The Vintage Years of eLearning in New Zealand Schools

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INTRODUCTION The term "eLearning" has been used in a variety of contexts in New Zealand schools and has been described by a variety of different terms, e.g., "computers in education," "telelearning," "telecommunications," "distance learning," "open learning," "flexible learning," "online learning," "virtual learning." These terms are linked by a common purpose and desire to communicate with other people across time and space to enhance a range of educational opportunities.

The birth of eLearning in New Zealand schools occurred when teachers began using computers in schools. This was when electronic mail was the prevalent interactive medium, well before the arrival of the graphical web Internet interface. This was a time of eLearning pioneering sprit, imagination, and innovation. A look back to events at this time reveals a wealth of rich learning experiences for teachers, students, and government officials.

A LOOK BACK TO THE 1980S AND 1990S

During the early 1980s computers became increasingly common in New Zealand schools and an enthusiastic group of teachers, predominantly men in the mathematics and science areas, began to explore the possibilities of using these tools in their classrooms. These computers were used as writing tools, instructional learning tools, or tools to explore computer programming. The Department of Education responded to this emerging trend and set up the Computers in Education Development Unit (CEDU), which began operation on 1 April 1984. The role of the CEDU was to provide training and direction for educational computing in New Zealand.

In 1986 the Department of Education report *The Potential Educational Benefits of Electronic Communications Technologies for New Zealand* was released. This comprehensive document examined the range of telecommunications systems available in New Zealand, Australia, and Britain. The report also considered what was happening with electronic mail and included some recommendations for future development. The report emphasised that the Department of Education had an obligation to recognise the need for new technologies, something which had been happening since the late 1970s in Britain, where financial backing came from both government and industry. After reviewing electronic mail

activity in five different schools, the report issued three warnings:

1. The importance of teacher training was emphasised as being a crucial factor and a function of any organisation that lends its support to the use of electronic communication.

2. If people were to see electronic communication as just an electronic pen-pal system, it would not maintain student motivation.

3. New technologies were not automatically better by definition. Electronic mail, for example, had to provide a cost-effective service to education and be educationally justifiable.

The report highlighted the advantage of New Zealand's education system being governed by one body so that any initiatives and commitment to electronic communication would be a national rather than a regional one. This was in direct contrast to education systems in Australia and Britain, which had a more devolved structure. A further difference became evident when it was observed that both Australia and Britain were in the process of investing in computer hardware and software. In contrast, computers in schools in New Zealand had been provided by the hard work of parents and a variety of fund-raising activities within each school and not by central government. Requests for funding for hardware and software would not be realised for many years, and this was often perceived as a barrier to change by some teachers. It could be argued however that the emphasis the government placed on teacher professional development was an important investment in eLearning for the future.

NEW ROLE FOR CEDU The
Potential Educational Benefits of Electronic Communications Technologies for New Zealand report (Department of Education, 1986) recommended that the Department of Education, through CEDU, work in conjunction with education and curriculum officers, teachers, and students to establish specifications and recommendations for a New Zealand electronic mail system for schools. The result was the establishment of a user group called CDU on Starnet, an electronic mail system operated by the New Zealand Post Office. At that time it was operating as a communication network for government, industry, and commerce. Based on international standards and conventions of specification, it allowed international mailing facilities. Ann Frampton, a CEDU staff member, was appointed as the system manager to oversee this email development in schools. CEDU was given the role of electronic mail teacher training, which complemented their role to provide national educational computing information and training.

CEDU regularly sent newsletters to schools, and the first mention of Starnet was in newsletter 9, term 3, 1986. It gave details of the equipment required and where to get help, and stated the charges of an initial $30 per mailbox, $2 a month box rental, and 35¢ a minute online charge. It was stated that electronic mail and the exchange of word-processed files both nationally and internationally for both students and teachers offered great potential, but no mention was made of how this could actually happen. Teacher

Education Centres nationally were to join Starnet and it was hoped this would allow teachers to keep in touch with their local centres.

