Adolescents, intranets and ultimate learning opportunities

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Abstract: Intranet technology is a relatively new concept for schools that has the flexibility to be adjusted to fit any school model. This article examines the relevance of intranet technology in optimizing the information literacy opportunities for students of the middle years and beyond.

The undergraduate editor of a university student newsletter recently commented in relation to his approach to assignment research that, 'if a professor asks a question and wants us to research it, my first step is to pull up Google and quickly search for an answer.' (Uhlig 2002). The efficiency of Google as a research tool is rapidly creating a situation where, for many students, this is as far as they go. Education today is an online, electronic world. Pew Internet and American Life reported that of 754 youth in the 12 to 17 age bracket surveyed, 94 percent said they use the Internet for school research (Cyberatlas 2001). This is fine as long as they are using all the options available. Considering the technology available to schools today, our students deserve to complete their secondary education information literate with the necessary skills to use all resources at their disposal not just Google.

The purpose of this paper is to examine the role of the Intranet in optimizing the information literacy opportunities of students in the middle years and beyond. Jamie McKenzie (1994) stresses information literacy as an essential requirement as the arrival of new electronic information technologies threaten to overwhelm us with info-glut and info-garbage. Suggesting that the post-modern school will raise a generation of highly skilled 'free range students' capable of simultaneously grazing the Net and reading deeply. Such capabilities, while possible, will not be attained without a clear idea of the tools that lie at our disposal to facilitate the process.

Students positive about learning

On the whole, students are enthusiastic about using computer technology. Anecdotal comments discussing the positive and negative effect of ICT in schools abound. Research indicates that one of the most consistent outcomes of the use of information technologies in classrooms has been the development of a more positive reaction to school across diverse groups of learners (Bracewell and others 1998). It is also suggested that the effective use of information technology in schools has the potential to produce positive teaching and learning outcomes such as:

- Motivation and stimulation of learners and a reduction in the risk of failure;
- Development of analytical and divergent thinking;
- Promotion of greater understanding, assimilation and creation of new knowledge; through the presentation of information in fresh and relevant ways;
- Adaptation to students with different learning styles or special needs;
- Enhanced communication and collaboration with others; and
- Improved monitoring, guidance and assessment of individual student's progress.

Researchers for the Middle Years Research and Development Project found that students within this group want to learn and are highly motivated, despite the commonly held view that they are not engaged. According to Melbourne University's Professor Jean Russell, they "want more time to think and explore ideas, to be shown how to go about learning, and to take part in decision making about their learning and assessment." (The Age 2003)

The challenge before schools, therefore, is to approach the new environment of education in a visionary and practical manner to achieve the outcomes of *Learning in an online world* (2000) document which states that 'the role of schools is to ensure that young people use technologies purposefully and critically and that they are able to continue to adapt and learn throughout their lives.' Intranets are a powerful, flexible tool in this new educational environment.

What is an intranet?

Through the support of government funding initiatives in recent years, schools generally can now boast of having a number of computers dedicated to the teaching and learning

program and are in the position to capitalize on the educational benefits of ICT technology. Creating an electronic shared learning space has the potential to give access to the 'big picture' of education policy and resources limited only by the capacity of the organization to develop it.

Intranets are used to share information within organizations. Just as the Internet has revolutionized information sharing *between* networks, so an intranet can revolutionise information sharing *within* a network (Long & Smith 1996). One of the greatest advantages of a school intranet is that it is accessible only by the school community or other authorized users and is protected from unauthorized access by a firewall. To all intents and purposes it can appear exactly like the Internet, though, it may or may not have Internet access, and a school has the option of using their intranet to confine students within the school network. The reasons for this vary from economics or low bandwidth to security.

An intranet can form the backbone of a knowledge management structure within your school. Andy Hargreaves (2002), in applying the theory of a 'knowledge society' to the school organisation suggests that intranets process information and knowledge in ways that maximize learning, stimulate ingenuity and invention, and develop the capacity to initiate and cope with change.

An intranet is never complete
At their most sophisticated level, intranets can develop to become an interface for a whole range of school processes eg., dissemination of learning resources, curriculum documentation, assessment and reporting, attendance records and a range of other electronic processes. Blackboard and WebCT are two commercial products in this category that are referred to as 'portals' as they act as 'gateways' to the whole range of other functions. The development of an intranet is never a completed project. It can be as big as you like, or as small as you like, and most commonly it is a project that grows in potentiality as it settles into use.

Size ranges from the top-shelf, commercial products that are out of the financial range of many schools, to a simple file structure on a server. The educational potential of this technology is so significant that other collaborative options are being fielded such as the

Catholic Education Office Ballarat Diocese Project - SIMON (School Information Management Online Network) that will facilitate the provision of intranet technology to a range of Catholic schools in Victoria.

In explaining their stance on the relevance of intranet technology, the Department of Education, Training and Employment (2001) states that 'although intranets by themselves will not enhance learning, they provide opportunities for teachers to more easily create a learning environment where students can become independent learners, critical thinkers and construct knowledge and ideas in new and compelling ways through the use of digital technology.'

