Abstract

Organizations worldwide now recognize that eLearning can: improve the efficiency and effectiveness of teaching and learning; provide necessary flexibility to the teaching and training process, lower teaching and training costs; and significantly enhance the learning outcomes.

In particular, the rapidly emerging economies in the Asia Pacific region are showing a great deal of interest in adopting eLearning as a means to accelerate educational and corporate skill levels. For many of these countries, education and work force training are becoming a major limiting factor in moving economic growth towards more knowledge based industries. The adoption of successful eLearning solutions is therefore likely to play a key role in these countries in the near future.

The University of Auckland in New Zealand was one of the first tertiary institutions in the world to develop a web based eLearning platform. Over a period of some 10 years considerable experience has been gained in implementing eLearning solutions across all the faculties of the University. Further, some applications of eLearning in New Zealand and Se Asia will be demonstrated to exemplify the solutions approach to successful eLearning.

1. Introduction

Knowledge is being generated around the globe at ever increasing speed and the transfer of this knowledge to governments, organizations, corporations and educational institutions is becoming a major bottleneck. Modern eLearning, when applied correctly, has the potential to catalyze the rate of knowledge transfer. Recognition of this potential has resulted in eLearning now being on the radar screen of most enterprises around the globe. This trend is also driven by the ever increasing need for the renewal and expansion of student education, employee training and professional development.

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The University of Auckland in New Zealand was one of the first tertiary institutions in the world to develop a web based eLearning platform. Over a period of some 10 years considerable experience has been gained in implementing eLearning solutions across all the faculties of the University. Further, some applications of eLearning in New Zealand and Se Asia will be demonstrated to exemplify the solutions approach to successful eLearning.

The experience and technology platform of Auckland University in the field of eLearning is now being offered into Thailand and the Asia Pacific region through a spin-out company called eLearnings Asia Pacific Ltd.
throughout the New Zealand education system. This paper is intended to share the experience of implementing eLearning gained at The University of Auckland and more recently through the University owned spin-out company, eLearnings Asia Pacific Ltd.

2 eLearning CHALLENGES

The key elements required for the implementation of a successful eLearning solution are shown in Figure I. These include the enabling technology platforms such as a student/trainee management system (SMS), a fully customized learning management system (LMS), tailored content, high quality instructional design, professional development of teachers/trainers and assessment tools. All of these elements need to be carefully matched to the particular situation and fully integrated to provide a complete eLearning solution which should be learning led and technology enabled.

![Figure I. Key Elements of eLearning Solutions](image)

Clearly, there are both “hard” technology elements and “soft” human aspects that comprise this solution. In our experience there is usually a strong “top down” vision and support from the senior management of an organization to implement eLearning and thereby rapidly enjoy the benefits. Further, there is very often a “strong pull” from students and trainees to have an eLearning platform as a powerful supplementary learning tool to complement the teachers and trainers. However, eLearning introduces a significant change in the teacher or trainee role which can often evoke resistance and uncertainty as is illustrated in Figure II.

![Figure II. Change Management in eLearning](image)

Recognition of this potential resistance or uncertainty at the teacher/trainer level of an organization and providing “change management” support is critical to the successful implementation of eLearning solutions. The role of the teacher/trainer changes from traditional rote learning to that of a coach and facilitator in an eLearning environment. The students have more scope within an eLearning environment to learn at a pace that suits the individual and the teacher/trainer has more time to assist the slower learners.
Another key element of success is the quality of instructional design used to upgrade content for application in eLearning platforms. In many organizations the instructional design task is given to teacher/trainers or IT experts without an educational background. Instructional design is a relatively new skill set that requires a strong background in education and understanding of learning theory as well as a facility with modern IT macromedia tools.

3. E-Learning Opportunities in the Asia Pacific Region

In our view there are some exciting opportunities to apply eLearning solutions into the Asia Pacific region. The region currently enjoys a high rate of economic growth but many of the educational systems and skill development resources are stretched to their limits. To sustain this rate of economic development and more importantly move towards a knowledge-based economy, high quality education and new skill development will be crucial. In this regard the application of modern eLearning solutions provides the region with an opportunity to “leapfrog” relative to developed countries.

The opportunities to apply eLearning solutions are remarkably broad spanning across all levels of education including early childhood teacher training, primary and secondary, tertiary and professional development. Other areas include government and local community organizations, health care, defence and corporate training. In addition, there is now good evidence that, when implemented correctly, eLearning can result in major cost savings and enhanced learning outcomes.

This is exemplified by the fact that eLearnings Asia Pacific has projects in many of these areas spread across Thailand, Malaysia, Singapore and New Zealand. Perhaps one of the most exciting developments is the pilot eLearning project with 5 public schools in the region of Bangkok under the jurisdiction of the Thailand Office of the Basic Education Commission (OBEC). These schools have started a supplementary mathematics course using eLearning to both gain experience in the use of this learning platform and to provide some comparative data with conventional learning techniques. The enthusiasm and support from the senior management of OBEC, the directors of the schools, the teachers and the students towards this project is most encouraging and provides a solid basis for success. A similar pilot project involving both mathematics and science content with modern instructional design is also being launched in a private school in Malaysia. Other projects in SE Asia currently in progress in SE Asia involve healthcare organizations, private corporations and education management centres.

4. Future Developments

There is good evidence that highly interactive learning can dramatically increase learning outcomes as shown in Figure III. eLearning techniques with advanced instructional design involving 3-D graphics, streaming video, gaming technology and self-assessment offer a very efficient and cost effective means of creating such an interactive learning environment.

![Figure III. Enhanced Learning Outcomes with Advanced Instructional Design](image-url)
In fact, given the high level of interactivity and 3-D graphics quality that are now offered to the youth of today in the computer games market, it is not surprising that there is a strong student demand for the use of similar quality multimedia technology in education. Closing this “multimedia education gap” in the future could have a major impact and lift learning outcomes in the field of education very significantly. These multimedia tools enable complex mathematics and scientific principles to be demonstrated in a manner that is well beyond the conventional classroom teacher tools. Given that these subjects provide the foundation of knowledge-based economies the introduction of these new multimedia tools through eLearning platforms could potentially have a very significant positive impact on economic growth.

Finally, countries and organizations in the Asia Pacific region that are early adopters of modern eLearning solutions with careful attention to both the “hard” and “soft” elements including the required change management at the teacher/trainer level will likely have a significant competitive advantage in the future.