

Elearning Training: Catching Up With The Future

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ABSTRACT

Teachers learn basic pedagogical skills during their initial teacher training. These skills, although further developed in formal teaching environments, are considered insufficient to teach effectively in an elearning environment. Whilst computers are now used by a majority of teachers, only a minority use them for educational delivery. Professional development activities focus too much on technology and fail to address important issues related to elearning. Organisations need to support teachers by providing and funding quality formal elearning PD activities.

INTRODUCTION

The adoption and use of technology is increasing at a rapid rate. A RedShriff report (2003) indicated that 62% of the Australian population maintained an Internet connection at home [online: <http://www.redsheriff.com/>]. Measurements from Nielsen//NetRatings found that Australia experienced a 150% surge in broadband subscriptions from April 2002 to April 2003, equalling roughly 1 million high-speed homes [online: <http://www.nielsen-netratings.com/>].

In a report titled "Communications and Information Technology Household ", the Australian Bureau of Statistics (2003) estimated 47% of all children in Australia aged 5-14 years accessed the Internet from home, school or elsewhere at some time during the 12 months to April 2000. The most prevalent uses of the Internet at home by this group were for school or educational activities (83%), to use email or chat rooms (51%), browsing the Internet for leisure (50%) and to play games (40%) [online: <http://www.abs.gov.au/>].

STUDENTS AND TEACHERS

It is obvious that the students of today are vastly different from their predecessors. However, they have not just simply changed their look, language, clothes, or body adornments. In fact, students of today represent the first generation to grow up in the age of digital technology. They have spent their entire lives surrounded by and using computers, video games, mobile phones, and digital music players.

Prensky (2001) refers to these students as "Digital Natives" meaning that they are "native speakers" of the digital language of computers, video games and the Internet. Those who were not born into the digital world but have, at some later point in their lives, become fascinated by and adopted many or most aspects of the new technology are referred to as the "Digital Immigrants".

To survive in the digital world the Digital Immigrants have to learn how to adapt to their new digital environment - some better than others! They are required to learn a new language and one might argue that learning a language later in life is more difficult than learning it in our younger years. To some degree the Digital Immigrant will always retain their "accent". This accent is displayed in behaviours such as reading the manual for a computer program rather than assuming the program will run itself, or printing a document to edit it rather than editing it online.

The Australian Bureau of Statistics has reports that fewer young people are entering the teaching profession. In 2001, around 28% of all Australian teachers were aged less than 35 years, a decrease from 51% in 1986. Over the same period, the number of teachers aged 45 years and over increased from 17% to 44% [online: <http://www.abs.gov.au/>]. Therefore, it may be safe to assume that the majority of the Australian educational profession are Digital Immigrants!

This has significant implications for our education system as we have schools full of Digital Natives who often do not understand what their Immigrant teachers are saying. On the one hand we have students who like to receive information fast, like to multi-task, prefer visual stimulation, function best when networked, and thrive on instant gratification and rewards. On the other hand those who are responsible for their education have little appreciation for the digital skills that the students have acquired; they learned to teach slowly, step-by-step, one thing at a time; and they believe that students can only learn successfully in an environment that is free from distractions.

According to Prensky (2001) the solution to this issue is that teachers need to reconsider both what they teach and how they teach it - in other words, the content and the methodology. Content refers to both old content (e.g. reading, writing, and arithmetic), as well as new or future content such as software, hardware, robotics, and the ethics, politics, sociology, and languages that go with them. The methodology involves going faster, less step-by step, giving students random access to information and allowing them to develop individual learning pathways. eLearning will enable this change in methodology.

WHAT IS ELEARNING?

It is anticipated that new technologies and the learning they give rise to (known as elearning) will become the new generation of educational delivery. eLearning can be defined as the delivery of learning, training or education through electronic means including digital collaboration, satellite broadcasting, CD ROMS, video and audio conferencing, mobile technology, interactive TV and Web based technologies. Online learning is a subset of elearning involving learning that is experienced through the use of computer networks such as intranets, the Internet and Local Area Networks.

Although many would say that the true definition of an online course is one where a substantial part of the course is delivered online, in reality, any course that has any element delivered online might be termed as an 'online course'. Mason (2001) classifies online courses into three categories:

1. where the focus of the course is online content,
2. where the focus of the course is online communication, and
3. where the two (content and communication) are fully integrated.

