypermedia, interactive media, adaptive media and discursive media. It is important to be familiar with a variety of teaching forms in order to develop WWW based training programs effectively. It is important to remember to analyse what the media will do to enhance the value of the training program.

## **Adjusting to Change**

We are often expecting our staff and indeed our students to have a level of IT literacy beyond what could be considered reasonable. We expect University students to be able to use the Campus Wide Information System (CWIS), electronic mail, electronic records, academic subject material such as lecture notes and to be able to access the wealth of information resources available through campus electronic database networks. Training programs conducted via the WWW often discourage participants from undertaking the program, particularly when they are not comfortable with the technology. At the University of Canberra an Electronic Resource Library (ERL) network has recently been expanded. Through the Library staff and students, have access to a wide variety of electronic information resources not only on campus but remotely. The Electronic database network has dramatically increased the availability of information via the WWW <http://www.canberra.edu.au/library/dbases/index.html>.

Databases are provided via three different mechanisms, on-line direct services such as ProQuest Direct and First Search, an onsite Silver Platter WebSpirs Electronic Resource Library (ERL) and a windows NT based internal CD-ROM network. The electronic resources are by in the most demand far outweighing traditional loans functions (which are currently down on average 12.5%). The Web based products are by far the most utilised service particularly as they are available on any networked computer on campus and off-campus through Ozemail only limited by licensing arrangements. With approximately 300 database products available, all using a wide variety of search engines ranging from DOS based text to fully WWW compliant, the training requirements are ever increasing.

Staff and students are expected to have specialist skills to use the print based Library collection without necessarily providing them with a training option. Staff and students are also now expected to use the Web based products for research without necessarily having basic IT literacy skills. Every year the mature age group of students tell us that they are increasingly uncomfortable with technology and are frightened to experiment but rather require up-front training and in some cases hand holding in the use of these products. In 1998, the Library Information Desk provided the equivalent of more than 3000 hours of individual training and support for staff and students in the use of our web based services. In an environment of declining resources surely this cannot continue. Staff and students need to

be encouraged to undertake training and to maximise their exposure to as many web based tools as possible. The Student Training and Awareness Program encompassed a wide range of information and electronic research information. The 1998 program included the following programs: Generic demonstrations and tutorials featuring OPAC (1500 student training places offered), Electronic Databases via the Internet (930 student training places offered) and Faculty Based Resources (1200 students training places offered). In Semester One 1999, Introductions to the WWW, including the CWIS, the Student record service (OSIS) and Email sessions were conducted as part of the expanded Student Training and Awareness Program <http://www.canberra.edu.au/library/student.html>. While the University is moving rapidly into remote program delivery, until students can gain sufficient IT literacy skills, creating base level training programs for delivery via the WWW would be succumbing to the techno-hype rather than adding value. It is now important for the University of Canberra to begin to create remote service library literacy programs as many other Australian university libraries have done.

Skill requirements of training and development positions like those in the IT industry are changing at a rapid pace. Between 1981 and 1993 there was a 17% increase in the number of employees undertaking different types of skill improvement training in the workplace (Bassi et al. 1996 p. 28). At the University of Canberra in 1996, 530 staff undertook an IT based training program out of approximately 1080 staff. Since then however, due to declining resources the staff training program has been disbanded. More than ever staff need effective IT skills to deliver and develop effective student information literacy and information technology training programs.

With downsizing, outsourcing, and business process re-engineering the current flavour of the month, training departments are under more pressure than ever to produce efficient and effective training solutions. More than ever training must be delivered with a customer service focus. Rather than continuing to provide specialist teams of trainers, the University has begun to purchase training and/or trainer expertise from external training providers. The Library is now acting as a "broker" or "consultant" to arrange the delivery of the training services for its staff. "Training professionals face a daunting challenge in having to ensure that purchased training meets specific needs and that it's available when and where it is needed, at a price that makes sense" (Bassi 1996 p. 35).

Training must be aligned to the organisations core mission statement, of providing opportunities for all students and staff to maximise the use of all services only a part of which are available using technology. Selecting the use of the most appropriate delivery mechanism rather than using technology for the sake of it will enhance the value of the training program whether it be delivered in a face-to-face or remote service mode.

