The Development of a Teacher Training Curriculum
Utilizing Learning Resource Packages in Open and Flexible Lifelong Learning: Australian Country Report

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INTRODUCTION

There has been a dramatic increase in the use of on-line learning throughout the world in the past decade. This is for a number of reasons - students learn better when:

- they are in charge of and actively involved in the process of learning;
- they are easily able to engage with real world issues;
- they are able to access large amounts of information; and
- they can learn at a place and pace that suits them.

Australia has been quick to utilise the benefits such learning offers. The education sector has been able to take advantage of a willingness on the part of Australians to be life-long learners and also a high level of domestic computer use.

EDUCATION IN AUSTRALIA

There are four education sectors in Australia: adult and community education; higher (university) education; vocational education and training; and schools. Both government and non-government providers (such as church groups, community organisations, and private providers) are involved in the education sector.

Teachers in Australia must be registered to teach in schools. In order to be registered, teachers must have a suitable qualification received at either a teachers training college (most of which are now incorporated within universities) or at a university. In most states, this can be done as a four year undergraduate degree or as an additional two-year qualification to an undergraduate bachelors degree. In-service training occurs much more sporadically and on the basis of need. In each of the four terms in the school year, one day is set aside for teachers to receive professional development.

While it is not compulsory for trainee or practising teachers to undertake a course in the use of educational technology, such an understanding would be embedded in all aspects of their pre-service training.
The use of technology in education has increased dramatically in Australia in recent years. Almost all schools in Australia, government and non-government, have access to computer hardware and software. According to a recent report (McRae 2001), more than $1 billion has been spent in Australian schools on computing hardware, software and networking since 1996. The level of access ranges from computers for each student in the student’s classroom, to computers in a computer laboratory or library. In addition, most teachers are computer-literate.

There is a view in Australia that computer technology should act as a tool to assist learning, rather than as an end in itself. It has, therefore, been used as both a resource tool and as a pedagogical tool by the four education sectors in Australia.

**The use of technology as a resource tool**

There are many ways in which technology is used as a resource tool. These range from the use of computers for word processing and email, to the use of the Internet for research. One example is EdNA - the Education Network of Australia. The Commonwealth Government of Australia has supported EdNA since 1995. EdNA operates across all states as a resource for the Australian education community. Through EdNA, information and resources about education (materials, reports, good practice guides, etc.) are shared by teachers, teacher trainers, education researchers and students. The web address for EdNA is http://www.edna.edu.au/EdNA. Examples on this web site illustrate how students learn to design and evaluate websites, research using on-line databases and use email to communicate nationally and internationally.

Another interesting site is the ECOHOT line at http://www.ens.gu.edu.au/ciree/ECOHOT/index.html. This is a site aimed at secondary school students to assist them in researching and writing assignments on environmental topics. It provides a guide to using the internet in research, examples of different assignment writing styles and hotlinks to hundreds of sites on over 50 environmental topics.

**The use of technology as a pedagogical tool**

Australia has long been involved in exploring and trialing strategies for enhancing distance education as many learners have geographically been far from the source of education. This has provided a solid basis for the introduction of flexible approaches to the delivery of education throughout the country. Many universities, colleges of training and further education, and adult and community education organisations now utilise flexible modes of delivery in order to best meet their students needs. However, since technology here is a tool, materials must still be developed using sound educational principles that provide opportunities for intellectual processing and intellectual challenge. Materials should provide for the levels of abstraction outlined
in Bloom’s *Taxonomy of Educational Objectives* (Bloom 1956), that is: knowledge, comprehension, application, analysis, synthesis and evaluation.

Much of the technology dependent material that has been developed has a topic-specific focus. However, a large amount of this material is also interdisciplinary to match the interdisciplinary key learning areas in Australian curriculum documents. An example of this is the *Teaching and Learning for a Sustainable Future* resource. This is a multimedia professional development guide designed to be used by teachers, teacher educators and student teachers. It is available in two forms through accessing a web site http://www.unesco.org/education/tlsf and as an Internet CD-ROM. It is available in two forms in order to maximise its dissemination and adoption in teacher education at both pre-service and in-service levels.

*Teaching and Learning for a Sustainable Future* is designed to enable teachers, even in isolated locations, to develop an appreciation of the emerging concepts of sustainable development and education for a sustainable future on their own or in small self-study groups.

The objectives of *Teaching and Learning for a Sustainable Future* are to enable teachers to develop:

- an appreciation of the scope and purpose of education for a sustainable future and how the subjects they teach can contribute towards this;
- an understanding of concepts and themes related to sustainable development and how they relate to the school curriculum; and
- skills in using a wide range of interactive and learner-centred teaching and learning strategies that underpin the knowledge, critical thinking, values and citizenship objectives of education for a sustainable future.

Achieving these objectives will enable teachers, teacher educators and student teachers to reorient curriculum and teaching so that the learning experiences of school students help them to envision sustainable futures and actively promote their capacities for thinking creatively about living in sustainable ways. In addition, the use of this resource teaches the learner about using such technology.

The 25 modules in *Teaching and Learning for a Sustainable Future* have been written to a common format to facilitate ease of navigation and use. Each module is based upon:

- a common set of five headings - introduction, objectives, activities, references and acknowledgments;
- a navigational structure which facilitates choice as to the content-focus and sequence of their learning activities by providing multiple access points to information, as well as multiple sources of information (through the use of a common navigation bar, banners and icons as visual alerts to various options); and
- experiential learning strategies that invite learners:
to analyse and interpret information in a variety of forms (e.g., text, tables, diagrams, and linked WWW-sites);

• to apply the ideas they develop to their own curriculum and teaching contexts and practices; and

• to reflect on these ideas in relation to their deepening appreciation of education for a sustainable future via a Learning Journal.

*Teaching and Learning for a Sustainable Future* also provides links to numerous Internet sites in order to provide multiple perspectives or alternative viewpoints. These links can be used:

• as extra sources of information;

• to enrich critical thinking about the emerging concepts of sustainable development and education for a sustainable future;

• as additional and alternative sources of professional development; and

• to enrich content and provide information in non-print modes for developing learning activities for students.

**CONCLUSION**

These examples show that technology can be used in a positive way to enrich the educational experience of learners by expanding their access to resources and through the use of sound educational and design principles in the development of materials.

**REFERENCES**


Source: [http://gauge.u-gakugei.ac.jp/](http://gauge.u-gakugei.ac.jp/) 09/2001