Increasingly, New Zealand primary and secondary teachers and students were introduced to the use of electronic mail in classrooms. Utilising a telephone line, computer, and modem provided the opportunity for them to extend the boundaries of their classrooms and communicate with their peers in a number of countries around the world. CEDU strongly promoted the use of the Starnet system, and many teachers who had access to computing technology at that time were eager to leap on the new bandwagon. Initially, as teachers began to explore the world of electronic mail, the activity appeared to have a lot to do with the technology and more limited regard for students' learning needs and positive learning outcomes. On reflection this emphasis appears to be part of an evolutionary process, where teachers are encouraged to first learn to use the tools that they did not have when they were school pupils.

In CEDU's *Report on the Exploratory Studies in Educational Computing* (1987), a statement was made about how:

> The teachers in both electronic communications studies believe that children have little difficulty in understanding and using this technology at an appropriate level. Students are clearly highly motivated to write when electronic publishing is possible. Teachers and students are excited about the opportunities for development of multi-cultural awareness, afforded by international exchange of letters, stories and information of interest to the students. (p. 8)

There was no mention of links with the curriculum, merely a reflection of the continued high level of interest. It is unfortunate that more detailed results from some of these electronic mail studies still remain unpublished, as the opportunity to review what actually happened for teachers and for learners and their learning has been lost.

In January 1987 the Department of Education published *Computer Communications in Education*, as a result of the discussions of a working party at Hamilton Teachers' College. This resource booklet for teachers provided a valuable guide on how to get started, what was available, and information about some case studies. Any links with the curriculum were still not emphasised in this document.

By 1989 the CEDU newsletter number 16 was describing successful electronic mail projects to stimulate children's writing, such as the progressive stories exchange between Waihou Downs School and Brightwell School in England. This was a clear indication of the changes that were now occurring in some classrooms. Teachers and children were beginning to grow in confidence and take control of this new medium to interact with wider audiences.

As the number of schools and teachers who were utilising the new technologies rose, the need for support became far greater than had been anticipated and support for schools was beyond the scope of CEDU. The result was that CEDU went out of existence on 30 September

1989 and support was then provided through the advisory services attached to the teacher education institutions in schools and colleges of education across the country. This had the effect of decentralising what had been a small but coordinated team who provided national guidance and leadership. Responsibility for providing training to such a large number of schools soon became a daunting task for each of the Educational Computing Advisors, just as it was for the CEDU staff. These advisors worked tirelessly as demand for their time and expertise far outstretched their resources.

The demise of CEDU was also to signal reduced use of Starnet, as the Internet became more available. New opportunities promoted by a range of Internet providers signalled the arrival of business and industry as key players in the national eLearning scene, and this was to be a feature of development in the 1990s.

CHANGE IN CLASSROOMS

A computer provided access to the global classroom but, as Chapple (1992) highlighted, it also provided the opportunity for learners to learn from other learners. He saw this as being one of the most powerful ideas to be confronted by schools, and he observed that the role of teachers was changing. Traditional sources of knowledge such as the teacher or the library represented knowledge from an adult perspective and at best it was second-hand. A teacher who was prepared to fill the role of the facilitator and was not afraid of change could find electronic mail a powerful classroom tool, providing first-hand knowledge applicable to all areas of the school curriculum.

Chapple (1991) described the importance of a bottom-up approach where teachers and students used the technology to solve a problem. Chapple warned that the medium could become the message, and stressed the importance of establishing a clear purpose for the contact, as well as the need to ensure expectations are clear and there is strong commitment between both parties as part of the communication activity. He suggested:

> Perhaps computer mediated communication is at last coming of age as educators themselves learn that it has a significant role to play in student learning, that it is not an end in itself but a means to an end. At last the technology has respectability. (Chapple, 1992, p. 147)

Hugh Barr, in his 1991 article "Social Studies by Electronic Mail," believed schools had been slow to take advantage of electronic mail opportunities that had been available to them for more than five years. Barr, like Chapple, identified that the use of sophisticated pieces of technology does not in itself guarantee sound educational outcomes, particularly in learning situations lacking a clear structure or purpose. Barr (1994) believed teachers appeared too conservative or afraid to make changes from existing information-gathering methods, and he challenged them on this. If email had been first placed in the hands of social studies teachers who were, according to Barr, much more child and learning centred, then some painful learning experiences may have been avoided.