## **The Library as a Global Learning Village**

People and organisations must learn to learn. As organisations become more knowledge based they will promote and capture learning and development by maximising the use of technology. In a learning organisation training is seen as an integral part of the work based system rather than a developmental add-on. By using the WWW as a mechanism for delivering training, the ability to capture and share knowledge can be increased - fundamental aspects that contribute to a learning organisation. "Technology should not be seen as a panacea. It is just another mechanism to enable faster and better quality exchange of information" (Rylatt 1994. p. 150). Virtual corporations or global learning villages provide

opportunities for individuals and organisations to communicate through the WWW to share skills, experience, costs and activities.

Library staff have not traditionally thought of themselves as training professionals who create structures within the learning organisation to support networks of both internal and external training providers. They need to be ready to explore new ways to organise internal and external networks of experts and resources in order to get the job done in a learning environment (Bassi 1996 p. 35).

Libraries need to see themselves as a part of the "global learning village" particularly focussing on the use of the WWW with an ever increasing diversity of clients. Ways must be developed to capture and share knowledge. For a learning organisation to maximise the opportunities available through the burgeoning WWW, it must be responsible for facilitating learning and for meeting the organisational goals. They must ensure that all systems are designed to encourage, maximise and coordinate learning across all levels of the organisation (Bassi 1996 p. 39).

The development of additional technologies such as intranets, multimedia technology and virtual reality allows course participants to retrieve information when they want in a way that is most useful to them. These technologies allow for fundamental changes in the way we view learning and training, particularly in terms of global learning.

We need to train not in the latest technology but in the use of technology in general. Librarians have been used to providing access to skill based training in such areas as boolean and generic search strategies and this can be easily translated into the uses of the WWW providing a medium for encouraging the habit of learning. Information is constantly new and exciting, WWW search tools and HTML development tools are only some of the changing variables. Staff need to be encouraged to experiment and be empowered to learn and develop new skills in the provision of electronic services. This is a huge challenge in itself, one which organisations do not often take seriously enough. Library staff can be encouraged to form the habit of learning by:

- Being given time at work to "play" and experiment with new technologies;
- Being expected to spend some time and money on additional training resources;
- Attending courses;
- Being encouraged to have out of the box thinking; and
- Attending conferences and/or seminars. (Lato, K. p. 27).

Staff need to be freed up so they can be proactive in developing information delivery, filtering and analysis programs as well as outreach and coaching services (Gulliford 1998, p. 158).

## **The Techno-Savvy Trainer**

It is important to understand how technology affects learning, how people respond differently to technology and how you can enhance organisational learning (Marquardt 1996 p. 56). The use of Internet and Intranets and email provide a wide variety of options. We often forget that our librarians like our course participants are not necessarily at the forefront of the technology. They too, need to be given opportunities to develop the skills and knowledge required to train in a technological environment. There are many ways that trainers can

prepare to change their training methodologies from traditional to technical, such as seeking mentoring, external or internal training, and by undertaking some self-directed learning. Some trainers will need more direction and motivation to change than others. The impact of technological innovation is still a mystifying experience for some trainers particularly for those training in management or professional development areas where the application of technology is not immediately apparent.

Another option particularly for training professionals who might not immediately be able to see the advantages of technology to their programs is to undertake some on-line learning. There is a myriad of internet training sites springing up everywhere such as: [http://pioneer.lib.ut.us/pioneer\\_dir/tutors.htm](http://pioneer.lib.ut.us/pioneer_dir/tutors.htm)

Keeping up with on-line resources is in itself a full time task. Training and technology searches reveal thousands of sites. A comprehensive list of on-line sites can be found at the American Society of Training and Development's Home Page at <http://www.astd.org>.

The Internet provides a wealth of material for trainers and developers limiting the need for "re-inventing the wheel". Librarians have often not seen their information literacy programs as training and have not seen themselves as trainers and therefore do not necessarily maximise their use of available training and development material. New training programs should encompass the "best practice" of other organisations such as Charles Sturt and Griffith Universities. Programs should focus on relevance to the organisation and customising training solutions rather than starting the development of each program from scratch.

There are throughout the training and development industry, those "technology junkies", who constantly look for new innovate methods for delivering training programs. All technology-training programs need to add value and not just use technology for technology sake. "Organisations who lead in the area of successfully implementing high-end technology are not necessarily the "biggest" but may well be the "smartest". These organisations do not get hooked on the features of the technology, but are more concerned with the outcomes of enhancing decision making, stimulating creativity, pioneering best practices and increasing job satisfaction" (Rylatt 1996, p. 163).

