

## **ICT UPDATE THEMES FOR E-LEARNING**

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There are numerous themes to be used as principles for the development of e-learning in schools. These themes have been gleaned from an examination of the way Information and Communication Technologies (ICT) is treated in the media. The examples have been selected and grouped into themes either, because they directly refer to e-learning, or there are implications for e-learning in education and for the whole community.

The articles examined mainly came from the print media aimed for the general public during 2003. The identified themes for e-learning include

- knowing your market niche,
- fostering adaptability,
- being prepared for unintended outcomes,
- the question of funding,
- the need to communicate well,
- understanding knowledge management and
- giving what is new a chance to work.

### **KNOW YOUR MARKET NICHE**

Sometimes e-learning strategies are developed without careful thought about the process of learning and what the learners need to know. E-learning may not be suitable for everyone. For example, Alan Goggins wrote “If you want a classic craft to succeed don’t fiddle with it.” (Coggins, 2002). This is a classic story about how good violins are still made by hand. Coggins works listening to talk back radio with experts telling him and other business people: to keep ahead of the opposition, for the need for constant innovation investment in research and development, to have a willingness to be flexible, focus on the importance of thinking laterally and never stand still. Then he suggests the advice is of limited use to his profession because he is in a business “where my competitors have been dead for 250 years and they still outsell me.”

Coggin’s suggests

“In my work any attempt at innovation would be financial suicide, doing something radical would see most of my customers desert me and even the slightest deviation from the norm is looked on with disdain. In fact I’m ideally expected to carry on doing things in pretty much the same way as they have been done for the past three centuries.”

It is a message worth pondering. E-learning might not be for everyone but it is gaining in importance in a number of aspects of modern life. So it is important to know who the e-learning is for and is it the best way of learning for that particular group. Notwithstanding this clarification there are a number of projects and studies that provide substantial information from which we can draw ideas on developing new projects.

- One online teaching trial reveals there are issues in schools concerning technology inadequacies, insufficient computer skills in many teachers and students, and finding extra time for teachers to get organized. The Learning Online Project was trialed in eight schools

in Sydney. One interesting finding was that “Teenagers feel less inhibited during online discussions than in open classrooms and this can lead to learning - or embarrassment” (Lawnham, 2002).

- There is more to e-learning than just the course content. Gavin Plitz examines the cultural value in the global classroom. Specifically he refers to the vast number of countries represented by students who engage in online courses. Though there are some inequities: “a lack of bandwidth, the Achilles heel of e-learning, was taking its toll on students in disadvantaged areas” (Wilson: 2003f).
- Virtual Integrated Teaching and Learning Environment (V.I.T.L.E.) in Hong Kong uses Macromedia’s Flash to web cast two way video between students and teachers. This is a real time system which operates in conjunction with the traditional system of teacher’s uploading material and students downloading material. To work in Australia we need real two-way broadband: “No doubt the Australian telecommunications industry needs a decisively big stimulus into the fast lane” (Wilson: 2003g).
- Providers have to start putting excitement into e-learning for new approaches to be adopted in a positive way (Wilson, 2003i). This will allow new projects space to develop and improve by trial and error rather than being curtailed when the first problematic issue that arises.

To be effective in e-learning it is important that you understand and cultivate your market of intended group of learners. Examples in areas outside education show how widespread e-learning is becoming and in some cases how necessary it is. It is used in business for training, by environmental groups to spread their message (Goggins, 2003), in medicine to provide necessary information (Sinclair: 2003a) and in nursing homes to help elderly people keep their minds active – and in some cases help the late adopting nursing staff and administrators! (Jones: 2003).

#### **FOSTER ADAPTABILITY**

There are aspects of using ICT and the internet that are predictable and there are moments when there are a number of ways to do the same thing and people get confused. To be a successful developer and user of e-learning activities you have to be adaptable.

How many times have you purchased a new computer or manual only to find out it is out of date quite quickly? I learnt early on, with the purchasing and using of hardware and software and the relevant manuals, to treat them all like the new car. The car immediately loses value as you drive out the yard, is superceded usually with in a month or so and accept the fact that you have to spend the money on service and repairs until you replace it. If you treat e-learning the same way you will become more tolerant and adaptable.

However, it is important to not solely ‘go with the flow’ if you wish to achieve intended outcomes. Some research from the use of e-learning in a business setting provides some useful insights. It is important to assess the attitude of the employers and the level of adaptability of the people in the organization for which you are planning e-learning. Research by Gringart indicates that bosses think older workers cannot adapt to new technology, are not worth training, are not worth training, are not interested in their work and do not have the physical strength and mental alertness of their younger colleagues. Dr Gringart then challenged this concept (as Peter Costello did in February 2004) by stating the efforts to retrain older workers were welcome but would not help if the employers’ attitude did not change (Nixon: 2003).