You can also classify an online course by the extent to which it uses online components in relation to the location of the learners.

- If learners are primarily working on-campus then online components may be used to support or supplement a traditional course.
- In the case of a part-time course, where learners are working both on and off campus, a hybrid approach may be preferred, where the course is run using a mix of both face-to-face and online components.
- Finally, where the learners are working entirely remotely, then a fully online course will probably be found.

This means that we can see a whole spectrum of online courses - from those that use very little online components to those that use a whole variety of online components to create a totally online course.

ADVANTAGES OF ELEARNING

We are all aware that educational content is forever changing and one might argue that there is no better way for education to keep up with this change than by the adoption of new technologies and elearning delivery. Content and learning materials can be upgraded easily, efficiently and economically as needed.

eLearning enables the teacher to provide course materials that allows the student to receive information fast, multi-task, develop individual learning pathways, network with other students, interact with content, and receive instant gratification and frequent rewards.

It also offers a number of other advantages for students over the more traditional forms of teaching and learning. These include:

- **Synchronous Communication**

Communication is synchronous if the people are involved in the interaction at the same time and the interaction carries an expectation of immediate response. Examples include a telephone conversation, a chat room event and instant messaging. With the merging of Web and audio/video delivery formats taking online education to a global scale, the use of synchronous, or real-time, communication is likely to increase.

- **Asynchronous Communication**

Asynchronous communication does not require that all people involved in the communication need to be present and available at the same time. Exchanges between teachers and students are frequently enacted asynchronously with the use of email and discussion forum.

- **Self-Paced Learning and Reflection**

Students can learn anytime, anywhere, and at any pace. As many students have other commitments such as work and family, online courses allow the student to access course materials and communication tools at any time, from any computer with an Internet connection.

- **Collaborative Work and Other Types of Interactions:**

These offer new and improved ways of learning, e.g. co-operative learning, problem-based learning, resource-based learning, action learning. Teachers may require students to interact and work on various projects as a group. The teacher can provide assistance to the group as a whole or one-on-one. Students can interact with one another in a variety of ways by using such tools as chat, discussion forums, and email.

- **Worldwide Resources and Emerging Technologies:**

Given the wealth of knowledge and information available on the Internet, online courses bring to the student a vast array of viewpoints and perspectives that provoke thought and careful scrutiny. Also, with continual updating of Web resources and access to the most up-to-date technological innovations, online courses provide the teacher and student tremendous flexibility and adaptability.

POSITIVE LEARNING OUTCOMES

Internationally recognised elearning expert, Dr A. W. Bates (1997), states the four most frequent reasons given for using new technologies in higher education as:

1. improving the quality of learning,
2. improving access to education and training,
3. reducing the cost of education, and
4. improving the cost-effectiveness of education.

Bates also argues that “using technology for teaching can help universities serve the public more cost-effectively and in particular can prepare students better for a technologically based society.” (1997)

A study conducted by Alexander and McKenzie (1998, p. 232) found a range of positive learning outcomes which resulted from student use of elearning products. These include:

- the opportunity for students to interact with others internationally, gaining a more sophisticated and global understanding of international political issues,
- improved understanding of concepts with which students are known to have difficulty through the use of interactive multimedia animations and simulations,
- the development of information and technological literacy to solve real-world problems,
- enhanced communication between part time students and their teachers through the use of computer-based conferencing tools over the Internet,
- the acquisition of information such as language learning where a high component of factual recall is required,
- learning the skills and knowledge of a particular discipline through participation in a simulation over the Internet, and
- the facility for students to assess their own learning through the use of computer-based qualitative and quantitative assessment tools.

From the same study, evidence of improved productivity in learning and teaching was found. In particular:

- decreased time to learn through the use of animations,
- increased content of learning in a given time through the availability of multiple representations, and
- increased interaction between academics and students through the use of computer-based conferencing tools on the internet.

THE ADOPTION OF TECHNOLOGY AND ELEARNING

According to elearning consultant and strategist Jane Massy (Electronic Training Village, [www.etv.gr]), the sequence of adoption of elearning in enterprises and training institutes has tended in recent years to be the following:

1. purchase the technology,
2. set up the infrastructure,
3. look for or develop content, and then
4. (and only then) involve training professionals in delivery and support.

