Supporting student participation

Connect

Number 95-96: October-December 1995

Student Participation in and through Information Technology

In this issue:

- The Internet and Student Participation
- I*EARN: International and Australia
- BushNet: MushMOO
- Practical Examples:
  - Wangaratta Primary School
  - St Hilda's School
  - Wendouree Secondary College
  - Nightcliff High School
- SRC Networking: E-mail and PASTA
- Reflections on Researching Student Participation
This Issue

This issue's focus is largely upon ways in which students can participate in real, valued and worthwhile activities through Information Technology - the internet in particular. The initial article (page 3) provides an extended 'editorial' introduction to this topic.

In collecting material for this issue, and in involvement in several recent and diverse forums, I was interested to note the increasing convergence of views upon ideas of student participation.

Here are three examples:

1. In this issue, I*EARN talks of students undertaking "projects designed to make a meaningful difference in the health and welfare of the planet and its people". (page 7)

2. At the recent Inaugural National Health Promoting Schools Conference in Melbourne, the keynote address from Denmark’s Bjarne Bruun Jensen talked of health promoting schools “teaching for democracy and with democracy”.

“The overall aim for schools’ health education is to develop pupils’ abilities to act at the personal and at the societal level: to increase their action competence,” he said. “If pupils have to contribute to the solution of today’s health problems, it follows ... that they have to identify personal and structural causes behind the health problems. And to develop their own possibilities to influence and change these conditions.” (The Health Promoting School in Denmark - this important document is available from Connect - see page 35)

3. As the Curriculum Corporation develops materials within the Civics and Citizenship Education Program, it is important that we recognise that students are already active citizens within their schools and within their communities - and that the materials need to enhance and support that participation. The Australian Curriculum Studies Association (ACSA) has already responded to the Curriculum Corporation’s draft framework, saying (interalia):

“The emphasis of the proposal appears to emphasise studying about social, political and economic structures and relationships, rather than encouraging students to learn through active participation in processes associated with decision making and involvement on a range of political issues. That is, rather than having a small section of the materials on ‘Active Citizenship’ (see Section 7.8) our view is that the opportunity to develop skills of participation (ie political literacy) should permeate, if not dominate, all of the materials..." (Curriculum Perspectives, November 1995, page 47)

Have a great end-of-year break. As we enter 1996, Connect invites you to return again with renewed energy to the continuing excitement of support for student participation - in your own area of involvement and from your own perspective. We’ll be there to help you tell others all about it.

Roger Holdsworth

NEXT ISSUE: #97 - February 1996;
deadline for material: end of January.
Student Participation Using Information Technology

The Internet

The articles in this issue of Connect provide documentation of some school-based projects that utilise contemporary communication and information technology. While it seems that the internet is the educational 'flavour of the month', what Connect is seeking to do with this issue is to raise the level of that discussion - to curriculum issues rather than technological issues, to active participation by students in the technology rather than its passive use.

The whole technology is also developing rapidly. There is only passing reference here to many aspects of the internet that will possibly become widely available in the near future. In the last 15 months for example, we have moved from blank ignorance about the World Wide Web, to perhaps feeling vaguely comfortable with its everyday use. In this issue, Connect has attempted to provide some introduction to the most common forms of the technology, and to explain what is already widely available, in simple terms.

Access - who we are - is, of course, a critical issue. Who has access to the internet technology? This question is both relevant for comparisons of the access available to different schools (and, behind that, to the differential access of students’ families) and for access within those schools. With limited resources within schools, to whom is access provided? Does the SRC, for example, have its own E-mail address? Who controls that access?

This issue will begin to explore some of those issues - at least by implication.

The Internet and Curriculum

Much internet use and discussion of it is dominated by the gee-whiz and flash of the technology. It is certainly amazing that primary school students can engage in discussions across half the world within seconds. The World Wide Web looks spectacular with graphics, audio and video built in. The possibilities for video conferencing using tools like CUSeeMe pose hardware and software issues that can easily become the focus of whole magazines and education roles.

And relatively few people within schools are familiar with the use of the technology - many may even be substantially uncomfortable with its use and 'esoteric mystery'. Noting that some (many?) students are more comfortable than their teachers only makes these teachers more uncomfortable.

However, good educational practice has always recognised that curriculum concerns must lead the discussion through consideration of how any technology can serve learning. This is essential to our use of this electronic communication technology. The discussion must start with consideration of what makes good learning - and then see how the technology can serve that learning.

The Internet, Curriculum ... and Student Participation

Now, let's add consideration of student participation - as a core aspect of what we mean by good learning. We then need to consider how the internet can extend the development of student decision making, through schools, about vital community issues.
forms of networking in comparison to meeting face to face? We need to establish some examples of these networks and to monitor and discuss what happens.

The technology also has implications for decision making and governance within classrooms and schools. The knowledge, familiarity and confidence that students bring to the technology has the potential to change power relationships within schools, as students are recognised as skilled curriculum and resource collaborators. As noted in articles in this issue, in several schools students are largely managing their Information Technology Centres, making recommendations on resources, organising facilities and teaching teachers.

**Student Participation in Curriculum Decisions and Implementation**

The internet can, of course, be used for essentially trivial curriculum ends. It can convey spectacular text-book information; it can provide an enormous and rapidly accessible passive library resource. The internet can be used to complete projects on pets.

It can reinforce models of the student as passive learner, as deficient in knowledge. It can continue ‘teaching’ styles that are basically ‘copy’, ‘summarise’ or ‘fill in the blanks’.

**INTRODUCING THE INTERNET**

There's much discussion about the Internet these days - and much of it throws terms at you faster than you can duck. So here are a few comments from a relatively new electronic communicator about my perceptions of it - and particularly about some of the aspects that are referred to in other articles in this issue. This is my attempt - as a user - to explain what I've learnt in simple terms.

The first thing to say is that there is no such thing as 'the internet'. There are a number of networks - a number of ways of connecting computers and conveying and getting information. To access these, you’ll need three things: a computer, a modem (to make connections through the phone lines), and a connection contract with one of the many connection companies. These companies will be able to provide or advise on the appropriate computer software that you’ll need. All three of these are developing rapidly, which makes providing lasting advice on purchases difficult - and that's probably another article anyway.

I tend to use three main forms of 'the internet':

**a) E-mail and Mailing Lists**

E-mail is simply electronic mail. You can send an electronic letter from your computer to someone else's computer if you know their electronic address. If you want to send an e-mail letter to me, you send it to: Roger_Holdsworth@muwayf.unimelb.edu.au

Note that all these addresses must be precisely correct - so be careful about getting the hyphens, dots, underscores and spelling right.

I subscribe to several Mailing Lists. Each one provides its subscribers with an electronic address and then the computer at this address re-distributes the message to everyone on the list. It's a way of sharing information and comments within a group of like-minded folk. For example 'netschools' (based at Deakin University, so its address is netschools@deakin.edu.au) establishes an interesting and useful community of people interested in use of the internet in schools and these people share information and advice.

Rather than provide all the details about what exists and how to subscribe, if you want more information, send me an e-mail message (I'm assuming that you would only be interested if you have e-mail access). Groups of Student Representative Councils might want to set up their own Mail List to link them into a SRC Network - this is explored a little more extensively elsewhere in this issue.
Student participation, of course, challenges such ‘learning’ as inefficient and unproductive; further, it charges that such approaches continue to place students ‘on hold’ for longer and longer periods, and structurally reinforce students’ images of themselves as irresponsible, dependent and unproductive (see Connect 88, August 1994).

Student participation has highlighted projects that recognise students as real and valued participants in their communities - today - and show how learning, responsibility, independence (and interdependence), and productivity are enhanced through such approaches. These projects involve students in research and action, and the creation of community resources. They have outlined how students negotiate curriculum in these areas, and how they test possible projects and their outcomes against criteria of:

- student decision making - they are seen as valuable by the students;
- community relevance - they provide something of value within their community;
- academic integrity - they meet curriculum and learning requirements.

So, internet technology provides possibilities for:

- Teaching/tutoring
  Students use the internet to teach about areas in which they have knowledge and skills. Such approaches also encourage students to develop their own learning in order to teach. For example, web-based projects on ‘Australia’ have developed interactive methods to reach out to students and adults throughout the world and to teach them something about which the students know (or can learn).

- Publication
  In the past, students have used the public media of newspapers, radio or TV to convey information and opinions. Some have had a limited audience and dealt with limited issues (‘minimalist’ examples of student participation - the student newspaper, the use of the school’s PA system) while others are widely available within their community and concerned with community issues (and thus present a more ‘maximalist’ version of student participation - the use of community radio or TV, publication of multilingual community newspapers and so on).

b) News Groups

If Mailing Lists are like having circulars of information delivered to your house, News Groups (or the Usenet) mean you have to connect to another computer (your local News Server) to read mail posted there. Apart from that, they are quite similar. Apparently there are over 8000 current News Groups in the world. The News Servers in your area (either commercial ones, or ones at tertiary institutions) subscribe to some of these. My News Server lists about 4500 News Groups: I regularly look at about 10 of these (I’m not particularly interested in topics like alt.fetish.kitty.litter). These include aus.education and alt.education.research - which both provide chat on education topics. People ask questions, provide information, comment (sometimes rudely) on each others’ suggestions, and so on.

To access these News Groups, you will need a software program such as NewsWatcher; again, if you want some clues on what exists, contact me by e-mail.

c) The World Wide Web

The Web is one of the newest and most spectacular ways to share information. With the Web, you can visit public information ‘posted’ on various individual computers around the world. Whereas the other forms of information involve only text, with the Web you can get text, graphics, photos and (if you have the appropriate software at your end) sound and movies. All this information is cross-linked, too, through a complex ‘web’ of ‘hypertext links’. In most programs used to look at the Web (they’re called Web Browsers), such as Netscape or Mosaic, there are highlighted and underlined phrases that are ‘gateways’ to further pages of information. Simply clicking once on one of these links connects you to a new page - on the same computer, or elsewhere in the world.

Web pages have been established by individual schools and around individual programs and so on. For example, the article in this issue of Connect on the Wangaratta Primary School Gender Project is reprinted from their Web page.

Some of the resources here are stunning. You can search databases, and respond to queries using interactive forms found on the pages.

There is a huge amount of information available here. The best way to make sense of it is to connect up and investigate it (surfing the net). The World Wide Web, in particular, is very user-friendly. But BEWARE: there are constant distractions of wonder. It is possible to spend hours looking around (in what seems to be only minutes). And all of that, of course, costs money.
Internet technology - the World Wide Web in particular - provides a further medium for publication. It can be read anywhere and by anyone, and this in itself can create a positive challenge to consider the needs of the audience. The extent of information available on the internet means that readers want to gain access to information or opinions of substance and meaning. Enormous possibilities exist for the creation of community resource directories, tourism advice, documentation of local histories and so on.

• Research and action

The internet provides possibilities for rapid communication and comparison of information. This has already been used in a variety of scientific and social projects - the collection of cross-cultural comparison data, coordination of information on ozone depletion or salination, communication of results of local studies on gender roles or homelessness. There still exist possibilities for international cooperation on student determined and organised projects and for forms of on-line analysis.

Various opportunities have already existed for students to attend conferences as ‘virtual’ delegates and not only listen to conference proceedings, but also to contribute to proposals and debates. The organisation and coordination of local student action in response to international issues looms.

In each of these areas we can characterise examples along a ‘minimal’-‘maximal’ or ‘trivial’-‘meaningful’ continuum. Our challenge is to continue to discover ways to develop ever more meaningful participation within these examples.

This Issue of Connect

This issue merely starts the documentation. We want to maintain an invitation, through Connect, to document practices of student participation that use contemporary technology.

And we want to maintain a challenge to all users of the educational technology to ensure that the excitement of its use is based upon a view of students as active creators of meaning and value rather than as passive absorbers of someone else’s meaning.

Roger Holdsworth
November 1995

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**Internet and Student Participation Noticeboard**

YARN: The Youth Affairs Research Network

The Youth Research Centre at the University of Melbourne has established a web site called [YARN: The Youth Affairs Research Network](http://yarn.insted.unimelb.edu.au/). It provides starting points for investigating related aspects of the web and can be found at:

**Pen Pals**

I've been asked by Ian McLelland, a year 7 teacher at Edge Hill State School here in Cairns, to try and help establish some e-mail contacts with 12 year olds in Asian schools. He'd like to start a project where the children find information about their contacts' countries. (He hopes to get up to five countries.) The information gathered will be used by the kids to produce a video documentary guide that helps travellers going to each country.

A pretty ambitious idea but interesting. We've seen quite a few contacts for USA and UK recently. What about Asia? Perhaps someone knows of an International school in say Hong Kong, Singapore or Malaysia that may help with contacts.

