New Zealand’s Virtual Learning Network (VLN)

Location
New Zealand

Aim
The aim is to establish an online environment supporting asynchronous and synchronous learning across New Zealand and beyond in-line with the Ministry of Education’s s-Learning Action Plan for Schools 2006-2010 (Enabling the 21st century learner).

Objectives:
• Increase and enhance the capability of teachers, principals, education providers, and Ministry of Education staff
• Support staff to become confident users of video conferencing and other communication technologies for teaching and learning through professional development
• Provide advice and leadership to staff and principals to develop quality online networked teaching and learning environments
• Initiate and coordinate collaborative partnerships between schools, staff, principals, and education resource providers

Rationale
New Zealand has 2700 schools, the majority of which are in rural areas with under 100 school children. Between 1920 and 1994, a paper-based correspondence school was responsible for the education of isolated primary children and for extending the limited curriculum of the smaller schools throughout rural New Zealand. By 1994, the correspondence school was trialling telecommunications technology, and in 2002, the Ministry of Education funded a video conferencing bridge between schools, enabling “a sense of immediacy and ‘presence’ for all participants.” (LCO Manual, 2005). In response to demands coming from schools for greater support in the use of video conferencing, and in anticipation of the need for coordination of online classes available through clusters and nationally, the National Virtual Learning Network Brokerage Service was set up at the end of 2002 (Reisch 2009 Breeze).

Description
Supported by the Ministry of Education, the Virtual Learning Network is a community of primary, secondary, and area schools plus tertiary organizations, community, and government ministries and agencies across New Zealand that share expertise and professional learning, classes, and resources. Facilitated by 13 ePrincipals and supported by two senior advisors, collaboration is supported by the same tools offered to students: video conferencing, mobile phones, face-to-face events, discussion forums, blogs, wikis, and other web2.0 tools.

One of the most important roles of the network is to enable a brokerage system supported by a time-tabling database by which schools in clusters (a group of between 6-10 schools) are able to share classes on a like-for-like basis, in order to extend the range of subject choices available to students. Clusters tend to be organized by geography or reflect special character networks or educational philosophy, such as schools that teach in Maori, Catholic schools, and Montessori schools, and are bound together by a verbal agreement, including a set of verbal protocols they must adhere to and are issued with before they join.

Other current activities of the network include:
• Supporting other ‘out of school’ programs and less formal events such as virtual field trips, international collaborative class projects, and inter-school competitions.
• Expanding the eLearning tool box to include asynchronous and other synchronous tools such as web conferencing and session recording services, ePortfolios, learning management systems, and eLearning authoring tools.
• The provision of Professional Learning opportunities, connecting teachers, the advisory service, and experts in their fields.
• Encouraging a move away from the delivery model of learning to a collaborative model of learning where asynchronous tools are as important as synchronous ones and video conferencing is not the only synchronous tool used.
• Holding a monthly meeting between ePrincipals and VLN advisors via video conference to share best practices and access expertise where it is not readily available locally.
• ePrincipals working with schools, staff, and students to share best practices and support the needs of all within the cluster.
Potential benefits include:

- Schools are enabled to feed off each other’s strengths. Each cluster can usually offer the same range of subjects that are offered by the biggest schools in NZ, in addition, they can link with tertiary institutions (for staff Professional Development and student opportunities) and with students/schools outside the eLearning community.
- eLearning opens up opportunities for development and sharing of alternative educational resources.
- Video conferencing can lead to inter-school moderation and improved professional support of teaching staff.
- Greater cooperation and collegiality between schools.
- Schools can take on a new role as community education and communication hubs.