This type of approach has left many institutions with very expensive infrastructures and content that fails to meet the learning needs of the students. It has also highlighted the absence of elearning professionals in the strategic decision making processes.

Over the past few years schools have been spending a large amount of money on technology. In fact, computers, scanners, printers, CD ROM drives and networks are common sights in most schools. Bates (1997) argues that although there has been widespread adoption of new technologies for teaching in the last few years, they have yet to bring about major changes in the way teaching is organised and delivered. He goes on to state that without such changes, technology-based teaching and learning will remain a marginalized activity.

Whilst computers are now used by a majority of teachers, only a minority use the Internet and elearning for educational purposes. Computers are more likely to be used by the teacher to enhance professional productivity with the use of administrative software packages that keep student records and generate student reports. An example is the use of Microsoft Excel to record student results. In other words, teachers are doing the same tasks that they have always done only in a more efficient manner with the use of technology.

PROFESSIONAL DEVELOPMENT

Teachers learn basic pedagogical skills during their initial teacher training. These skills are further developed in formal teaching environments. However, are these skills sufficient to teach effectively in an elearning environment? If not, what specific skills do elearning teachers require? It has been argued that a skilled elearning teacher requires more awareness about the use of technology, online interaction and negotiating processes. Currently, very few undergraduate teaching courses include subjects related to elearning and the use of it as a delivery method.

Many professional development (PD) activities within the educational sector focus around the use of computer programs such as creating PowerPoint presentations. While this may be seen as a positive step, these activities fail to address important issues such as the teacher's conception of elearning; the elearning environment; the planning stage; the development of elearning teaching strategies; pedagogical principles specific to elearning; and student experiences and expectations of elearning. Effective elearning teaching involves much more than simply being able to manipulate the technology.

An online survey conducted by the Electronic Training Village [www.etv.gr] in 2001 examined:

- how teachers acquired new skills in elearning,
- the type of elearning PD activities they were undertaking,
- whether the activities were conducted during work or within their own time, and
- who was paying for the activities.

Results of the survey indicated that PD activities were more “informal” than “formal” meaning that teachers acquired the majority of their elearning skills through discussions with colleagues rather than through organised PD activities. Only 1 to 4% of their organised PD activities were related to elearning and nearly one quarter of respondents reported that they spent 5-10% of their PD time outside work hours. Most respondents rated the quality of their PD activities as poor to fair and most were required to fund the majority of the costs themselves.

SUCCESSFUL ELEARNING PROFESSIONAL DEVELOPMENT

If the education sector is to meet the forecast challenges of this century, initiatives in elearning will need to address more than the current focus on technology. A number of research projects and surveys related to elearning skills have identified three skill sets that need to be included in professional development activities. These include:

1. expertise in technology,
2. pedagogy , and
3. business strategy.

Teachers need to know how to use the technology. However, merely introducing teachers to the technology without considering the other two skill sets is not adequate. Successful PD activities should also provide teachers with models of elearning. They need specific models and examples of how they can incorporate technology into their educational environment. As professionals, they will decide which of those models they will adopt, which of those models they will adapt, and which of those models they will discard.

Formal PD activities need to be structured so that the teachers have the opportunity to develop an understanding of elearning and the elearning environment. Not only do they need to know how to develop elearning materials, they also need to know how to deliver the materials using pedagogical principles specific to elearning.

CONCLUSION

With the first generation to grow up in the digital age currently within the school system, our education sector is failing to meet their needs. We have schools full of technology literate students who think and process information differently from their technology illiterate teachers. If these teachers want to reach their students, they will have to change their teaching and delivery methodology.

eLearning as a method of delivering course material enables the teacher to provide up-to-date information fast. It gives the student the opportunity to multi-task, develop individual learning pathways, network with others, interact with content, and receive instant gratification and frequent rewards.

A major issue is that teachers are not taught the skills to teach effectively in the elearning environment. Current PD activities focus too much on the use of technology and fail address other important concepts.

Organisations need to consult with teachers and elearning professionals during the initial stages of elearning adoption. They need to support teachers by providing and funding quality formal elearning PD activities within work time. Success will come only when organisations are committed to elearning as a delivery method and are prepared to support their teachers in the development of elearning skills.

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