[Brett Hitchens](Ph (070) 53 4446; Fax: (070) 53 4311)

**Kids on Canberra**

ACT school students have created an on-line brochure about Canberra called 'Kids on Canberra'. The students have created a resource with a difference for families and schools planning a visit to Canberra. Take a look they have done a great job. It can be found on the World Wide Web at:


If you would like to contact teachers and students in the ACT you can send a message to ACT-Schools@actein.edu.au

This ACT-Schools mailing list is a discussion group for teachers about using the Internet in the classroom. If you would like to join in the discussion you are welcome to join this list.

Send the following message to:

majordomo@actein.edu.au

**Subject:** subscribe ACT-Schools

Michele Huston, Outreach Officer
The Centre for Networked Information and Publishing
The Australian National University ACT 0200
e-mail: Michele.Huston@anu.edu.au
Coordinator ACTEIN Program
[ACTEIN Web Pages](http://actein.edu.au/)
I*EARN

The International Education and Resource Network

I*EARN empowers teachers and young people (ages 6-19) to work together in different parts of the world at very low cost through a global telecommunications network. The purpose of I*EARN is to enable participants to undertake projects designed to make a meaningful difference in the health and welfare of the planet and its people. I*EARN is a non-profit organisation.

I*EARN is expanding to additional international sites daily and now includes over 1000 schools in more than 25 countries: Russia, China, Costa Rica, Israel, Australia, Korea, Canada, Argentina, Mexico, USA, Chile, England, Finland, Hungary, Japan, Jordan, Netherlands, Brazil, Kenya, New Zealand, South Africa, Uruguay, Sweden, Turkey, India and Spain. There are current negotiations with organisations in Nicaragua, Egypt, Senegal, Singapore and Haiti.

I*EARN Student Project Work focuses on young people making a meaningful contribution to the health and welfare of people and the planet. Students can go beyond simply being ‘pen-pals’, to use telecommunications in joint student projects designed to “make a difference” in the world as part of the educational process. There are many examples and more details of some are provided below.

I*EARN projects generally utilise three forms of interaction:

- speaker telephones (in some countries using regular telephone lines, slow-scan, black and white video phones);
- electronic mail, on-line conferencing and the World Wide Web;
- exchanges.

International Partnerships

Not wanting to “reinvent the wheel”, I*EARN looks very seriously at international partnerships that already exist to see if adding telecommunications would enhance and deepen the relationship. Toward this end, I*EARN is working with international service and youth organisations to explore how telecommunications can bring larger numbers of young people into contact and meaningful work with each other using organisational infrastructures. Examples of such youth and service groups include: Save the Children, World Scouts Environment Network, Partners of the Americas, street children’s organisations in Brazil and elsewhere, the United Nations Environmental Program (UNEP), UNICEF, international student exchange programs etc.

I*EARN has recently partnered with the Global Rivers Environmental Education Network (GREEN) for international watershed education networking.
The Nature of I*EARN Project Work

I*EARN is committed to making a difference to the welfare of the planet and its people. To accomplish this goal, I*EARN offers groups of students and young people the opportunity to work either in partnership with another class or youth group or with several other classes who’ve expressed interest in a theme-based project. This arrangement has proven successful because it encourages I*EARN participants to form a mutual support group for designing collaborative learning activities over long distances. On-line support in the form of project facilitators is available for project assistance.

The theme-based projects you will find described here have all been designed by teams of I*EARN students and teachers. Existing structured on-line projects exist within the following five areas:

- environment/science;
- arts/literature;
- social studies/economics/politics;
- language;
- interdisciplinary/other.

Information about participating in any of these projects (or new ones that are posted weekly) as a member in I*EARN can be found on the I*EARN gopher. Or send an e-mail message to:
<learn@igc.apc.org>

The Global U.V. Project

Description: The Global U.V. Watch program is designed to allow students throughout the world to study U.V. light levels and the impact of increased U.V. Radiation. Students will either collect data from their own countries and transmit it to Broadford Secondary College in Broadford Australia, or they can request the data collected in Australia to monitor levels if local sources are unavailable. Broadford students will edit a semester journal containing graphs of the U.V.B. readings as well as stories and articles about the ozone layer and related topics. This magazine is called Icarus.

Description: El programa global de observación de la luz Ultra Violeta está diseñado para permitir a los estudiantes del mundo estudiar los niveles de luz U.V.B. y el impacto del aumento de Radiacion U.V. Los estudiantes pueden acumular información de sus propios países y transmitirla al Colegio Secundario Broadford en Australia o pueden pedir la información acumulada en Australia para estudiar estos niveles si la información local no está al alcance. Los estudiantes de Broadford publican una revista cada semestre que contiene gráficas de los niveles de U.V.B. y también historias y artículos del problema de la capa de ozono y temas relacionados. La revista se llama Icarus.

Ages: ALL school age students are encouraged to participate.
Dates: Ongoing. Icarus will be published twice a year.
Languages: We can handle English and some Spanish.

The Holocaust/Genocide Project

Description: The Holocaust/Genocide Project (HGP) is an Interdisciplinary project (art, history, literature, music) involving schools from Australia, Israel, and the US with new schools joining from Argentina and Russia. Other schools are also invited to participate. The goals of this project are to promote respect for human rights by studying the lessons of the Holocaust and other genocides and taking action to make our world a better place. Students and teachers meet on the <learn.hgp> conference to discuss common readings, current events, and issues related to this topic. On the HGP Gopher, teachers can find bibliographical information and other helpful teacher/student resources. A two-week study mission to Poland/Israel is offered as part of this project, and an international student magazine, An End to Intolerance, is published annually to further the project’s goals.

Descripción: El Proyecto del Holocausto/Genocidio (HGP) es un proyecto interdisciplinario (arte, historia, literatura y musica) con escuelas participantes en Australia, Israel, y los Estados Unidos junto con nuevas escuelas de Argentina y Rusia. Las metas de este proyecto son promover los derechos humanos para estudiar el holocausto y otros genocidios, y tomar acción para hacer un mundo mejor. Estudiantes y maestros se unen en la conferencia para discutir libros, actualidades y otros asuntos relacionados a este tema. En el “HGP Gopher” los maestros pueden obtener informacion bibliográfica y otros recursos educativos. Una excursión de dos semanas en Polonia e Israel se ofrece como parte del proyecto, y una revista internacional para estudiantes, Terminar La Intolerancia, se publica anualmente para alcanzar las metas de este proyecto.

Ages: 13 and up
Languages: English, but we would welcome help in translating other languages. English does not need to be perfect to communicate.
Dates: Ongoing

Kids CAN

Description: This conference will be used by I*EARN primary, elementary, and middle school children and teachers to research environmental issues/problems, then develop action ideas and compile them in a newsletter/handbook.

Descripción: Esta conferencia de I*EARN sera ofrecida a los niños y maestros de nivel elemental e intermedio y con el propósito de analizar problemas y temas del ambiente, y para desarrollar ideas de accion, las cuales se publicaran en una carta informativa.

Ages: 5-13
Languages: All
Dates: Ongoing

Contact:
For more information about participating in I*EARN projects, write to learn@igc.apc.org
I*EARN Conferences

To I*EARN, conferences mean two things:
I*EARN uses extensive on-line conferencing as a means of creating ‘rooms’ for project work. The contents of these rooms are shared automatically with the networks used by I*EARN around the world - minimising costs and maximising involvement by students and teachers.

These conferences are accessible only by I*EARN members, and only if you use a WWW browser that is able to read newsgroups. For details on accessing the I*EARN conferences (via WWW or via direct-dial, telnet or e-mail), send e-mail to iearn@iearn.org

I*EARN 2nd Annual International Teachers Conference

Opportunities seldom arise for students to attend an international conference - at least for students from Ballarat. Five students from the Wondouree Campus of Ballarat Secondary College were given the opportunity during the July holidays to attend the International Education And Resource Network (I*EARN) conference in Melbourne. The students, as members of the school's Student Information Technology Management Committee (STIMac) had argued for their attendance to the College administration. They were so successful in putting their case that the College decided to finance their attendance.

What follows are some impressions the students had, based around three organising questions: What did they expect of the conference? What did they do? What benefits did they gain from the conference?

Andrew Jackson

On the 8th-13th of July there was an I*EARN conference. I was asked to go to this conference a couple of months before the actual conference. When I was told, I said yes straight away, mainly because I thought it was during school but now I'm glad I went because I really enjoyed it.

Before I went to the I*EARN conference, I did not know exactly what to expect. I thought that it would be full of teachers who would not listen to our opinions because they thought they were smarter than us. When I got there, I found out that it was the complete opposite. In some cases there were a few teachers who asked us to help them with some problems.

I was part of a group of students who put together a student newspaper. We put the newspaper onto the World Wide Web. We did this by collecting a range of reports and adding them to the newspaper daily. We were helped by a few people from the University. We also put personal opinions about the conference, food and other things like this.

There was a lot of sessions that stood out in my mind, but my overall favourite was "Teaching with the Internet". I found this session very enjoyable because we were able to have hands-on experience with the Internet.

From this conference I learnt a range of things. For example when I came back to school I had to do a Web Page, and my experience helped me to make a skilful and fast page. I also improved my public speaking skills because I was always talking to people from around the world and asking them questions. My personal opinion of this conference was that it was an enjoyable five days and I would do it again any time.

Bethany Costello

The International I*EARN Conference was over a six day period. It involved people from all over the world, from countries such as USA, Russia, South Africa, Sweden, Switzerland, Israel, Argentina etc. It was interesting meeting all the people from different places, especially the people from South Africa.

Through the conference, we five students attended workshops everyday and we made reports which we then used for a newspaper. The newspaper was constructed from our reports and photographs we took using a digital camera. This was the first time I had used such a camera and it was weird not to use film. Interestingly enough, we had to construct the paper at the end of the day before we went back to Ballarat as we travelled down each day by car.

Rosemary McLeod and I attended a Water Watch excursion and this was good because it gave me an idea of what I would be doing when I returned to school.

I think the conference was good as it gave me the chance to talk to people I would not normally meet. The newspaper project also helped me to improve my reporting skills and gave me some idea of how to put a paper together. After the conference I was able to talk more easily with the teachers and especially with the principals at the College. I felt this was a good experience.

Grant Smith

I was one of the students from Ballarat Secondary College that went to the I*EARN Conference. It was probably the highlight of 1995 for me. Before I went I thought it would be quite boring because I didn't think we would be doing anything exciting. But those feelings soon changed after the first few days. I felt really privileged to go because it was a teachers' conference.

I got a lot out of the conference because, not only did I attend the sessions, but I also learnt HTML so I could publish a newsletter on the World Wide Web. After the conference, I took the skills I had learned back to my school so I could teach other students as well as teachers.

One of the sessions I attended was about Video Conferencing which is a communication method that can send video and sound. I thought that this was a very effective method of communication. At the moment I am experimenting with the same Video Conferencing software for my Information Technology project. I have had some success with it but I hope to achieve more from it in the future.

Rosemary McLeod

My experience at the I*EARN International Teachers Conference was really good. I think that I learnt a lot and met lots of new people. I really enjoyed myself, even though it was pretty tiring; it was very good. My favourite workshop that I attended was the South African Experience. I really found this workshop interesting. The part that I liked best was meeting all the new people. I learnt that being with adults wasn't so hard. It built up my confidence by talking to complete strangers.

Aaron Coulter

When I heard about the conference I expected to be attending a conference that would be fairly boring and very much over my head. I thought that because it was an international conference that it would be very big and mainly focused on the other countries. When I went to the conference, I was pleasantly surprised at how interesting it was. I attended a lot of sessions over the week and most of them were very good. I learnt a lot about global communication from people talking about their experiences.

I was also part of the team that produced the newsletter for the conference and from doing this I learnt HTML. Learning this was great because we have brought our experience back to our school and used it to produce web pages such as the college web page.

Overall I am very glad I went because I learnt a lot.

October-December 1995
I*EARN AUSTRALIA

I*EARN Australia is part of this truly global educational network. The International Education And Resource Network is a unique organisation of educators from across the Globe. Visit the I*EARN Global Secretariat’s Home Page (outlined on previous pages) to see how I*EARN facilitates projects designed to empower young people (K-12) to work collaboratively in different parts of the world to share their understanding of each others' cultures and their visions for the future.

All members of I*EARN in Australia have full internet capability, including telnet, gopher, World Wide Web etc. I*EARN Australia is proudly supported by The Whalesong Foundation. The I*EARN Australia Centre is also working closely with the Directorate of School Education in Victoria on the Global Classroom Project for all Victorian schools in 1995. This project builds on the successful model created by Broadford Secondary College in Victoria, Australia.

As part of a Statewide Professional development program for Victorian teachers, I*EARN Australia also hosted the 1995 I*EARN International Teachers Meeting in Melbourne.

Examples of I*EARN Theme Based Projects Include:

- The I*EARN Holocaust Genocide Project
- The I*EARN Family Project
- The I*EARN Arctic to Amazon Project
- The Contemporary (International Student Newspaper)
- The I*EARN “Ultra Violet” Project - (ICARUS)
- The Nicaragua “Rope Pump” Project
- The Global Art Exchange
- The Kids CAN Primary School Project
- A Vision - award winning literary anthology
- Planetary Notions - environmental newsletter
- Liberty Bound - human rights newsletter
- "The People We Admire - Las Personas que Admiramos!" - a bilingual study of cultural heroes
  And many, many more...