The VLN Classroom Experience

A typical distance learning class has a teacher based at one school and up to 12 students; some participating virtually, from up to five other physical sites, (coordinated by and attended from the local school), and some in the physical classroom. Students take part in lessons and activities four times over the school week with many classes comprising a video conference once a week supported by a mix of online and offline asynchronous resources. The classes available are surprisingly varied and are not limited to theory; one of the first video conferences to be offered was physical education and children can also enroll for classes in equine studies, music, German, and chemistry amongst many others. Teachers aim for “a rich and participatory learning experience for students with debates, experiments, and group work much the same as in any other kiwi classroom” (Allott McPhee, 2009).

Scale

260 schools, 213 teachers, 1400 children, 150 online classes, 13 school clusters (Reisch 2009 Breeze). While the video conferencing bridge was originally set up to support rural schools, urban schools are also beginning to show interest in what the network can offer.

Staffing

- Two Virtual Learning Network manager and advisors
- A support technologist
- 13 ePrincipals who work directly with the 13 school clusters

Cost

Funded by the Ministry of Education, the project costs comprise:

- Salaries for the ePrincipals, manager, advisor, support technologist
- Adobe Connect license for 200 live meetings
- Other tools are open source
- Web development: negligible
- Provision of a video conferencing bridge for three years, facilitating video conferencing between up to 200 schools: $2.7m (Harre, 2003)
- Professional Development

Price

NA
Leading Practice

- Linking schools according to shared beliefs about teaching and learning or core activities rather than by geography.
- National music classes, bringing in outside organizations—an opportunity to communicate nationally.
- Brokerage service enabling the sharing of resources and building trust.
- The Virtual Learning Network (VLN) is running a number of smaller innovative pilots
  - Music Online: a hugely successful trial of out of schools music tuition (violin, clarinet, drums and voice), supported through video conferencing, web, and classroom sessions.
  - SPARC (Sport and Recreation New Zealand): three top New Zealand coaches linked to schools to offer expert coaching tips.
  - Professional Development for Rural Farmers: farmers visit schools to take part in training via video conferencing with Crown Agricultural Research and then return to their farms to continue their study using other online technologies.
  - Te Reo Project: a trial LAMS, Moodle, and Adobe Connect by 5 Kura (schools in which teaching is in Maori), to establish the effectiveness of online collaborative environments within bilingual educational settings.
  - Truly blended approach to learning with teachers running classes by whichever methods they wish, including web conference (Adobe Connect), video conference, email, discussion forum, paper-based materials, telephone, and virtual learning environment (Moodle). Classes often combine groups of physically and virtually present children. The network has never obliged teachers to provide classes through the VLN and when they choose to do so, the subject areas and methods are very much in their control.

Lessons Learned

Common challenges across schools
- High workloads for eTeachers
- Many schools still on 512kb

Tried and Tested Methods Are Most Popular
To most educators across the world, the prospect of preparing for and delivering a combined live and video conference class would be daunting, however in New Zealand the system is successfully embedded and supported at the school and government level, considered integral to the school and routine events. Schools are primarily motivated to join the network to make use of this system. This greatly contributes to its success, however, at the same time, can make introducing alternative, potentially easier, flexible, and cheaper but unfamiliar solutions, such as web conferencing surprisingly difficult.

Insight Through First-hand Experience
As a two-way system, video conferencing has made an important contribution to teachers’ understanding of the distance learning experience. Unlike the correspondence schools, the video conferencing system provides an opportunity to communicate directly over distance and receive immediate feedback from students (in the same ways as in a live classroom). In this way, teachers have become much more aware of student experiences, system affordances, and best practices.

Success Is In the Blend
Despite the sense of presence it provides, video conferencing should not be the only technology used. To be truly successful a combination of synchronous and asynchronous technologies is essential, creating a multi-channel learning experience for students, and greater flexibility to study at times that suit them.

Change Starts From the Bottom Up
Enabling pedagogical change at all levels, rather than technology and infrastructure is at the core of the team’s activities. The model and the project are not superimposed, which involves close collaboration with participants across the board and is beginning to recognize the importance that students play in the process. The network recently began working with a group of “Tech Angels”, students who are fluent in online technologies and act as mentors to their peers and other teachers, in order to change the way that teachers use technology in the classrooms.