Barr's perspective and comments were important because, as a person who had vast experience in the field of

social studies, he was a relative newcomer to electronic mail. However, he had developed through his own research clear ideas about what electronic mail could do to improve a teacher's knowledge of a topic and in turn that of young children.

The new curriculum initiatives emerging at this time were challenging the role of the New Zealand classroom teacher and placing them in a more facilitative role, giving them the opportunity to validate creativity and the learning process in new and exciting ways. People like Chapple and Barr believed strongly that learner-centred education could be enhanced by using an eLearning approach.

New Learning Networks Develop

While electronic mail was being utilised in schools, other telecommunications tools were gaining momentum. Bulletin boards like K12 Net and FidoNet were gaining in popularity, along with a host of online databases that provided access to information generally only available in schools as written text on paper.

The K12 Net was a school-oriented bulletin-board system brought to New Zealand by IBM. Elizabeth Probert, an English teacher and the teacher in charge of the Library/Information Resource Centre at Pakuranga College, was a dedicated user of K12. She described how:

> I have used K12 at school in three ways—with junior English classes who write short 100 word news stories to post in Global Village News (GVN), with a fourth form class who wanted information about life for other 14 year olds around the world and

with the German teacher who used the German area with her German language students. (Probert, 1994, p. 34)

The process of sending and receiving information on K12 involved nightly downloads and uploads of messages ready for the staff and student the next day. These bulletin boards were carefully moderated and Probert described how in K12, "People sending inappropriate messages are smartly told off in no uncertain terms" (1994, p. 33). When describing her enthusiasm for using K12, Probert warned other teachers, "You may well become addicted and find that 3 hours can seem like 3 minutes once you get started" (1994, p. 37).

Te Wahapu, a member of the International FidoNet Association, was launched in May 1991. Daphne Ropiha (1991) identified how Te Wahapu was set up for two specific purposes. Firstly, it was to provide a forum for exchange for teachers within the area of Maori language and education. Secondly, Te Wahapu would provide an interesting and stimulating environment for schools "to exchange creative and expository writing in the Maori language" (p. 47). It was also a significant eLearning development because of its use of Maori as the language for commands and system messages, and the fact that it provided access to a range of databases (Benton, 1994). Benton described how:

> Registered members of Te Wahapu whanau who agree in writing not to allow the material to be used for commercial purposes may download the latest version of the database, together with a program to enable them to

search it on their own computer. (1994, p. 39)

The response from Te Wahapu users was, according to Benton, very positive and "Native-speakers found the universality of Maori on the system both affirming and intriguing," as it had been difficult for some "to come to grips with supposedly English-based computerese" (1994, p. 39). The ability to download regular updates to the database and to link with other people in Te Wahapu was a groundbreaking development in eLearning in New Zealand and a treasure that was held in high regard by its users.

Partnerships between schools and business were to provide resource benefits for schools, as in the CASATECH case (McMahon, 1996). Carol Moffatt took up the position as the principal of Oxford Area School in Canterbury in 1991 and was faced with falling senior school numbers. Her interest in information technology and her industry links enabled her to group six schools in the region and form CASATECH in 1994. They used new information technologies to enable teachers and students to communicate across the geographical barriers, forming regular online classes. In 1996 CANTATECH was born when four other form 1 to 7 schools joined the group. This pioneering work by Moffatt with the CASATECH/CANTATECH online networks was to provide a successful model for online school collaboration and networking for future school eLearning clusters.

THE AGE OF THE INTERNET AND THE 1990S The call from schools for government to recognise the

need for a much more focussed and strategic approach was acknowledged in 1993 with the first of the Information Technology Teacher Professional Development contracts funded by the Ministry of Education. Later these were referred to as Information and Communication Technology Professional Development (ICTPD) contracts. There was a heavy emphasis on telecommunications in the majority of early contracts, and this was due in no small part to the high level of sponsorship and support from Telecom New Zealand at that time. The Telecom Education Foundation established in 1993 facilitated the loan of equipment and resources to encourage the use of telecommunications in schools.