Interaction is the online Global Newsletter for I*EARN members. Extracts of the latest newsletter can be found by following a link on the I*EARN Web page.

Bill Coppinger
Broadford Secondary College

If you would like to know more, please contact Bill Coppinger - I*EARN Australia Co-ordinator - at: bcoppinger@peg.apc.org or any member of the PEARN Australia Management Team: Andrew Hocking-Science/Environment Coordinator broadsc@peg.apc.org Ian Parry-Major Projects Coordinator iparry@peg.apc.org Kathy Skidmore - Holocaust/Genocide Teacher Facilitator kskidmore@peg.apc.org Roland Gardiner-Elementary/Primary Online Mentor rgardiner@peg.apc.org

For technical assistance, please don't hesitate to contact Pegasus Networks Australia (a member of APC Worldwide): http://www.peg.apc.org/

I*EARN Australian National Office, PO Box 268, Broadford 3658
Phone: (057) 843 452; Fax: (057) 841 028

Information about I*EARN was drawn from material provided by Bill Coppinger, Broadford Secondary College, plus material available on the I*EARN Australian and International Secretariat World Wide Web sites. These sites can be visited at:

- I*EARN International Secretariat:
  http://www.igc.apc.org/iearn
- I*EARN Australia:
  http://www.peg.apc.org/~iearn
- The I*EARN International Secretariat as at
  345 Kear St, Yorktown Heights, New York 10598.
  E-mail: iearn@igc.apc.org

I*EARN TELECOMMUNICATIONS NETWORK (World Wide Web Map)

I*EARN Centres around the Globe are also beginning to have a presence on the World Wide Web, so please feel free to visit these sites:

- I*EARN SPAIN:<http://citel.upc.es:80/iearn/>
- I*EARN Mid-Continent Centre:
  <http://www.mncs.k12.mn.us/~iearn/iearn.html>
- I*EARN Pacific North West Centre:
  <http://cisl.osp.wednet.edu/CISL/I*EARN_PNW.html>
Telecommunications in Action

St Hilda's student-produced newspaper, The Observer, is forging ahead in the links it is making between students in more than 21 countries, worldwide. The work of its journalists provides a graphic example of telecommunications in action.

St Hilda's Observer journalists and students in all curriculum areas have the opportunity to share ideas and global concerns with students in many countries through their involvement in the iEARN network (see pages 8 to 11 of this issue).

iEARN teachers facilitate theme-based collaborative Projects to enable young people from preschool to year 12 to work together in different parts of the world on topics of mutual interest. Projects are wide-ranging and challenging, allowing for broad participation.

They vary from the Global Ozone and UV Project and the Global Water Quality Project, which allow students to monitor environmental changes in their area and collaborate on problem-solving issues, to the Global Art Project, where students share and respond to each others' artistic interpretations of their local environments. One successful project is the Holocaust and Genocide Project, an international effort to increase tolerance.

The Contemporary, a global student news-magazine provides teenagers with a way to learn about issues of national and global importance as the first step toward understanding how young people can have an impact on the direct taken by our world. At St Hilda's, Observer Editors Karen Buttigeig and Kylie Pinchen, are also International Editors of The Contemporary. In addition, St Hilda's students Nalat Chavanaviraj, Juliana Chou and Anri Narushima are Graphic Artists for both newspapers.

Students have access and communicate within these Projects through special teleconferences set up within the iEARN network. The results of their work can be freely viewed in multi-media presentations found in the iEARN pages on the World Wide Web.

St Hilda's Observer Editorial Staff have recently established a new International Project, Operation First Byte. The project will involve students with access to global telecommunications who will work together across cultures to generate support and to gain donations of computer technology from organisations in their own communities. The computers and modems will be sent to schools in designated underdeveloped areas to allow increasing numbers of disadvantaged students access to the Internet and the exciting challenges of the iEARN network. Benefits to the iEARN students involved will include the development of valuable communication and marketing skills as they organise campaigns in their local communities. The initial phase of the project will focus on schools in the Cape Town area of South Africa.

The International Director of iEARN, Mr Ed Gragert, officially launched the Project in Cape Town, South Africa, at the multiracial Internet and Educational Computing Conference in late September, with the donation of six modems destined for students in black township schools in the Cape Town area.

In their role as Project Coordinators, the Observer editorial staff are working with Associate Professor Jeffrey Brand and a team of undergraduate and post-graduate students from Bond University on the Gold Coast. As a collaborative effort, the students are at present formulating a Project Model which will then be made available for other schools in developed countries around the world. The official launch of Operation First Byte within Australia will take place in February 1996.

Computers and telecommunications aid the achievement of universal primary and secondary education. Telecommunications is a vehicle by which education can be delivered where it is most needed.

With such technology at their fingertips, St Hilda's students will be well equipped to meet the challenges of the 21st century.

Dianne McWhirter, Student Adviser
St Hilda's Observer
St Hilda's School, PO Box 290, Southport Q 4215
SRC NETWORKS:
Electronic Possibilities

Students active in Student Representative Councils (SRCs) and similar bodies have recognised the value of meeting to compare experiences, to learn from each other, and to plan together. Student Networks have existed in districts, regions and, sometimes, at state or even national levels. However there have been huge practical difficulties involved in the organisation of such Networks, and students have found it difficult to maintain the Networks - particularly without direct and specific support.

Most of these difficulties have centred on issues of time and distance. Educational geographies have seldom been based on logical transportation routes and, to attend meetings, students have had to travel vast distances, often after school. In the face of such difficulties, regions have held infrequent weekend student conferences or annual SRC camps.

Even these have relied on the goodwill and commitment of supportive teachers and parents, and the organisational time of project or regional staff. Staffing cutbacks and job 'rationalisations' have almost invariably meant the removal of such support.

Occasionally, student organisations have used other means of communication - telephone hook-ups, fax messages or newsletters have all been tried, but lack the immediacy and interactivity of face-to-face meetings.

Electronic Mail Lists

Electronic mail (e-mail) may provide student organisations with a new networking tool. E-mail enables students to send messages from one computer to another, with few delays and at relatively little cost.

In turn, groups of SRCs could be linked through Mail Lists. SRCs would simply need to subscribe to such a list by sending their e-mail address to a central point (the list server) and subsequently, messages sent to this server would be automatically circulated to everyone on the list.

A server could maintain several different lists - for example, one for each region or district and one for the whole state. SRCs could subscribe to a 'local list' and to a 'state list' and then send messages accordingly.

These Mail Lists could be used for rapid communication between SRCs - queries about operational methods, descriptions of projects, discussion of issues. Messages could be left, to be answered by each SRC at its convenience, possibly after discussion and debate. By arranging to be physically present at the computer at the same time, groups of SRCs could hold 'virtual meetings' in a 'write and respond' mode.

Such arrange-ments could become even more sophisticated with developments like Internet Relay Chat which would enable all the SRCs logged on at a specific time to 'talk' on each others' screens. And then, of course, video conferencing using the internet could become a future development.

Barriers and Needs

The principal issue to be solved at the school level would be one of access. As schools become connected to the internet, they will need to face the issue of how to allocate access to these resources within the school.

Will the SRC have access to the internet? Will it be able to receive and send e-mail? Ideally, the SRC should have its own e-mail address within the school, accessible only to SRC members through provision of a password. Schools may be convinced that such access is easier and cheaper than arranging to transport students to distant meetings.

It is also unlikely that many schools will be able to afford to be on line full time. This would be the requirement for being a Mail List server or establishing the school’s set of World Wide Web pages. In this latter case, schools are usually arranging with their connection vendor to maintain their web pages on the vendor’s server.

In the former case, it may be possible to reach agreement with the vendor or with a supportive tertiary institution to be the administrator of one or more SRC Mailing Lists.

Mail Lists or Meetings?

Will the ability of SRCs to ‘talk’ via e-mail satisfy their need to meet, compare, discuss, argue, decide? I suspect not. There is something energising and inspiring about face-to-face meetings between students with similar interests and involvements. However, the ability to plan and organise may be substantially enhanced by electronic communications.

I’d like to see it tried, and I’d like to hear of any experiences in this area. If you’d like to discuss possibilities further, please contact Connect.

Roger Holdsworth
The Wangaratta Gender Project took place in September 1995. We were seeking men and women in non traditional gender occupations who were willing to respond via E-mail to student questions during the week of Monday, September 4 to Friday, September 8. Approximately five student questions were sent to each participant’s E-mail addresses on Friday, September 1.

We had participants from the following fields (all female unless stated): a graduate maths student, an astrophysicist, a Technology Services Coordinator, house husbands looking after children while their partners finished their training/qualifications, an immunology researcher, an Assistant Professor of Physics and Astronomy, a graduate PhD Biology student, a physics teacher, a Professor of Mathematics, an editor of an Internet Magazine, a farming adviser, an agricultural researcher, a geologist, a steel worker, a Chief Justice and a biomedical engineer. The participants came from Australia, Canada, New Zealand and the USA.

The Internet Project allowed children to ‘talk’ to people working in a much wider range of occupations than was available in our small town. During the response week we also had a number of guest speakers who addressed the students and responded to their questions.

Project Aims

- To encourage students to consider and value non-traditional male and female occupations.
- To ensure equal opportunity of access for all students to information and computer skills.
- To use technology to allow meaningful and real exchanges between students and adults in non-traditional occupations.
- To develop students’ questioning skills.
- To provide an opportunity for students to access Internet information which is able to be understood at their level.

What Was Achieved?

On reflection the project:

- allowed for continuing discussion in classrooms, the staff room and in students’ homes about ‘alternative’ gender occupations, about why many roles have been seen traditionally as male or female, and whether this is changing. Many of the students were surprised at occupations such as veterinarians, architects and some of the sciences being classified as male dominated.
- placed an emphasis on students developing questions which elicit interesting and pertinent information.
- allowed for the broad range of ages and interests in a Primary School. Those who responded to students’ questions made sure that their use of language suited the age group.
- allowed both students and teachers to experience the power of the Internet, both as a resource for human contact and as a medium for communication. This was our first school wide Internet Project and for many of the staff was their first experience in using the modem. For Jill and myself, in an organisational role, the experience was invaluable.
- made us realise that there are many wonderful, generous, warm hearted people around the world who are prepared to give of their precious time to support students, especially in developing positive attitudes to equal opportunity for all.

The guest speakers component of the program really supported and reinforced the interest and discussion created through the Internet Project. The students’ awareness of effective questioning techniques was remarked upon by the speakers.
Problems we encountered were:

- A lack of expertise in Internet Use made the task more difficult, finding ways to broadcast our call for participants was a challenge, especially as we didn't initially have access to Newsgroups. This does highlight the need for continuing professional development for teachers in Internet use.
- Some technical problems occurred with software and hardware that at times caused frustrations. However, we managed! It was certainly a learning experience! We sincerely thank all of those people who contributed to make this such a valuable program!!

If you would like more information contact:
fgersden@www.netc.net.au
or
jcullen@www.netc.net.au
The above information can be found at:
http://www.netc.net.au/gender.html

Our Snail Mail address is:
Wangaratta Primary School
Chisholm Street
Wangaratta, Victoria, Australia 3677

Non Traditional Gender Roles

Peter Lalor Secondary College, Vic

Students Participate in an International Video Conference on the Internet

Peter Lalor Secondary College Year 7 students Bree Moore, Ben Carey, Steven Baldwin, Stephen Keogh, Karyn Rose, Julia Bazzano and Tamara Nikolic participated in a video conference with students from Singapore's Crescent Girls' Secondary School and The Chinese High School. After inviting their virtual partners to the school's Art Show using the internet's CU-SeeMe technology, the students then took part in a conference at the Monash University, Faculty of Education computer laboratories during the first week of the term 3 holidays.

In what is thought to be one of the first such activities in Australia, the students from Peter Lalor SC and Singapore were able to see and interact with each other on a computer screen. There were a number of tasks for the students to do, which included collaborative scientific problem-solving activities, as well as exchanging cultural information.

Bree Moore had earlier given her Singapore counterpart the recipe for 'Pavlava' through the use of e-mail and is expecting a recipe for a traditional Singaporean dish from her international partner.

Finally, Tamara Nikolic and Julia Bazzano exchanged information of national significance with the Singapore students.

The main aim of the exercise was to work collaboratively with the students from Singapore to achieve a common goal. In doing so, the students were using some of the most recent and advanced internet tools available, tools that are, at this point of time, believed to be on the cutting edge of the technology.

The interaction was a huge success, with Monash University lecturer Mr Bernard Hulke being interviewed the following day by 3AW's Neil Mitchell, as well as by the ABC in Sydney. News of the event went as far north as Darwin.