Despite some of the problems that such businesses can encounter there has been progress. For example, online accounting has been developing. Accountants are gaining easier access to broadband and this means they can lodge between 5-20 tax returns at any one time. Online tendering makes the process more transparent and the speed and efficiency is increased dramatically. It helped geographically remote companies reduce their costs of travel and the incorporate the savings into the tender (Head: 2003b).

So it is possible to foster adaptability by developing a new mind set and by trying to understand the level of adaptability in the workplace.

### **BE PREPARED FOR UNINTENDED OUTCOMES**

Yet despite some of the best planning and targeting of market groups, interesting patterns emerge that are not always intended. For example, there has been an argument that the web in Australia started with the environmental movement (Morgan: 2003).

In fact it has been argued that the web in Australia came from a very early and (my interpretation) specifically targeted e-learning strategy. Morgan (2003) has outlined a convincing case on how the adoption of the World Wide Web in Australia came out of environmental groups electronically communicating with each other about Terania Creek and other environmental issues of the day. "How the Web was Spun" places the origin of the internet in Australia on the far north coast in the wilderness of Terania Creek near Lismore. The internet service provider Pegasus grew out of the ecological battle of the day. Information was shared online and the activists were able to keep abreast of similar movements and global hotspots. For environmentally active groups, e-learning existed even before the concept was developed, to share environmental information and to keep up to speed with actual tactics and strategies used in environmental programs.

More recent research indicates that e-learning trends are not all they seem, for example, Cochrane looks at research by Charles Sturt University about the type of students attracted to e-learning. Women account for 58% of the university population and represent 61% of the participants of the online forums: some 52% from Melbourne and 36% from Sydney. Online activity drops off after the age of 20 and those 20-30 are the least likely to go online (Cochrane: 2003). This goes against the three factors that people said would inhibit online learning: that it is male dominated, that it only for the young and that those living in rural areas will be disadvantaged. If people need to be online they will find a way. (Wilson: 2003a)

So even if you know your market niche and foster adaptability you need to be prepared for the unexpected. Importantly this is understandable because the ICT and the face of e-learning changes quickly. And these changes are impacted upon by the level of available funding.

### **THE QUESTION OF FUNDING**

The question of funding refers to not only the provision of software, hardware and professional development but also the employment of people, preferably teachers, on a longer term basis to develop, maintain and to expand e-learning. Such investment in human capital is crucial to facilitate the culture of change required to create the paradigm shift to e-learning. Unfortunately for education it is not a level playing field:

“Initially at least, business can afford e-learning on the cheap, whereas education cannot”  
(Wilson, 2003j)

Funding needs to be set at a national level indicating that e-learning is a priority. Take for example, a project in the United Kingdom. In a program to develop musical e-learning an interesting analogy is made. “Is e-learning as important as food? Almost. Only food is consumed more than education even though learning should be life long too.” The UK government sees online learning as big business. The UK government spent \$120 million subsidizing online school curriculum and is now throwing another \$720million. Schools are given a lump sum and a payment per student is made. (Wilson: 2003b)

Then there is the question of the equity of funding and it is not an easy issue with which to deal. It tends to raise more questions than answers. One article suggests that the “private purse makes a mockery of public lip service to e-learning”. In NSW the state schools cannot afford the technology that is in the private schools but does this mean that the private schools should not provide the technology? Or can the state schools afford more and it is more an issue government priorities?

“Our economy can’t afford the waste of human capital this two tiered education system will produce. It is time the Federal government underpinned e-learning with the states.  
(Wilson: 2003c)

Investment in e-learning human capital will only happen when we address two other important priorities in education. The twofold crisis in education is the 25 000 teacher shortfall and the number of students struggling with the unaddressed child welfare problems. The incorporation of e-learning may help address both issues. Eric Wilson argues that even though e-learning is no panacea it will give back to the teachers the thing our education system most lacks, one on one personal time with students. It might not seem so but e-learning in e-classrooms provide kids far more personalized and effective tuition, ultimately leading to a productive economy (Wilson: 2003d) and pastoral care.