The important issues that emerged from this period were, to some extent, accurately documented and predicted in the report *The Potential Educational Benefits of Electronic Communications Technologies for New Zealand* (Department of Education, 1986). They were the importance of teacher education, use of electronic communications simply as a pen-pal system without cognisance of its teaching and learning potential, and the cost-effective uses of telecommunications education. These warnings were echoed in overseas experiences and reflected a period where schools were busy "doing computing" or "doing electronic mail" with few links with the curriculum.

Another critical event that affected the eLearning landscape in New Zealand was the draft release of *Technology in the New Zealand Curriculum* (Ministry of Education, 1993). This draft document was released into schools for comment at the end of 1993, with feedback gained throughout 1994 and early 1995. The final version of the curriculum

statement was officially released and launched in late 1995 and gazetted in February 1999 as mandatory for all schools from years 1 to 10. A new term, "information and communication technology" (ICT), one of the seven technological areas in the curriculum document, soon became part of teachers' vocabulary. What was significant was the inclusion of the word "communication," as this signified the importance of these tools to promote and enhance eLearning. The curriculum document highlighted the importance of using electronic networks for the collection, structuring, manipulation, retrieval, and communication of information in various forms. *Technology in the New Zealand Curriculum* (Ministry of Education, 1993) emphasised how ICT was part of a learner's technological knowledge, understanding, and capability to enable them to live and work more effectively in their society and environment. This document gave both ICT and eLearning a purpose and direction with their own knowledge base and a clear link with society. No longer was eLearning something that was practised by the computing enthusiasts in some schools; it was to become a vital part of the curriculum planning and integration of all teachers. To support the integration of ICT, the Ministry of Education continued to provide support for ICTPD through an ongoing programme of school contracts, which have continued to affect the New Zealand eLearning environment into the twenty-first century.

INTO THE NEW MILLENNIUM

New Zealand is an isolated country geographically, but this isolation has been minimised to some extent by the efficient use of a range of eLearning technologies.

For many students, the hardware has become transparent; it is simply a tool to achieve a goal. As a window on the world, eLearning allows students in New Zealand to take part in the global information world with new partners among classrooms, teachers, students, and members of our communities.

One of the strengths of teachers and schools in New Zealand has been the way in which they have responded to the eLearning challenge by examining their own practice and how this can be enhanced by the use of new and different tools. From the early pioneering activity in classrooms in the 1980s, there was generally a clear emphasis on teaching and learning and the beginnings of a new eLearning pedagogy. There was no centralised scheme to facilitate widespread dumping of large numbers of computers into classrooms and suites, leaving teachers numb with anticipation. There was no clear political or economic expediency to drive the change toward the implementation of distance modes of teaching and eLearning. The result was a situation where there were steadily increasing numbers of students and teachers in New Zealand classrooms becoming excited about what eLearning could offer them.

The New Zealand approach to eLearning in schools has placed a strong emphasis on teacher support and the development of a pedagogy that can justify and sustain ongoing resourcing and development. While the 1980s began a period of do-it-yourself eLearning, the 1990s saw a period of recognition for the use of these new tools and practices with support from both government and the telecommunications and computing industry.

When speculating on the future of eLearning in New Zealand, it is possible to imagine new configurations of classrooms, schools, and the technologies they will contain. There is little doubt, based on what we have seen in the past twenty years, there will be some significant changes and the environments will be different in 2023. What we will hopefully still be able to recognise and identify with are learner-centred teaching practices ·that have been made possible by the integration of eLearning, in whatever form that might be. Finally, the words of Ann Frampton, the· CDU Starnet system manager and one of the leading pioneers of electronic mail in New Zealand schools, sum up what eLearning educators will expect to see in the next twenty years:

> The application of electronic mail to expand the available audience for children's writing, and for sharing projects and research with children in another part of the world is well accepted these days, but the possibilities do not stop there. (1990, p. 45)

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