Pictures of the event can be seen at the following World Wide Web sites:

For further information, contact:

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14
The National School Network Testbed schools are among the leading schools in the USA integrating technology into the curriculum and working with their communities. Their network connections offer unique opportunities to model new linkages between school and community. The NSNT testbed has a special web page focused on:

http://copernicus.bbn.com/testbed2/bts/bts.html

that features pointers to NSNT testbed projects and products related to the 'America Goes Back to School' themes. These are a rich set of examples of many types of activities eg student work, community/student engagement, professional development and so on.

In addition, the NSNT testbed is working with the US Department of Education to encourage and arrange for electronic visits to National School Network Testbed schools by leaders, role models and citizens across the country. NSNT testbed plans to make the electronic discussions or work created through these visits available over the web.

Selection of Student Work at NSNT sites

This is a selection of student work on the World Wide Web that has been produced at schools that are part of the NSF-funded National School Network Testbed (NSNT). For a lot more examples, check out the page referred to above.

The Great Penny Toss
(http://mac94.ralphbunche.rbs.edu/RBS_Forms/RBS.html)
The Ralph Bunche School in Harlem, NY would like your help with their math activity, 'The Great Penny Toss'. The Ralph Bunche School is at 425 West 123rd Street in New York City. This is one of the many projects participated in by students from the Computer School, a mini-school within the whole school.

Alaska Online
(http://jsd.k12.ak.us:70/0/WWW/AKonline/AKhome.html)
Alaska Online is a collaborative, interdisciplinary project of a group of 200 students and seven teachers from Dzantik'i Middle School in Juneau, Alaska, working with community, state and national partners to provide information about Alaska and its environment. To learn about the history of the Alaska Online project, involvement of students, and integration of the curriculum, take a look at the Director's page. To view the descriptions of the community, state and federal partners that played a role in the development of Alaska Online, take a look at Partners With Alaska Online.

CHAOS Literary Magazine '95
(http://belnet.bellevue.k12.wa.us/sammanish/chaos.dir/chaos.95.dir/)
An online literary magazine published by the students of Sammamish High School in Bellevue School District, Washington. From their home page you can also check out their online Course Description Book and audio clips from their jazz band.

Vocal Point - Middle School Newspaper
(http://bvsd.k12.co.us/schools/cent/Newspaper/Newspaper.html)
Students at Centennial Middle School are responsible for Boulder Valley School District's first online newspaper. Every issue is fully linked with reports and graphics on topics such as censorship, pornography on the web, and water shortages.

The Berlin Wall
(http://192.253.114.31/Berlin/Introduction/Berlin_contents.html)
The Berlin Wall project is a multi-school collaboration led and sponsored by Patch American High School in Stuttgart, Germany. In another example of work from this school, their German department shows students and teachers taking advantage of local resources for learning.

In Search of the Creative Muse
(http://www.mac.cnyric.org/projects/blissesproj/blisshome.html)
Excerpts from a seventh grade language arts project at Cordland Junior-Senior High School. This school is from one of a number of school districts served by the Onondaga-Cortland-Madison BOCES in NY state.

Clouds:
The Effect of One Variable on the Earth Radiation Budget
This is a study project of a student team working in the Earth System Science Community Collaborative.
Overview of the National School Network Testbed

Goals and Objective of the National School Network Testbed

The National School Network Testbed (NSNT) was organised by the Educational Technologies group at BBN Systems and Technology and funded by the National Science Foundation of the US. Phase 1 of the Testbed, conducted over 18 months in 1992 and 1993, resulted in an understanding of the ways in which schools and other educational institutions could take advantage of internetworking to build their own local information infrastructure and support reforms in education. The goal of the National School Network Testbed (NSNT) Phase 2 is to research the following question:

Can we construct and manage communications networks and information services to support educational innovation on a local level in such a way that taxpayers, governments and private industry will view their benefits and cost-effectiveness as warranting the investment needed to support them on a large scale?

There are four major objectives in Phase 2. The first is to develop an understanding of how a community can create and maintain an information infrastructure with connections to the Internet. Considerable investment is required to create the technical and organisational infrastructure to support broad scale participation. The Testbed is collecting, organising and sharing information on what those costs are and what benefits are perceived by the learning community. Such an empirical base of knowledge is urgently needed in order to make sound policy decisions about investment on the part of local, state and national governments and taxpayers.

Broad participation in the National Information Infrastructure (NII) is another objective of the Testbed. The reason for stressing participation is the belief that people learn in the process of doing and of actively constructing knowledge, both alone and in collaboration with others. Participation is key to the growth and use of the vast information resources available over the Internet. As more students, teachers and administrators create educational materials from the vast raw materials of the NII and construct their own local resources, they add new value to the information infrastructure. The more valuable the information and services available on the NII, the more schools and communities are likely to invest in additional connectivity.

A third objective of Phase 2 is to research and understand how to expand the use of networking in schools to support use in the curriculum and in professional development for teachers, to provide new approaches to school administration and to managing town and district offices, and to link schools with the local business community. In many instances, the network is used in a single classroom or by an isolated project. To expand integration in the schools, the network must support the larger purpose of curriculum reform and serve a multitude of functions within the school and the community.

Assisting schools and institutions in their efforts to restructure education through use of technology is a fourth objective. Technology will only be seen as valuable when it is understood how it can support the larger goals and current methods of educational reform. The National Information Infrastructure (NII) has a vast collection of raw materials that teachers can incorporate into their curriculum, that they can use to create their own local resources, and that they can share with others across the networked community. Using the network, students and teachers have the opportunity to investigate, to explore by doing, to learn scientific methods and to work on projects and problems of intrinsic interest.

Nature of the NSNT Community

Currently, approximately 248 institutions are participating in the Testbed - 95 organisations working with 153 individual schools across the United States (with one in Canada and one in Australia). Of the 95 organisations, about a third have a national scope, eleven have a statewide scope of operations, eleven are regional within a state, thirty-two are local institutions (such as individual schools, museums, school districts or towns) and a few are international or multi-state in scope.

These organisations are on the forefront of both educational reform and the creation of local and national information infrastructure. They are an important resource to their local communities and to the nation's agenda for educational reform. They are creating new models of learning and teaching for the information age. They are proactively seeking to assist schools and other places of learning and teaching to benefit from information infrastructure. Many of the organisations and projects are specifically addressing needs and resources of particular groups such as minorities, women, Native Americans, bilingual teachers, physics teachers, urban schools, rural areas etc.

Examples of Testbed Member Organisations

The Allegheny/Schools Partnership is a group of eight school districts in Western Pennsylvania and Allegheny College. Teams of change agents from each district are using the National Center for Teaching Mathematics Curriculum and Evaluation Standards as a guide to identify concepts that block students’ understanding of critical mathematics concepts and top develop instructional solutions to help students grasp these concepts.

The Ralph Bunche School in Harlem, New York, and the Graham and Parks School in Cambridge, MA, have collaborated on discussions about shadows, the sun, earth and other astronomical and physical phenomena. Activities, included measuring shadows, continue over the Internet with participants from other schools across the world.

Another group of member organisations is creating digital libraries and making them accessible to others via the Internet for learning.
and teaching. For example, Earthwatch provides access to a worldwide network of university-based scientists, a resource network of 6000 Earthwatch teachers and students who have worked in the field of Earthwatch projects, and written reports and lesson plans based on their field experience. Earthwatch is building a Global Information Network for understanding our planet, including digitisation of all print documents, photographs, maps, video resources and expedition logistics from its worldwide scientific expeditions. Earthwatch also sponsors fellowships for teachers and students to work with scientists on field research expeditions around the world.

Franklin Institute in Philadelphia is working with six other science museums and their collaborating teachers to create a virtual museum that is accessible to Internet users. It is especially suitable for use by elementary and middle school teachers.

Two other Testbed partners, the California Department of Education and the Massachusetts Corporation for Educational Technology are working to develop state networks that will support and leverage state systemic initiatives.

Profile of Members' Affiliated Schools

Information gathered in a baseline survey conducted this spring showed that Testbed member schools comprise a diverse array of schools across the country. Most have unusually strong histories of involvement in leading-edge technology and telecommunications programs. About one-half serve high school grades, one quarter cover middle grades and one-quarter are elementary schools. The schools tend to be located in northeastern and west coast communities. Although they tend to have middle-class clientele, they are still a diverse group, including approximately equal numbers of schools in large cities, suburbs, small cities, towns and rural areas. In addition, under-represented minorities constitute 24% of the collective student body and 9% are limited-English proficient.

Examples of Testbed schools:

Many of our NSNT schools show how students are thriving and how the network has enriched and empowered their learning. For example, students at the Dzantik'i Heni Middle School in Juneau, Alaska, worked together with state and federal agencies to create an online resource about Alaska called Alaska Online. Throughout the project, students faced and overcame many challenges. Many of these students were at risk, lacked writing skills, and had lost pride in their community. In many ways this project helped them overcome these problems. Getting involved, learning about their community, taking on the responsibility of working with professionals in the Alaskan federal agencies, all gave them a sense of ownership, awareness of their abilities, and pride.

Leslie Backus, and Earth Science teacher at Montgomery Blair High School, brought her classes to the computer lab to look at earthquake data after the quake in Kobe, Japan. Her students were amazed that they could see images of the quake damage. They were far more engaged in learning about earthquakes than they would have been using traditional textbook methods.

Facilities and Support Offered by the NSNT

The NSNT Testbed acts as a facilitator to support efforts underway and to encourage collaboration among the participants. It has built and will continue to enhance a support infrastructure and web site that not only assist the Testbed members but serves as a model for members to implement locally. This support infrastructure is called the National School Network Testbed 'Exchange'. It serves as a clearinghouse for the Testbed members to share their initiatives, to disseminate materials and to discuss issues electronically. The tools and techniques used in creating this 'Exchange' are available to Testbed members to enhance their own local information infrastructure. There are six 'Exchange Desks' which have resources, pointers and the latest developments on topics of particular interest to Testbed partners. Each desk serves as the focal point for resource collection and development related to the theme of the desk, and for interactive discussion between Testbed participants.

The 'Exchange Desks' are:

- Local Information Infrastructure Desk
  Mission: To explore and clarify the many dimensions of Internet connectivity in the educational setting; topics can include (but are not restricted to) technical issues involved in local and wide area networking infrastructure, the organisation and management of information resources to support work in the instructional and administrative arenas, policy and finance issues, and building a culture of effective technology use.

- Curriculum and Instruction Desk
  Mission: To focus on systemic school change initiatives, curriculum integration of network tools and resources, and exploration of such issues as project-based learning and portfolio assessment.

- Staff Development Desk
  Mission: To develop and share staff development models, frameworks, resources and opportunities.

- Finance Desk
  Mission: Financial planning and funding of local and community infrastructure.

- Evaluation Desk
  Mission: To help Testbed members and projects design and conduct useful evaluations of their activities - for example, in clarifying evaluation goals; in selecting evaluation frameworks, research methods and research designs; in developing research instruments, and in analysing data.

- Reference Desk
  Mission: Reference and dissemination of information, knowledge and materials related to the Testbed Project and its members.

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October-December 1995
The BushNet MOO (BushMOO)

What is a MOO?

A MOO is a text-based virtual reality, along the lines of the old text-based adventures which were popular in the earliest days of home computing. The most important elements are:

- multi-user interaction: the MOO is accessed over the Internet providing real-time interaction with people from anywhere in the world, much like Internet Relay Chat (IRC).
- highly customisable: the MOO world is built by the users. The BushNet MOO (BushMOO) has been built to look like a country town. Users contribute by building their own little slice of the world, define not just how things look, but how things behave. Unlike the old adventure games the MOO world is not static - it changes daily as users extend and improve their virtual world.

(Incidentally the acronym MOO stands for “MUD Object Oriented”. MUD stands for “Multi User Dungeon”. The acronym says something about the genesis of the MOO, but is quite misleading as a description. The MOO is multi-user, and is object oriented, but the dungeon - the role-playing element - has been removed.)

The best way to describe a MOO is by example.

Here is an excerpt from BushMOO:

**look**

Bushville State School Gate
You look out towards the school and see a large, brown grassed, ant infested oval. At one side of the school grounds are the school rooms.

Exits: Gum to The Great Gum Tree, Oval to the School Oval, Veranda to School Veranda, Main Street to Bushville Main Street

Kibo has arrived.
Kibo says, “hi”
Kibo waves at you.

**look at kibo**

Kibo
Kibo is a young man somewhere in his 20s. He has cropped hair and bushy eyebrows which seem to dance about over his eyes when he talks.
He is awake and looks alert.
Carrying: Wombat

say “nice wombat - what does it do?”
You say, “nice wombat - what does it do?”
Kibo says, “You can ride it. I'll show you.”
Kibo drops Wombat.
Kibo gives the Wombat a little kick and the Wombat runs off with Kibo on its back.

Virtually all of the text you see in the above example was written by the MOO users. The description of the school yard was composed by the user who built the school environment within BushMOO. Kibo composed a description for himself, and also created the wombat, using a combinations of basic text descriptions and some programming. The wombat is an example of a user-created object which does things. It can be ridden around the MOO.

Why is MOO useful?