As well as more teachers we need more investment in professional development. Your future is at your fingertips, with the right training (Wilson: 2003h). For example, Intel’s Teach for the Future is a professional development program launched in 2000 and runs in 26 countries and has trained more than 650 000 teachers. Victoria is the first Australian state to be involved with 20 schools. Staffed by two senior trainers per school (Turner: 2003)

Also, class based e-learning could learn from the growing investment in distance learning. For example, the new wings for schools of the air are a good model to adapt. E-learning comes to the bush with new technology meaning students will be able to see their teachers online. As part of a \$17 million project three School of the Air teaching studios in Dubbo, Broken Hill and Port Macquarie and two distance education centres in Darwin and Alice Springs will be supplied with new equipment. Initially, due to costs and bandwidth limitations, students will not be able to see teachers. It is called the SatLearn E-learning Project based on a product made by One Touch in USA and modified by Optus for Australia. It enables online sharing of applications and course material: an electronic whiteboard the student and teachers can work on, and secure high speed internet and email chat facilities. Another \$8 million came from the Federal Government through the National Communications Fund and the NSW DET contributed \$6 million “in kind and real money” (Murray: 2003).

Financial support for e-learning is an investment in the future. There is a credible view that if education problems are not addressed soon, Australia faces a financial crisis. A request for 10 billion a year for e-learning in schools has gone to Mr Costello otherwise the country will go broke. It is needed because

“the arrival of e-learning , as opposed to mere ‘internet access’ will turn schools upside down - and not a moment too soon” (Wilson: 2003d)

## **WE STILL NEED TO COMMUNICATE WELL**

The combination of information overload and the Internet makes communication skills more essential than ever. Accordingly, it is important not to underestimate the importance of the following quote:

“Creativity’s precious, but good English is beyond value.” (Hewett: 2003)

The technology needs to be used in an appropriate manner to maximize the communication of the message. We need “articulate, self assured speakers” (Hewett: 2003) who can strike a balance between being themselves and making some, but not too much, use of “high tech gadgets” when making a presentation” (Robinson: 2003).

Take for instance the use of PowerPoint Presentations. If Tufte’s view is true, we have to be careful that e-learning does not go down the same path.

“in the classroom to the board room the PowerPoint slide show is turning even serious subjects into bland dumb downed sales pitches” (Tufte: 2003)

Courses in communication have been developed where “tech skills meet people skills”. This is also known as the development of “soft skills”. These soft skills courses are needed because information technology workers have developed a reputation for not being particularly user friendly, that is, they lack soft skills. Now people are required to work closely together to the end of the project. “We want to make people aware of how to build a fire within people not under them” (Wilson: 2003e).

Communication is very important to sell the idea of e-learning, to outline the procedures and strategies for implementation and to facilitate effective e-learning. In conclusion,

“Even a scientist or a computer geek needs to be able to explain their ideas in easily accessible English.” (Hewett: 2003)

## **UNDERSTANDING KNOWLEDGE MANAGEMENT**

There are 700 billion documents on the web and how much of it is read? (Adams: 2003)

Knowledge management is evolving and it is at the core of ongoing e-learning. Knowledge allows businesses to operate efficiently, effectively and competitively and schools should be no different. There are tools, technologies and techniques in which an enterprise can invest to create a knowledge

management infrastructure. But there is no one right way of doing it (Head: 2003c). We have to learn how to store, sort and collate information as well as discerning what to use.

“Spinning Around” is an article which looks at information overload (Adams: 2003). Research carried out claimed that on average the person at the office handles 46 phone calls, 25 emails, 16 voice mails 8 inter office emails, 16 faxes and 9 mobile phone calls. This is a really important issue for the teacher. Sure there is an overload, however, in the long term there can be savings and greater efficiency. In the meantime we need to develop skills to cope:

- 1) Learn to think better
- 2) Learn to plan better.
- 3) Learn to research better.
- 4) Learn to organize better.
- 5) Learn to create better content.
- 6) Learn to collaborate better.
- 7) Learn to network better.

### **GIVE WHAT’S NEW A CHANCE TO WORK**

In conclusion, it is crucial to manage the cultural shift required to allow new approaches to work (Head: 2003a). For example, in “Schools Transformed” there is a detail analysis of the implementation of Laptops into schools for students (Johnstone: 2003). Issues of equity and costs aside it is one of the more contentious issues in schools, particularly those who can afford to make the decision. Johnstone reports that

“It is happening. Slowly but surely computers are having a huge impact on our classrooms.”

He challenges the media to go out there and ask the teachers, instead of recycling “second hand out-of-date findings”, to see the pioneering work being done on our doorstep. This brings into focus the essence of this theme. Even if there are arguments against an innovation or a new idea, challenge it, be flexible and give the new a chance to work. Work through the issues and look at things from a broader perspective: educational decisions sit in a real world.

The relationship between the baby boomers and the younger generation has been addressed in a number of articles. A look at these will keep you well abreast of the way the media has been dealing with these issues in relation to the use of technology and allowing it to have a chance to work (Plüss, 2003, Heath, 2002, Korn, 2002, and Austin, 2002). The successful building of this relationship will go a long way towards accepting new ideas and applying them in an e-learning environment, especially if we develop a greater understanding and application of the identified themes.

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