Impact
Since the network's inception in 2002, the use of video conferencing has grown from eight to 260 schools.
Community
• The Virtual Learning Network offers an opportunity for the establishment of “professional learning communities”, for example, through links to universities, groups such as doctors/nurses, farmers, government departments, and other members of the public.
• Students are more likely to remain in the rural community if their needs can be met at the local school. In some instances this has resulted in the growth of rural communities, which in turn can have a significant impact on the rural economy and can reduce family stresses, children having to travel long distances to school, and the cost of boarding.

School
• Retention rates of students have improved (including at-risk, rural, and Maori students) in comparison to correspondence school figures, with very low rates (less than 10 percent) dropping out after the first few weeks
• Video conferencing is saving money for meetings and travel for staff (e.g. 1.5 hour-video conference as opposed to a full day’s work plus travel costs)
• Rural schools are becoming a more integral part of mainstream education

Students
• Every student in a cluster school (i.e. a small rural school) has access to a full range of subjects and most have their first choice of subjects.
• Extra opportunities are created for individual students, e.g. inter-school mentoring of scholarship students.
• Students are personally monitored by their distance teacher as well as by the supervisor in the home school on a regular/continuous basis.
• Students have greater access to learning Te Reo Maori (the language of Maori) and to learning through the medium of Maori.
• Students take on more responsibility—for getting to where they should be, getting the keys to the room and switching on equipment. The more formalized protocols around eLearning force them to become better organized.
• Students are tied into learning communities that go far wider than their own schools, with the resultant opportunities for cooperation and teamwork, competition, encouragement, and mentoring of each other.
• Students can continue with the same course/class if they transfer to another school.
• Students can access resources (and potentially lessons) asynchronously—i.e. learning at the time of their choosing. They can also access them several times if they want/need to—i.e. a more individualized way of learning.

Benefits to Staff
• The staff involved in the project experience huge professional growth. It gives most of them a new lease on life. The dynamic nature of Information and Communication Technology (ICT) means the staff does not plateau. They continue to develop professionally, are motivated to upskill, and have more opportunities for professional advancement.
• The project touches all staff in the school and provides a better basis for acceptance of the new pedagogy.
• “Isolated” sole specialist teachers have opportunities for professional collegiality with their opposite numbers in other cluster schools and reach mentor scholarship candidates and high-performing students in their specialist areas, when student numbers in their home school may not warrant this.

Technology
• Network
  Video and Audio Conferencing Bridge
  512 ADSL
• Hardware
  Video cameras, Monitors, PCs
• Software
  Synchronous: web conferencing software
  Asynchronous: Moodle, LAMs, Web2.0 tools, Discussion Forums
• Media
  Wide mix of media including text-based documents, graphics, animations, video

Conclusion
The Virtual Learning Network is a very small organization supporting and connecting a rapidly growing, increasingly complex group of schools, technologies, tools, and partners, in a multi-ethnic and multicultural society (Auckland is home to more than 180 nationalities; the most ethnically diverse city in the Southern hemisphere). While the network is only seven years old, the core team has been working together for significantly longer and developed strong and personal relationships with groups at every level, while clusters are lead by ePrincipals who actively own and support the project, providing cohesion despite disparate needs, attitudes, and stages of development. Their vision is for the network to be self-sustaining and Eddie Reisch believes it is at the point where
this would be possible. Increasingly, place does not matter for schools within the Virtual Learning Network, which is facilitating a new form of blended education that “draws on the methodologies of both face-to-face and distance education” and seems to be closing in on future plans for an educational system in which “teachers may or may not be in the same physical location as their students, and ICT will become an integral part of virtually every lesson” (Chris 2005).

Similar Projects
A number of U.S. and Canadian states have virtual schools but there is no equivalent to New Zealand’s brokerage system.

Read the Education Best Practices Whitepaper and other case studies at:

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