Perhaps because of their ancestry, MOOs are often confused with on-line games. In fact some Universities prohibit the use of MOOs for this reason. However MOOs are finding a variety of distinctly non-game applications on the Internet including delivery of distance education, hosting virtual conferences, and even facilitating remote industrial process-control.

In the context of BushNet, an Internet project serving primary and secondary schools, the MOO provides an environment in which students and teachers from the many BushNet schools can meet, talk, share ideas and run training courses. The MOO offers significant advantages over other interactive environments such as IRC in that the environment can be controlled in sophisticated ways. The BushMOO lecture hall has tables around which the students sit. When the teacher speaks, everyone hears. When the students speak, only those at their immediate table hear, unless they first stand to address the room. This controls the ‘noise’ level in the classroom in a way which mimics a real classroom environment.

The MOO provides opportunities for a very wide range of educational opportunities from basic keyboard skills, English comprehension and composition through to very sophisticated object-oriented computer programming. It also provides a cost effective way of delivering educational material to remote audiences.
Experiences With The BushNet MOO

The BushNet MOO was originally created by Jay, a Year 10 student from Herberton State School. The student had been using the Internet to explore other MOOs and he was inspired to start his own here at BushNet. Developing a MOO is a large and technical task, and Jay was rapidly able to enlist the support of a handful of University students (over the Internet of course) who were able to provide the support needed to get things under way.

Jay has continued to be responsible for the MOO, and this in itself has been an exciting process. He has become in a sense the ruler of a small society, and is forced to deal with issues of bad behaviour, greed, jealousy which are all very real. Often the people involved are much older than Jay - including university students and adults from outside of BushNet. The skills Jay is learning are the same skills needed to succeed in all areas of human endeavour involving group dynamics. It's rare that a student from a small town gets a chance to demonstrate his skills to an audience who haven't already pre-judged his capacity.

BushMOO has been allowed to develop with very little adult intervention, and has proved very popular with secondary students - more popular than the World Wide Web. A relatively small number of students are learning the programming skills necessary to develop complex interactive objects in the MOO. However without external guidance it seems that most students use the MOO only to socialise; talking, experimenting, showing off.

The BushNet MOO is currently undergoing a review process aimed at identifying the strengths and weaknesses of the MOO environment, and developing recommendations to ensure the MOO evolves into a useful educational resource.

For more information on BushNet or BushMOO visit our home page at http://www.bushnet.qld.edu.au or visit the BushMOO by telnetting to sugarbag.bushnet.qld.edu.au:7777.

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Email: guy.carpenter@bushnet.qld.edu.au

Guy Carpenter is the principal consultant with Clearwater Technical Services and has been closely involved with the development of BushNet since its conception.

The following information is taken from the Bushnet World Wide Web pages at:
http://bushnet.qld.edu.au

For more information, contact Bushnet:
webmaster@bushnet.qld.edu.au

- The New Teen Magazine from Down Under BushScene is an International Teen Magazine maintained by the Students of Herberton State School Secondary Department on behalf of the BushNet schools of Far North Queensland Australia. We invite schools around the world to contribute items to create a student magazine for you with a truly world wide perspective.
- Sarah Clutterbucks has started a resource page to support the use of computer technology in the classroom. It includes some interesting ideas for email projects.
- The DEVEIR Skills Enhancement Trainees at the Mareeba Primary School have created a Mareeba Aboriginal people and Torres Strait Islander people home page.
- Jay Rudell, a Y10 student at Herberton, is constructing BushMOO, a multi-user virtual environment. Come in and look around Bushville, and talk to the people there. If the above link doesn't work for you, send email to support and we will help you configure Netscape. PC users may like to use Mutt to connect to the MOO.
- A number of mailing lists are available in Web format. Check out the BushNet Mailing List Archives.
- We have started a BushNet Community Calendar to help you remember those important dates. We will need your help updating it! Stay tuned for more details.
Learning Together

Imagine looking at a satellite image of your country: add the isobars of pressure, then add offshore currents and water temperature, then add the clouds, and colour for rain. Imagine being able to cross reference this with Geographical Information System (GIS) data.

Imagine a second screen: there is a face many of the students know - the weather caster. The students are listening to him and watching as he points out on their screens how pressure relates to mountain ranges and why the clouds form as the low pressure system moves over the mountains. Imagine a student turning and asking why the cloud patterns change as they cross out into the ocean, to which the weather caster nods and brings up a screen which displays the water temperatures on the student's computer. This is not imagination! This has happened.

The CoVis (Learning through Collaborative Visualisation http://www.covis.nsw.edu) project has used the Internet to examine learning together. This is a leading edge project with equipment not accessible in many schools, however they suggest with increases in the power and speed of the Internet and future data superhighway, this kind of collaboration is not so far fetched. Schools in Australia are not currently at this level, however we are making some interesting progress.

Training first: getting familiar with the technology

Mr. Jock Garnsworthy of Hopper Crossing Secondary College, a government school in the outer Western suburbs of Melbourne, runs the Internet centre. They have thirteen computers linked to a local area network which is connected to the Internet. This is a facility of which many schools would be envious and they have plans to extend it to allow other schools in the area to dial into the centre. Mr. Garnsworthy is enthusiastic about what he can do with the Internet; he is amazed at what students can do with the Internet. Most importantly, he knows what it means for teachers. For teachers it means learning and that means time. Mr. Garnsworthy has done his time. Yahoo is no longer a hooligan, Veronica is no longer an old sweetheart's name, and webs are no longer just spun in his garden shed. Along with a core of seven staff (including the assistant principal and librarian), Mr. Garnsworthy is setting out on the path of integration. This group offers a core of experience which is looking to build projects and collaborations for students from year 7 to 12.

In what can only be considered a remarkable achievement, the school has had almost 300 students use the Internet in just 9 weeks. By the end of term 2, over 600 of the school's students will have been exposed to the Internet. They have all sent and received e-mail and surfed the World Wide Web. The Italian class now has a regular lesson in the Internet lab to communicate with other students in Italian. Posters of Web pages and pointers of how to use the Internet now cover much of free wall space. Students have their own e-mail addresses and the librarian has put together a research sheet which both helps students to find information and helps teachers keep track of what they are doing.

Dealing with up to 600 students, each with their own e-mail address and managing access to the facilities have become central issues for the feasibility of the centre. This once again means extra time is required to manage the centre; Mr. Garnsworthy has only two periods a week to do this, and other teachers have little spare time.

An innovative solution

Hoppers Crossing Secondary College has a system which puts many of the management issues in the hands of students. Through a customised user manager, students are able to manage all necessary facilities without the need for supervision. Student managers now receive request forms for new e-mail accounts and process them without any teacher input required. This serves a double purpose: students feel that they have some stake in the facility and support its use by enforcing the rules through peer pressure. Teachers are then free from one extra time constraint to concentrate on integrating the technology into the curriculum.

Talking the Next Steps: Collaborative Projects

Previously I have reviewed both pen pal projects and then using the Internet as a resource for research. Collaborative projects are the next stage. These require more planning, more involvement and produce greater opportunities for broad learning. These projects are at the core of what the Internet offers in terms of extending the classroom. Proponents see these...
projects as the prototype for the future of education.

Students can become involved in real world research, collaborate to change their environment, and learn skills which are difficult to teach in the traditional classroom. They can be the answer to the question "Why are we doing this?"; they can extend students into areas not possible in the traditional class room; they can include the skills of other adults and even parents; and they can encourage students to become more active and independent learners. The projects work best when they are integrated as part of the standard teaching process, where students still use standard research techniques, class discussions and essay writing, but include the Internet in each of these activities.

In one past project, students combined to do research on air quality, following one class’s complaints about their classroom. They encouraged other classes to test the air in their classrooms and compared samples from around the world. Their room was indeed the most polluted. Armed with this evidence they got funding to install air conditioning for their classroom.

Another landmark project involved a group of classes who assessed each others’ work. The teacher was so impressed by the increased effort his students made that he let them work longer than the planned time. The quality of the work was of a much higher standard and students who would not normally commit themselves to their work were fully involved. When it came time to finish the project and get on with the ‘real’ assessed work, he noticed that less effort and enthusiasm was put in. The format of collaborative assessment has been developed into a series of recurring projects where students review a book. The review is then sent to two other students (who have also written a review) who then review the review. The remarkable effect is the change in students’ attitudes to writing as students discuss the strong and weak points of any piece.

In these examples, the Internet provides a platform for the involvement of students in a wide range of interdisciplinary projects. Mr Rob Summers of Ferny Creek Primary School sees his students developing new skills with the Internet: “They become more aware of what they are doing; this helps them assess their own learning and so become more active learners ... I believe the students have benefited greatly from the easy access to the Internet, other students, teachers and experts”.

However, not all Internet projects are without difficulties.

**Difficulties with Collaborative Projects**

“Julian ... JULIAN! How many times do a have to tell you: don’t lean back on your chair!”

The students are climbing the walls; they are supposed to be concentrating but the Internet connection has been running very slowly and no one is getting very far.

Meetings, class preparations, marking - and on top of that, actually teaching. Mr Garnsworthy wants to get his students involved in more collaborative projects, however “these projects take much extra work”. Teachers such as Mr Garnsworthy have almost weekly curriculum they must work though. Internet projects traditionally have short lead times and they can sometimes start the week following the announcement. Teachers must build flexibility into what is a full timetable. They must also be able to see the relevance of the project to the subject they are teaching, and with many Internet projects being quite interdisciplinary in nature, that can be difficult.

Starting your own collaborative project can be very rewarding. Good collaborative projects need a coordinator, they need to be publicised, and the need to fit into other schools’ timetables and curriculum as well as your own. This also takes time and, as stated before, this is a precious commodity in any school environment.

Collaborative Internet projects do not replace the teacher or the classroom. They work best when integrated with other traditional teaching methodologies and act as a focus for a project. When students are encouraged to extend their classrooms and examine their learning, real benefits can result. However, constraints of time and lack of any coordinated support can make being involved in projects difficult.

Fundamentally, current curricular constraints and timetabling will need to be altered to take advantage of all the Internet has to offer. Then we will see the start of what could be the biggest change in the history of teaching.

**Examples of Collaborative Projects:**

These projects were conducted in March and April of this year. (For further information, see the projects’ e-mail archive at http://www.schnet.edu.au/Docs/Home/edtoc.html)

Australian projects are quite rare, however one great source for these is the Oz-projects. This listing contains many of the Australian projects; unfortunately there is no e-mail contact listed nor a World Wide Web page for the valuable resources.
Virtual China: become a virtual traveller and learn from other students as they take two week long bike trips in China. Students are encouraged to "travel along" and ask questions. This well coordinated project will engage students in China’s landscape and culture.

Desert and Desertification: Students develop a profile of deserts through a series of stages which examine deserts in literature, history, global change, deforestation. Students work with each other and world experts and build a presentation of collaborative produced works.

Newsday: Take part in a truly global newspaper. This project aims to improve students' reading and writing skills through being involved with every aspect of putting together a newspaper. Even get advice from real newspaper people.

The Light Project: Students become involved in an interdisciplinary project to discuss the different aspects of light, trying to internalise the cultural values in connection to this concept.

Works in Progress: Students receive stories from established children's authors which are unfinished and are asked to discuss the stories with other students and relay their comments back to the author.

UN Youth Initiative: 90 world leaders meet in Denmark to discuss poverty, unemployment, and social conflict; students are encouraged develop submissions which will be viewed by thousands of people at the summit and become involved in global issues.

Project Ecology: Students draw images of world ecology and exchange these. The drawings are put together through discussions of a range topics such as recycling, logging, waste disposal, soil erosion endangered species. The project acts as a focus for almost any discussions of ecology.

Topex/Poseidon Project: Scientists and researchers involved with the building of the advances satellite system for examining the world's oceans will involve students in their research and provide individual responses to students' questions.

F-18 SRA Project: Students become involved with test pilots and engineers as they explore new technologies. These include fibre-optic sensors, inertial guidance algorithms and flux airdata systems.

Australian School Expo
John Wilcock Senior High School, a country school in Western Australia, conducted a computer expo in their school on Thursday October 26 and Friday October 27. As part of this expo, they requested e-mail from other schools and individuals from around the world, who were asked to send e-mail on or before these dates to:
expo@sjohnwill.eddept.wa.edu.au
David McCleery
ED41SDM@zcompserv.eddept.wa.edu.au

Best Practice:
IT and the Learning Process
The Department of Employment, Education and Training (DEET) is funding a project of national significance titled Best Practice: IT and the Learning Process. The project is being conducted under the auspices of the ACT Department of Education and Training.

The project has been established to seek out and publish best practice in the use of Information Technology across the curriculum in primary and secondary education in Australia. The project is not only seeking leading edge exemplars, but a range of material to assist all teachers to take at least one step further in the effective use of IT in their classrooms.

To assist in the conduct of the project I am looking for the following:
• examples of similar best practice projects;
• criteria for determining what is best practice;
• suggested formats, proformas for collecting suitable material;
• ideas about how to publish the material (in terms of content and layout) in an interesting and meaningful way so as to appeal to teachers.