New terms for technology trainers include "performance improvement specialists", "knowledge workers", "learning consultants" and/or "technology resource specialists". Librarians must also start to see themselves in these terms. Trainers should familiarise themselves with the four basic types of WWW based training. One type makes use of text and graphics alone and is best used of reference training, a second type adds judged interactions and is useful for directive training, a third employs multi-media technology making it ideal for marketing and the fourth type makes use of interactive techniques and is best for guided discovery training (Clark et al 1999).

## **Linking Needs**

Needs should be linked with the specific desired outcomes. Offer training that is needed by the organisation and the individuals within. Don't choose to offer what is simply the flavour of the month. Where for example, WebCT is the preferred courseware development platform, it makes sense for the library to utilise these campus wide developments tools to mount on-line library learning modules. If you choose to buy training from an external vendor, buy a solution not just a "training box" because it looks good. Buy programs that your staff and students really need and can build upon. Is the journey more important than

the destination (Lato 1997. p. 27)? Projects should be about linking needs and learning how to learn rather than learning the use of a particular technology. Technologies come and go but by constantly linking training to needs, particularly in the ever changing WWW environment, organisations will maximise the effectiveness of the training.

## Conclusion

The WWW offers a new frontier in the delivery of training programs and libraries must take the opportunity to utilise this medium as much as possible for the delivery of its information literacy and information technology education programs. The WWW provides particular applications for the development and delivery of IT training programs as well as the professional development type programs. As long as appropriate methodologies are chosen for the development of programs, then they should be, by nature value-added. Technology should not be used for the sake of utilising the latest and greatest but rather to enhance the quality of the program by providing for flexible delivery and "just-in-time" applications. Online development tools such as WebCT and TopClass make this possible.

This paper has not been about solutions but rather a series of questions that not only the library industry as a whole but the training and development profession must consider in trying to maximise the learning opportunities that can be achieved by web based delivery. Trainer development and organisational change are issues that also need to be addressed in the implementation of any WWW based training solution. Integration of training programs into a "learning organisation" will enhance the final result. The challenge for the future is not whether to use the WWW in the development and delivery of flexible learning programs rather when should they be used and to what extent?

Cyber-training should accompany traditional training methods rather than replace them. Self-directed training programs delivered via the WWW provide a myriad of alternatives. Traditional face-to-face training and interaction skills must not be lost in the search for "techno-lust", training must be value added. Training staff need to develop a different skill set that encompasses WWW based products and initiatives that can be incorporated into existing and future structures.

Students as well, need to be given opportunities to develop base level literacy skills whether as part of their formal study program as a some sort of foundation unit as per the American model. Students, throughout their studies will need to access the "global learning village" through a variety of means: WWW based delivered courses, distance education programs, flexible delivery and Electronic Resource Libraries. There is however, no doubt that training utilising the WWW is the way of the future and will continue to expand and develop but we must not forget that it must add value to the content and context of the program.

## References

- Bushell, Sue. (1996) "While you were in", *ComputerWorld IT Casebook*, November pp 8-12
- Clark, R.C., Lyons, C. (1999) "Using Web-based Training Wisely", *Training*, July, v36, i17
- Caudron, Shari (1996) "Wake-up to New Learning Technologies", *Training and Development*, May, v.50, n5
- Fritz, M. (1997) "Is Web-based Training New Hype in Old Wineskins?", *Emedia Professional*, June, v10, n6
- Gulliford, B. (1998) "Making Choices in the Virtual World: The New Model of United Technologies Information Network", *Library Trends*, Summer v47, i1)
- Marquardt, Michael. (1996) "Cyberlearning: New Possibilities for HRD". *Training and Development*, November, pp. 56 - 57
- Bassi, L.J., Benson, G. and Cheney, S. (1996) "The Top Ten Trends". *Training and Development*, October, pp. 28 - 42
- Laurillard, D.(1993). *Rethinking University Teaching*, London, Routledge
- Lato, K.(1997) "Learn to Learn: Training on New Technology." *Journal of Object Oriented Programming*, Vol 10, No. 1, March/April.pp24-27
- Munger, P. D. (1996) "A Guide to High-Tech Training", *Training and Development*. December pp. 55-57
- Ryatt, A. and Lohan, K. (1995) *Creating Training Miracles*, Sydney, Prentice Hall
- Steen, M (1998), "The Training Imperative", *InfoWorld*, June 22, v20, n25
- Webb, Wendy (1999) "Show Me the Return" at <http://www.trainingsupersite.com/ittrain/coverstory.htm>