If you are able to assist in any way, please contact me.
Ian Webb
Project Coordinator
E-mail: ian_webb@signas.dpa.act.gov.au
Telephone (06) 205 5491; Fax (06) 205 9387

Australian Schools on the Internet
A list of Australian schools on the internet (either with e-mail addresses or with World Wide Web sites) can be found at:
http://www.nuswired.net/Chalk/Schools.html

Daniel Ingvarson
SchoolsNET

SchoolsNET is an Australian organisation dedicated to providing Internet access and online educational resources to schools.
E-mail: info@schnet.edu.au
Web: http://www.schnet.edu.au/
Governance and IT
SITMaC at Wendouree

Student participation, as we are well aware, can take different forms. It includes various forms of student governance in which students are an integral part of a school’s decision-making structure. An observer would recognise that the Wendouree Campus of Ballarat Secondary College (aka Wendouree Secondary College) has a long history of trying to wrestle not only with the definition of student participation, but the means of its implementation. It is now time report on a new addition to the list: the Student Information Technology Management Committee (SITMaC).

SITMaC had its genesis in the Music Management Committee that used to operate at Wendouree High Technical School in the late 70s and early 80s. This group consisted of students, parents and music teachers. The group was responsible for the development of the music curriculum as well as the development of budgets and so on. This idea was resurrected in a new format that would allow students a greater say in the way the Information Technology curriculum for Years 7-10 should be structured, allow them to develop skills of running meetings, financial management, technical skills and knowledge about the operation and maintenance of the Digicard network and the Apple Mac computers. It seemed the climate was right to introduce this concept.

In trying to implement something that could change the very way in which students and teachers have seen their relationship, it is absolutely vital to have the support of your teaching colleagues and the support of what I will call ‘significant students’. Fortunately, the timetable worked in a way which gave myself and a colleague with similar views the bulk of the IT classes on the campus. Hence, support was available for the plan within the faculty. The other component of this equation - the ‘significant students’ - was easily tapped into, because the student campus captain and other Year 10 students who had an influence on the student body of the campus, were also extremely interested in IT as a subject and were also suffering from the ‘student ceiling syndrome’ - that is, they had reached a point where their decisions within the SRCs (three on the campus associated with each sub-school or unit) were seen to be marginalised. Probably these students were also looking for a vehicle by which they could make significant changes to the administrative and curriculum structure of the campus. Given the support in the faculty and a group of students looking for new ways of contributing to the culture of the campus, the idea of SITMaC was floated to the Year 10 IT classes.

First Meeting - First Decisions

The initial meeting was called for a lunchtime early in term one. The idea of the group was placed before students. The group could be involved in making decisions about the financial operation of IT, what was taught, the type of computers and software to be used, the operation of the computer lab, student and staff access to the labs, future directions of IT on the campus, planning of professional development for students, staff and parents, the overseeing of internet access, the development of links with the other educational institutions and the wider community and so on. The immediate reaction of the 25 Year 10 students who attended the meeting was complete endorsement of the concept. So enthusiastic were the students that the nature of the meeting changed from information to construction - construction of the basic structure of the group.

The students quickly agreed that the group needed to have an executive body, to consist of two chairpeople (one female and one male), Secretary, Finance Officer, Minute Secretary and Communication officer. The positions were to be filled by an election process but the candidates were to come only from Year 10. Furthermore, the group then made some significant decisions:

1. the group should be open to interested students from Years 7 to 10;
2. there should be a series of committees or groups concerned with issues that needed to be addressed, such as the lab management group, community and media liaison, excursions, fund-raising and training;
3. Each group would have a person elected to the position of manager or coordinator (later this was changed to Chairperson);
4. A meeting of the group would be held once a fortnight and managers would make reports at those meetings;
5. The sub-groups would meet on the alternate week, which meant that meetings were also held once a fortnight;
6. A staff member would be appointed as Executive officer and thus be in a position to work for the executive;
7. The executive should be responsible for the development of policies and/or rules concerning the operation of the computer labs, course content, maintenance programs, development of a
budget and the overseeing of its spending, as well as the future directions of Information technology at the campus;

8. the group should develop telecommunications on the campus;

9. SITMaC members should be prepared to train others in the use of the hardware and software;

10. The executive should put pressure on the campus and college administrations to support the SITMaC initiatives.

In essence, the guiding principles established at the start have remained in place throughout the year. The only change that really took place was in the way the executive decided to deal with the large numbers of students that were attending meetings and using the Information Technology resources and that was by putting the group on a club basis. The executive decided to issue membership cards to people and this entitled them to increased access to equipment as well as to the internet. To attract even more people the executive arranged a five per cent discount on purchases with a local computer reseller. Of course, this attracted more people into the group, especially when the executive held McD days for the group.

Impact on the School

SITMaC has made an impact, not only in terms of student participation, but also on the way that things operate. I might go as far to say that the group has brought about a major change in the culture associated with the library. Some of the major achievements of SITMaC this year clearly illustrate the impact they have had on the curriculum, staff and students, parents and outside organisations:

- attendance at the PEARN 2nd International Teachers Conference at Melbourne University, where the students were responsible for the production of an electronic Conference newspaper;
- the development of the Multi-media Resource Centre which has impacted upon the curriculum of Social Education, Information Technology, English and Science (Art to be included in 1996);
- increased access for students to the computer lab before and after school as students used these resources for other subjects;
- changed the Year 9 and 10 Information Technology curriculum to incorporate multi-media and Web page development;

An examination of the list shows that the group is active in areas that have been hard for students to have an impact on: curriculum and policy development. Why this has occurred needs some further reflection on the behalf of this writer but it can be contributed to a number of factors.

Like most organisations, success or otherwise depends on the people involved in its operation. Yet the executive had to deal with the problem of succession in order to produce a sense of longevity about the group. The executive believed that the answer to the problem was ensuring that the 1996 executive was in place before the end of the year. Elections were held and people were appointed to 'elect positions' so as to provide the Year 9s with some on-the-job training before the Year 10s finished. Interestingly, as the Year 10s head off to the senior campus, they have their sights set on operating a similar group on that campus. Given what this group achieved throughout this year, then the senior campus appears to be in for an exciting time.

While the above provides a sketch about how the group was formed and what it achieved, it is hoped that in the near future (early in 1996) a booklet outlining the structure and policies of SITMaC will be made available to interested people. If you wish information now, then please contact the address below.

SITMaC Secretary
Wendouree Campus
Ballarat Secondary College
PO Box 1877
Ballarat Mail Centre Vic 3354
Ph: 053 3295071
Fax: 053 381433
email: bscwendouree@peg.apc.org or bscwen@ballarat.edu.au

Allen Jones
SOSE Learning Area Head and
SITMaC Executive Officer
Wendouree Campus
Ballarat Secondary College
The power relationships in the Darwin classrooms of Nightcliff High School have been slowly changing for some years now. In 1993, as the Information Technology Manager of the school, I was “snowed under” with a mountain of tasks. Although I had another teacher assisting me in the area, I was continually besieged by the day-to-day tasks of running an expanding computer network: refilling printers, fixing software and hardware problems, ordering new equipment and installing it, and coping with the need to drive the school’s Computing focus further. In addition, I was teaching in two subject areas, both Computing and English, and the school’s computers were open to all faculties to prevent equipment domination - an idea that works well and which we still use today. This did not stop teachers sending messages via students to my classroom. The message usually went something like this: “Mr X says that a computer has crashed /a disk is stuck/a printer has jammed in Computer Lab I/II or elsewhere and there’s some vital work/original formulas/incredible artwork involved. He says can you come now?!”

Faced with more of this or a retreat to a desert island, we began searching for a solution. An idea was stolen from the methods of teacher-librarians. We would use students to help. Today Nightcliff High School, with its focus on High Technology, has an “Excellence in Computing” group of 28 students in a three-rank organisation. Known as the Network Assistants Group, these students manage the school’s 150 Macintoshes and associated equipment, and act in a number of other roles as well. They advise in classes, have set up our Internet access points, a World Wide Web presence, and a school multi-line Bulletin Board run by three student sysops. Our security programs are controlled by one student who has the relevant passwords; our 50 Powerbook portables are managed and maintained by a group of Network Assistants; we have an OS troubleshooting team capable of leapfrogging buildings or at least most software problems ... All computing areas have a team of student Network Assistants supervised by a student Network Assistant Manager; these students start up computers in the morning, fill up printers, perform routine maintenance and shut the machines down in the afternoon.

The members of the group receive privileges in return for their responsibility and duties. For example, they are allowed to use the computer labs unsupervised; they may take home items of equipment depending on their rank, including CD-ROM drives and Powerbooks; and at the highest level of the group, the school provides the student Network Manager with an Internet account. Competition to enter the group is fierce: when our year 8s were recently offered the opportunity, nearly 40% of the year expressed interest, and 28% applied. We basically look for two sorts of student: the computer devotee, or the responsible person who may in time be able to manage others. In either case, the highest standards are expected, as we give these students passwords, user IDs, access to restricted areas, and responsibility for expensive equipment. Each student must pass every subject every term to maintain membership.

Sometimes we hold days out of class for various reasons; usually to perform network upgrades. The school often provides lunch, and for students who run demonstration labs during parent-teacher nights or open evenings, of course tea - food is a powerful incentive to the teenager! We have a meeting scheduled for once a week on Thursday lunchtimes: it is the only time of the week when we can all get together, as during the normal homeroom/roll mark students are engaged in duties in an area. Thursday also is the day Net News is given out: a one page newsletter which carries items of interest about the IT facilities, new equipment, special days coming up and so on - and also a list of failures for the term; that is, students of the lowest rank who forget a duty. For this sin, if it happens five times in a term, students can lose a privilege for a time. It happens rarely.

Along the way, of course, a student is learning a lot. Not only about computers, although we have some extremely capable achievers. Inter-personal skills, management techniques, responsibility - all are part of the students’ curriculum. Sometimes the learning can be hard: it takes courage as a 15 year old to tell a 16 year old what to do, but such cases are good training in themselves. Over 50% of the group is female too, which can also lead to power struggles, as the gender equality idea often doesn’t count with students, particularly when it was formulated in the primary school playground with the idea of strength = power.

For the team of three teacher administrators - myself, Christine Brown and Keith Moylan - who manage Nightcliff High’s IT facilities, the learning has also been a little difficult. Speaking personally, I once thought it was essential to be the “knowledge master” of everything in the teaching area. This idea was attacked a little by the repeated installation onto our school network of many programs, but it really began to crumble with the enormous rise in innovations in the computing world: Desktop Publishing, digital cameras, Bulletin Boards, the Internet, Personal Digital Assistants, RISC technology - the list goes on. Eventually logic replaces personal pride (or fear of being “left behind”).

October-December 1995
The school's Bulletin Board is a case in point.

A Bulletin Board is a computer that can be telephoned by another computer, using modems as the communicators. Our Bulletin Board offers information about the school and its subjects, and shareware programs for the Mac: utility software such as screensavers, sounds, accessories, games and so on. To learn all about the intricacies of the Telefinder management software would be quite a steep learning task. With some agonising, the decision was made: the students would be given complete responsibility. The teachers' input has simply come from the fact we ring up the BBS ourselves occasionally, generally to check that it doesn’t contain anything it shouldn't. This decision has worked very well: the BBS is popular and interesting, and we have not had one controversy. For the teacher manager however, the decision to relax some control has implications. First of all, it's a revision of the idea that authority necessarily involves being an absolute master of the subject. Secondly, there some degree of fear as to the possibilities for carnage and destruction. And thirdly, there's the implicit idea that teaching is all about giving knowledge.

To look at these problems of mindset briefly. Authority within the education system generally comes from position. As an adult and a qualified teacher, the teachers’ role is not lessened by the fact that he or she is not a walking encyclopaedia. This is related to the third objection too. Is teaching not about withholding knowledge and dispensing it to maintain power? Surely it involves reworking the knowledge with the student to thoroughly understand it, evaluating ideas - even questioning them, ensuring the knowledge is fully understood. The teacher’s role is not that of guardian of the knowledge, and perhaps too many teachers are concerned if a student is perceived as being of greater potential than the teacher. But if the English teacher trains a student who becomes a successful writer, or the music teacher is one day surpassed by the pupil, is that failure?

By empowering students with the authority, ability and trust to operate sections of their computer facilities, at Nightcliff High we have managed to solve the problems of operating a huge resource with very little paid personnel. In addition, we like to think that we have developed our students' minds in a few ways. The Group has had some minor problems, but in summary after three years, we are happy with the arrangement - and with the loss of power.

Nightcliff High would like to invite readers to check out their Web presence at http://www.peg.apc.org/~nightcliffs/

by Tom Lewis © 1995
School's Out Forever? No Thanks

"Computer-based education is coming to a school near you," writes Koelsch (The Infomedia Revolution, 1995). He's not wrong: judging from the plethora of computer-aided learning tools currently available, educational technology is experiencing a veritable boom.

Typically, education occurs in the classroom. The combination of computers and telecommunications has challenged this concept; individuals can now participate in single and group learning activities regardless of space and time constraints.

Indeed, educational technology has come a long way. The networked multimedia educational packages of today don't stop at the transference of information either - they reach much further. Conferencing facilities promote the much more sophisticated concepts of collaborative learning, allowing students to share different perspectives, personal knowledge and experience via conversation, argument, debate and spontaneous or structured discussion.

Educational technology today seems capable of tackling both educational and social issues. Marvellous, but what does this really mean for students and how does it affect the teacher-student relationship?

Whilst the benefits of the 'Information Technology Revolution' are clear - lecturing time is increased, expense is decreased, students at remote locations or smaller institutions are given a wider range of disciplines from which to choose and everybody can see the 'blackboard', apparatus or procedure being carried out - are we not overlooking that vital relationship between teacher and student?

Although students may now interact, the emphasis, quite rightly, seems to be upon the student learning that which is presented to him/her. This is something which the following statements have in common:

"...computers...are...so often seen as just another channel for transferring knowledge from the teachers to the students rather than providing an environment in which the students can explore and learn together." Howard Rheingold, author of The Virtual Community (1994).

"I knew that if we could create a suitable playspace, children would learn a wide range of skills and subject matter." Barry Kort, co-creator of MicroMUSE, an educational playspace available on the Net (1994).

"The computer could not only guide them but pace, monitor and assess their progress. It will tune education to the specific needs and capabilities of individual children." Frank Koelsch, author of The Infomedia Revolution (1995).

There is absolutely nothing wrong with any of the above. The problem lies in the changing attitude towards the teacher. Frank Koelsch goes on to say:

"It is unreasonable to expect teachers to focus on individual children, what they are learning and how they are progressing."

Is this not what teachers are for? If not, why do we need teachers at all; would not books and videos suffice? It is a fallacy that the teacher's only role is to teach. For most children, after their parents, their teacher is one of their main adult role models.

In America, educational psychologists are now suggesting that the presence of male adults in the classroom can prove invaluable to the development of male adolescents living in a female-dominated, single-parent environment.

It is through their teachers that many children learn self-discipline and gain respect for their elders. Have we forgotten the lessons taught in those wonderful teen films 'Dead Poet's Society' and 'Shout' where Robin Williams and John Travolta not only educate their students in classical study but also guide them through the trials and tribulations of adolescence and growing up? Have we indeed forgotten our own teachers? A virtual teacher, known only by his or her Cyberspace persona could not fulfil this role.

In conclusion, the benefits the 'Information Technology Revolution' has brought to education must be reassessed. Educational technology is a powerful tool made more so by communications technology. It allows students to live the lessons that they are being taught; in the words of Richard Bartle, co-creator of the first Multi-user dungeon (1990):

"MUAs (Multi-User Adventures) can exert an influence over a large number of these players out of all proportion to that of either a teacher or game alone. MUAs have an emotional hold over their players which stems from the players' ability to project themselves onto their game persona, feeling as if the things which happen to the game persona are happening directly to the players themselves."

"In an interactive network, school is never out." Richard Brown, vice-chairman of Ameritech.

The evolution of the computer's role in education must continue, but let us not get too caught up in glitz and glam of the 'Infomedia Revolution' lest our children suffer. We must not relinquish such predictions as that of Rajasingham (1990) who believes that in the future, communications technologies (ISDN in particular) will make distance learning the norm and Koelsch (1995) who writes:

"Networked computers enable everyone - students, families, teachers and administrators - to rethink the nature of 'school'. Instead of thinking about schools, it lets them focus on teaching and learning. And learning doesn't just happen in schools. Just as computers give business people a new degree of freedom - divorcing work from the physical workplace - they can do the same for students. The virtual classroom, just like the virtual workplace, doesn't have to be a physical location. Children can learn at home, at the cottage or while on a trip with their parents, all the while staying in touch with their classmates and teachers.

Let us keep our perspectives; where distance learning is required, networked computing has provided the best possible 'better than being there' environment in which to learn; but wherever possible, let us maintain the tradition of classrooms in educational establishments. Bring the computer into the classroom. Allow students to escape from the classroom via the Net, even invite virtual classmates to participate within the classroom, but please, let us not dispose of the classroom altogether.

School's out forever? No thanks!

R M Crawley
Department of Mathematical Sciences
University of Brighton, UK

October-December 1995
BUSINESS MANAGEMENT

I teach at Galvin Park Secondary College in outer-suburban Werribee, some 30 km west of Melbourne. In my fifteen years of teaching, I have come across many teaching methods and strategies and have implemented many of them over those years, in my roles as Secretarial Studies and Commerce teacher. At the same time, I recognise that I imposed a somewhat authoritarian style of teaching on my students.

This was until the early 1990s, when I volunteered to undertake the task of teaching VCE Business Management at both years 11 and 12. This was a new subject at this college and in this state. My first two years were just survival (together with all the other teachers of this new course) and it was based on research, investigation - and trial and error. Countless questions continuously arose in my mind, all directed towards one thing: was I doing the right thing by my students?

Over time and with some assistance from appropriate in-services, I became more confident with what was happening in my class. Due to the nature of this course of study, students are required to learn and experience all the eight Key Competencies. As a result, I found that much of the decision making, organisation of activities, group and team work was being made by the students - and my role became one of an adviser. This allowed me to experience teaching under a new perspective.

The fact that students learn the theory of operating a small business, then actually engage in an enterprise activity, has allowed us all to go beyond the classroom. This has had a positive effect on the students, as they understand real learning can occur in many different ways.

Some business enterprises undertaken have been - to name a few:

- a sausage sizzle;
- a fashion parade;
- a car wash;
- a hamburger stall;
- a trivia night.

For each activity, students were required to contact business organisations either by phone or letter. This developed a real sense of responsibility and a lift in their self-esteem as they found that when people were approached the right way, the success of their enterprise was ensured.

I really enjoy teaching Business Management as it allows me to nurture and develop confidence in students, together with the fact that this course allows the teacher to be part of a group. The ‘I’m the teacher; you’re the students’ ceases to exist, as it is more a team of people working together and learning from one another.

Finally, the best part of this course of study is the joy I see in students maturing within themselves. They progress from unsure, reticent students to outgoing, confident young adults. For this reason, I hope to have many more years of teaching this subject. It is more than teaching; it is the pleasure I see in the positive growth of young people.

Christine Robinson
RESEARCHING STUDENT PARTICIPATION

Some Reflections

Steve Wilson, Lecturer in Education at the University of Western Sydney, Nepean, is undertaking a case study of student participation in a high school. Details of Steve's research were outlined in Connect 88 (August 1994). In three recent communications, Steve reflects on issues raised as the study progresses.

Note 1:

It's enlightening and frustrating at the same time - seeing the potential in student ideas for school transformation, yet at the same time seeing the resistance from staff to meaningful student dialogue, and the powerlessness of students to initiate action without staff leadership.

I haven't engaged in quality analysis of my data to this point, but am looking forward to the time when I do. What impresses me to this point is the complexity of factors which operate in the case study school to minimise the impact of change, especially to teaching methods (which are conservative). There is a great need for dialogue in the school about the purposes of education. Some teachers feel students repress teacher initiatives in broadening teaching approaches because students have very instrumental views of education. Teachers say, for example, that they try things like group work, but that students like copying notes into books. And the students are themselves divided on this question (they just don't know it, for there is no public forum for such issues to be discussed).

A further interesting factor is the way teachers seem to view student initiative and student responsibility as 'innate' characteristics. If students are deficient in their knowledge or skills in Mathematics, then teachers generally perceive it to be their role to teach these students the knowledge or skills so they improve. When it comes to empowering students to improve their sense of responsibility or initiative, however, this doesn't seem to be seen as part of the curriculum by teachers. We still have, in this school at least, and I suspect in a much broader context, a very content dominated view of curriculum. In this school, if students fail to meet the challenge of taking initiative or being responsible, then they are regarded as deficient. Further efforts to help students are seen to be futile, and teachers simply wait until students demonstrate that they have 'become' responsible or pro-active.

Note 2:

One of the problems with doing a case study is that to some extent your perspectives are blinkered by the nature of that particular site, and the site I am in has no great record in student participation. However, in that respect I guess it is typical of many schools and the attitudes of teachers in those schools.

Things have begun to look up a little. My research has tended to become action research a little more, because a group of students and I have been working together on a project which involves them conducting a presentation to staff on a 'School Development' day.

This evolved because I met with a group of four Year 10 students. One of the questions I asked them was, "Do you think that an SRC should be concerned about teaching, learning and curriculum issues?" (The reason I asked this question is that my research had shown that students in the school were concerned about poor teaching styles and learning outcomes). They discussed this for awhile, and finally decided "Yes". I then asked them whether they were aware that there was to be a School Development Day in October that was to focus on the issue of how to teach in 80 minute periods (the school is moving from 40 to 80 minute periods, and an outcome of my research for staff has been a gradual realisation that if kids are unhappy with teaching styles in 40 minute periods, then 80 minute periods will be even worse, so something should be done). These students had not been aware of the SDD, but felt they should have been. We then began to discuss possibilities.

The upshot was that these students decided they would either like to present at the School Development Day to the whole staff, or run a workshop. They have since met with the Principal and Leading Teacher, and they are in the process of planning a presentation to the whole staff with the assistance of myself and the leading teacher (mostly the leading teacher, I'm happy to say). Basically, they are going to make a video in which they are going to ask 20 or so students about how they like to learn and what they would like to do in 80 minute periods. On the SDD they will have about half an hour to introduce the video, show it, and conclude it (at this stage, I think they are planning to have a discussion or question/answer session with staff).

This project has begun to invigorate some members of the SRC who were previously quite unmotivated. There are now 12 students working on the project, and these students also worked with me in a process of evaluating the processes used by the current SRC and deriving goals and strategies...
for its improvement. This is obviously in its infancy, but is encouraging. All this is taking place in a context where students are seen to be passive, sometimes irresponsible and having little to contribute in terms of school management, so it is interesting and exciting. The only thing which depresses me (and I suppose it shouldn’t) is that it took an outside agency to initiate action. Despite being confronted with detailed information about student views in the first phase of my research, nobody in the school has taken on board the opportunities created by these understandings.

HOWEVER - it now looks promising. One thing I’d like the students to do at some point is to write something about this for Connect. I gave them a copy of the journal a number of months ago, and they tell me that they’ve now subscribed.

Note 3:

Since my last note, the students have done their presentation to staff. It turned out to be a top class act and was enjoyed by the teachers who saw it - in their evaluations, teachers overwhelmingly reported it as the highlight of the day. The students who were interviewed on the video were given the questions to consider in advance. Consequently they presented as thoughtful young people with good ideas about educational matters.

I’m not sure how much the students’ presentation will influence what teachers actually DO in the classroom. But, it’s a start, and it has helped teachers to think about some of the issues. The students who organised the presentation now feel significantly empowered because they have conducted an effective piece of research in the school. Teachers are also impressed. There is talk of inviting students to participate on some school management committees. This is something new in this school, and many teachers up till now have held the view that students would have little to contribute on such committees.

Finally, the students who organised the presentation have promised me they’ll write something for Connect in the near future concerning their feelings about their experiences.

Steve Wilson
Faculty of Education
University of Western Sydney, Nepean
PO Box 10, Kingswood, 2747

National Student Participation Workshop

Thanks so much for all the work involved in putting together the student participation workshops. They were fantastic! They widened my students’ appreciation of what is possible - it is such a buzz to talk with enthusiastic students and their facilitators.

The after-ripples of interest and networking keep us going - sometimes it’s hard to maintain the energy. The workshops boosted our enthusiasm back to high.

We’ve just applied to our Shire, the amalgamated Moira Shire, for funding for another camp for next year. They received us very positively and we await their decision.

Lyn Logan
Nathalia, Vic

ACSA Conference

I found the ACSA conference to be a really fantastic and worthwhile experience, not only from the point of view that I learnt a lot about ACSA, reporting and web pages, but also because I met lots of new people and got to really experience what it is like to be a ‘journalist’ - which is a field that I am seriously considering following after secondary school. I think that a lot of the things that made the ACSA Student Reporting Team and the four days that we were at the conference so enjoyable, was the work that you and Sara put in.

Another development that I thought you would like to hear about (if you are wondering about ‘Life After ACSA’) is that Kilvington and Scotch College seem to have formed a link. Christine Young and I have been asked to write an article with Lars Gilbert from Scotch on the ACSA Conference - using e-mail. This is something which would, undoubtedly, have caused me a great deal of worry before ACSA, but I think that I will be able to deal with it now. It is quite interesting that the two schools will continue their association.

Clare Pellegrini
Kilvington Girls Grammar, Vic

NSW State SRC

During this year I have moved into tertiary education and therefore I am no longer directly connected to the school’s Student Representative Council. I have, on the other hand, still retained links with the Metropolitan South West Regional SRC. This region over the past few years has provided a network for students to acquire leadership skills that will both benefit the school system and themselves in the future. My background with this program spreads back some years and it has seen me extended to represent the students of my region and my state on the NSW State Student Representative Council.

In the latest budget, however, the NSW school system was hit with a 17 million dollar cutback which has put in jeopardy the continuation of the program. In these modern times, wouldn’t you think that students would be recognised to be a crucial part of the education system.

Hewon Parry
Belimbla Park, NSW

Connect 95-96:
PASTA Incorporated

Exciting times have finally arrived for student leadership advisers in schools. The Professional Association of SRC Teacher Advisers (PASTA) (Promoting Student Leadership, Participation and Representation) has been incorporated on 8th August 1995 and a member of the Joint Council of Professional Teacher Associations in October.

Joy Neilson and Ralph Murray represented the Association at the Joint Council AGM and questioned the NSW Minister of Education, Mr John Aquilina, on behalf of the SRC movement. They were given assurances that the level of support for SRCs in NSW schools would continue. Metropolitan North’s Dr Alan Laughlin has been assigned the task of determining where in Head Office the SRC support is to be located and the level of support it will be given. Each District in NSW is also to receive support for SRC activities. PASTA suggests that SRC advisers organise District Networks to administer their area and liaise with each District Superintendent.

The NSW State SRC Council is to continue and the next meeting will probably address the future representative pattern. Student representatives need to be briefed about possible options - combined District representation, old Regional organisation, rotation of delegates from Districts etc. The State Conference is also assured with both roles to go to the soon-to-be-appointed Head Office officer. Whilst PASTA would love to see this become a full-time position, it will probably operate as at present and be 30% to 50% of an SEO11 position.

The first PASTA Conference was organised for the weekend of 18-19 November. It was the first opportunity to meet, to discuss NSW and National directions for PASTA, and to canvass future membership.

PASTA membership forms have been organised and are attached. Please copy and distribute to schools (both primary and secondary) in your area. Subscriptions for 1996 are open. The organisation is only as strong as its membership and so, if PASTA is to develop the political clout necessary to make things happen in schools for SRC Teacher Advisers and the students with whom they work, all schools and SRCs should be encouraged to join. PASTA is a national group and hopes to have affiliation from state and district SRC Associations in all states and territories across Australia.

Ralph Murray will edit the first PASTA journal - Student Leadership (the old Wave Rave) - and is presently negotiating with Ashtons Scholastic who publish the US SRC Leadership magazine. The first issue of Student Leadership will feature the Northern Suburbs of Sydney Districts and future issues will rotate around other NSW and Australian areas. Regional Newsletters, SRC Reports and newsworthy articles can also be forwarded to Ralph for future publication.

PASTA Steering Committee Co-Convenors are: Charles Kingston, Bathurst HS (Phone: 063 31 3755; Fax: 063 32 2302) and Ralph Murray, Berkeley Vale Community High School (Phone: 043 88 1899; Fax: 043 88 5539).

October-December 1995

31
PASTA MEMBERSHIP

PASTA is the Professional Association of Student Representative Council Teacher Advisers. It is a Professional Teachers' Association formed in 1995. It offers membership to educators at all levels of the education system from K to 12, in both public and private schools across all the states and territories of Australia. PASTA is a member of the Joint Council of NSW Professional Teachers’ Associations and is affiliated with the National Association of Student Activity Advisers (NASAA) and the National Association of Secondary School Principals (NASSP) in the USA.

Aims

PASTA is a Professional Association whose aim is to provide active support for teachers and students involved in Student Representative Councils and other Student Leadership and Student Participation activities.

PASTA offers:

- positive support for SRC teacher advisers;
- practical workshop ideas for SRCs in schools;
- regular seminars and workshops/conferences at an Association, State and National level;
- regular newsletters and journals;
- reduced registration rates to PASTA in-service courses/workshops/conferences etc;
- training and development within the SRC area;
- a supportive network for SRC activists;
- special resources for students and teachers.

Who can join?

- teachers or trainee teachers working or interested in the area of student leadership;
- any person interested in the area of student participation or representation;
- institutions/corporations who have a demonstrated interest in the support of Student Representative Councils and student leadership within schools;
- any person or organisation interested in promoting citizenship within schools.

Professional Development and Support

- PASTA will act as a forum for SRCs;
- PASTA will offer support for SRC National, State and District Association activities;
- PASTA will pursue professional recognition and improved working conditions for SRC Advisers;
- PASTA will promote the area of student leadership and SRCs as an essential curriculum area in all schools;
- PASTA will assist in the exchange and dissemination of resource materials in support of SRCs.

How You Can Get Involved in PASTA

- Form a local PASTA association and affiliate with the National PASTA;
- Attend PASTA meetings;
- Nominate for a position on the PASTA Committee;
- Help with the organisation of workshops, seminars and conferences;
- Assist with publications/contributions and data collection;
- Assist with PASTA submissions and policy writing;
- Promote SRCs, Student Leadership and PASTA at every opportunity, both at school and in the local community.

PASTA Annual Conference

The first NSW SRC Teacher Adviser Conference was held in February 1995 and this led to the formation of PASTA. The PASTA National Annual Conference will be held in February of each year, in Sydney.

Membership

Ordinary $30
Student/Unemployed $15
Overseas $40
Institutions $50
Corporations/Publishers $70

NB: Membership is tax deductible.

PASTA, PO Box 577, Leichhardt NSW 2040
Phone: (02) 564 3322; Fax: (02) 564 2342
AIESEC

AIESEC is a non-profit, non-denominational, international, independent educational association dedicated to achieving the fulfilment of society’s potential. It is the world’s largest student organisation, located in 85 countries, and comprised of over 75,000 members based in over 800 universities. AIESEC’s members play an active role in the development of international understanding and cooperation, encouraging interaction between the student, academic, government and business sectors of society. In Australia, AIESEC brings together university students from twenty major campuses to identify, discuss and, most importantly, initiate action to take advantage of Australia’s cultural wealth.

In Victoria, we are currently running many diverse projects, from an international Youth Development Envoy Program, to the Graduate Exchange Program focusing on building relations between the People’s Republic of China and the Australian business and academic sectors.

The project I am associated with is called Destination X. Destination X is a project being run in Victoria in cooperation with the Community Relations and Education Project of the Directorate of Schools Education, Victoria. It will provide a voice for young people in Australia’s multicultural society, using visual media such as television and interactive CD-ROM. It will comprise two interlinked and equally important phases:

Phase 1 (today until September 1996): A series of six half-hour television programs, made by young people, for young people (with professional assistance from the people behind the ‘I Am Australia’ campaign), which deals with the positive and proactive aspects of multiculturalism. Each episode will focus on topics such as the family, education and the future. We will involve final year tertiary students in the filming and production process, and in areas where vacancies exist, provide short-term administrative employment opportunities for as many young people as possible. The aim of this phase is to educate and inform today’s young people, and their parents’ generation, of the current reality, as well as to inspire a change in attitude.

Phase 2 (September 1996 - February 1997): An interactive CD-ROM incorporating the themes discussed in the television series, aimed at secondary students around Australia, which will fit into a national anti-racism strategy. It will include information, prospective paths of action, available resources and course-related project opportunities. The CD-ROM will be introduced into secondary schools as part of a comprehensive package. There will be short-term employment opportunities for post-graduates and unemployed young people in the administration and distribution areas, as well as the innovative and relatively new field of interactive computer technology. The aim of this phase is to activate young people into effectively solving the problems they see in their environment, and to provide them with the necessary skills, knowledge

Andrew Rakers
Destination X, AIESEC
GPO Box 4367, Melbourne 3001
Phone: (03) 628 3441

Landcare and Environment Resources

I thought I’d bring to your attention a site that is Australian and could be useful for projects and lesson plans:
http://www.agfor.unimelb.edu.au/LOCweb/1clibrary/edulcare.html

The links listed contain information on projects that may be useful for landcare education at primary and secondary school level. There are also a number of environmental science links that are Australian-based. One link on the above site has a number of science/geography/environment lesson plans attached:
http://envirolink.org/enviroed/envirok12.html

Trisha Benson, President, ACT Schools Internet User Group
Agriculture Teacher and Librarian, Stromlo High School, ACT
benson@tyndale.apana.org.au
School Exclusions Research Report

The research report: School Exclusions: student perspectives on the process has recently been completed by the National Children's and Youth Law Centre. The Final Report has been sent to the House of Representatives Committee on Employment, Education and Training for the Non-Attendance at School Inquiry.

Copies of the Report are available from the NCYLC for $5 (including postage). Contact: National Children's and Youth Law Centre C/o The University of NSW Sydney NSW 2052 Phone: (02) 398 7488; Fax: (02) 398 7416 E-mail: nyclc@unsw.edu.au

Summary of Recommendations

1. State and Territory governments should specify, in their respective Education Acts, fair and objective grounds under which a student can be suspended, excluded or expelled from school.

2. Education Acts should provide students and their parents/guardians with the right to appeal against a decision to exclude a student. Acts or Regulations should provide for students and parents/guardians to be informed of this appeal right and the appeal procedure should be outlined clearly.

3. Students or their parents who appeal against a suspension, exclusion or expulsion should have the right to have an advocate of their choice, including legal representation.

4. A student appealing against an exclusion decision should have their appeal heard by an impartial panel on which a range of school and community interests are represented. Reasons should be given for any decision, based on evidence presented at the hearing.

5. A joint committee should be set up with representatives from students, parents, teachers and educationalists to develop a model code of good practice for behaviour management in schools, including grounds and procedures for all form of exclusion.

6. Exclusion should be a last resort after the student's family has been involved in dealing with the problems that have arisen and specific programs to deal with the unacceptable behaviour have been tried and failed. Schools should have supportive and appropriately trained staff to provide general preventative and specific focus support measures to assist young people who may be at risk of suspension or expulsion.

7. Students who have been expelled from school should be provided with information on alternative education programs or other specific options to enable them to continue their education. There should be clear lines of responsibility for assisting students who have been excluded to continue their education at some other school or in some other way.

8. Departments of Education should arrange training courses for school principals and for other senior staff in the principles of natural justice and their applicability in relation to school exclusion procedures.

9. Consideration should be given to the preparation of a training video and accompanying handbook for each State and Territory explaining the statutory procedures and relevant guidelines and illustrating how the principles of natural justice should be applied in practice.

10. Detailed statistics to be kept centrally by each State/Territory Education Department and nationally by education authorities containing comprehensive information on: age, sex, year level, region, aboriginality, ethnicity or cultural background, reason(s) for exclusion, period excluded, number of exclusions per student, previous intervention, measures taken to deal with behaviour, support provided and any other relevant information.

11. Students facing exclusion and their parents should be informed in writing of the reason(s) why their exclusion is being considered and be given sufficient time to make their own inquiries and respond to the allegations.

12. Departments of Education should recognise that children and young people may only be denied their right to education in exceptional circumstances and only after they have had the benefit of a fair, unbiased and democratic hearing.

13. State and Territory governments should implement and uphold the principles of the United National Convention on the Rights of the Child into their education legislation.
Documents

The documents listed in this column are of general background value. A photocopy is available for research purposes. The length and cost (to cover copying and postage) is listed. Please order by code number.

A full, computerised list of these documents is now available from Connect for $3; this can be accessed and printed by topic, key-word etc or simply sequentially.

Code  Description/Pages/Cost

420  The Health Promoting School in Denmark - teaching for and with democracy, selected key points of an address by Bjarne Bruun Jensen, National Coordinator, Research Centre for Environmental and Health Education, The Royal Danish School of Educational Studies; Keynote Address at the Inaugural National Health Promoting Schools Conference, Melbourne, September 1995.  (11 pp; $1.10)

421  How Partnerships Between the Student Representative Council (SRC) and Their Communities Operate in NSW - David Jones (year 12, Narrabeen HS, NSW) - address to the International Principals' Conference, Darling Harbour, Sydney, August 1995.  (8 pp; $0.90)

422  Samples of student 'on-line' discussion on the internet re 'Silicon Snake Oil' through I*EARN - various students including from Coldspring HS (USA) and St Hilda's School (Queensland).  (12 pp; $1.20)

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• Cross-referenced index to contents of Connect back issues ($3) $ ...........

• Students and Work - 1985 Connect reprint booklet #5 ($5) $ ...........
• ‘Youth Radio’ issue of 3CR’s CRAM Guide (1985) ($1) $ ...........
• Democratic Decision Making in Schools - Victorian PEP (1987) ($3) $ ...........

• Sometimes a Shining Moment (Wigginton) ($25) $ ...........
• Foxfire 9 (Doubleday Anchor) ($25) $ ...........
• Foxfire: 25 Years (Doubleday) ($25) $ ...........
• A Foxfire Christmas (Doubleday hardcover) ($25) $ ...........
• Shining Moments - Foxfire video (1 hour) (loan for 1 week: $5) $ ...........

• SRC Pamphlets Set (6 pamphlets; Youth Affairs Council of Victoria) ($5) $ ...........

• Photocopies of the following documents:

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