These students require a learning environment conducive to the development of the basic characteristics of an information literate person that Bruce (1997a) identifies as one who:

- Engages in independent, self directed learning;
- Uses information processes;
- Uses a variety of information technologies and systems;
- Has internalized values that promote information use;
- Has a sound knowledge of the world of information;
- Approaches information critically;
- Has a personal information style that facilitates his or her interaction with the world of information.

So what are students doing on computers in schools? While they are engaged in activities of random surfing, cutting and pasting or fancy assignment cover pages, they are not reaping the true benefits of the investment their school has made in technology hardware. One only has to refer to the aforementioned Pew Internet and American Life report or even simply do a random, informal survey of students to realize that ICT is an engaging environment for the student of the 21st century. The often mentioned negatives of access to computers, teacher skills and crowded curriculum, require schools to examine their ICT structures to ensure that they capitalise on student enthusiasm for the best possible learning outcomes. This is where an intranet comes into its own as a management tool. Each school has the opportunity to construct and manipulate its intranet to totally suit its own requirements which can be used to:

- Provide easy access to library and online learning resources;
- Gather specific resources guaranteed to be of relevance to the age of students, learning styles and abilities;
- Display student work;
- Provide easy assess to curriculum documentation;
- Display photos of school events and excursions;
- Integrate email communication.

Intranets and information literacy

What is the information literacy potential of this structure? The *American Library Association Presidential Committee on Information Literacy:* Final Report (1989) provided clear goals in stating that 'ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand.'

In a nutshell, an intranet can benefit all members of the organization with the potential to:
- Familiarise students with unfamiliar resources;
- Lay the learning path more clearly by creating a knowledge sharing environment;
- Offer opportunities for peer review and sharing, or examples of best practice for other students;
- Provide signposts to learning and an idea of what's coming next;
- Give meaning and purpose to the project as a broader audience provides a form of encouragement;
- Bring variety into teaching and learning as world wide examples of teaching best practice are linked electronically;
- Make life for newcomers easier as they can independently explore the school profile on the intranet to familiarize themselves with the new environment;
- Provide students with more control over their own learning with opportunities to revisit a learning situation anytime, either inside or outside the physical school environment;

- Use the rotational nature of curriculum to constantly adjust, improve and develop teaching ideas;
- Provide more opportunities for pupil creativity in a new medium, by catering for different learning styles and multiple intelligences;
- Facilitate authentic, real world learning experiences through linking to community and workplace organizations and home.

An intranet becomes a living document of school policy and practice. Furthermore, having this material available through an intranet creates the school without walls or time that is accessible anywhere online at any time. Adolescents enjoy the freedom of independence. Through this interface they can begin to have control over their own learning environment with the option to refer back to material covered class, visit a teacher's personal homepage or research a topic within a supported or 'scaffolded' environment.

Scaffolding learning

Scaffolding in an online environment provides students with the opportunity to learn in more complex ways than ever before. 'Like training wheels, computer scaffolding enables learners to do more advanced activities and to engage in more advanced thinking and problem solving than they could without such help', as the opportunity for complexity enables greater levels of variety and engagement than ever before (Bransford, Brown & Cocking 1999).

Scaffolding can and is taking a number of different forms such as:
- The library, key learning area or individual teacher webpages;
- Research guides or pathfinders for research assignments;
- Webquests, Hotlists and Knowledge Hunts;
- Online research assignments;
- Interactive multimedia programs;
- Online support components for subject textbooks; and
- Online tutorials and templates.

The ultimate outcome of scaffolding, according to Jamie McKenzie (1999) is that it "reduces uncertainty, surprise and disappointment, delivers efficiency, and creates momentum." A worthwhile consideration as we explore new and innovative practices to captialise on the educational benefits of the web, while simultaneously dealing with its distractions.

Providing the tools and opportunities for learning are made easier through the structure of an intranet, however, does not solve the problem of maintaining student interest in their own learning. Many students now come to school from homes equipped with complex computer and multimedia systems. Apart from the usual education outcomes, schools must tap into ICT skills learnt on home computers and integrate them into teaching and learning practices to make school relevant for all students. This is achieved by introducing similar technology into the curriculum with models of 'engaged learning' that involve:

- more student interaction;
- more connection among schools;
- more collaboration among teachers and students;
- more involvement of teachers as facilitators; and
- more emphasis on technology as a tool for learning (*Plugging in* 1995)

The engaged classroom

Intranet technology facilitates the move away from drill and practice applications of ICT to structured online programs that can make learning relevant for students. The role of the teacher can become that of guide who moves from student to student giving individual attention as required. These 'engaged' classrooms according to the report *Plugging In* (1995), feature four principle indicators, typically:

- Students become responsible for their own learning;
- Students are strategic, knowing how to develop and refine their problem solving strategies;
- Students are energized by learning deriving excitement and pleasure from it;
- Students are collaborative, understanding that learning is social.

Intranet technology doesn't guarantee effective learning. Students can still get distracted into spending excessive amounts of time choosing fonts and graphics, however, it does provide opportunities to direct students for greater success. It is the technology that Ross Todd (2001) refers to when saying that school libraries and information services are at an exciting crossroads as they tackle the challenge to provide the best information opportunities for people to make the most of their lives as 'sense-making, constructive, independent people'.

The Changing Role of the Teacher-Librarian

Where does the teacher librarian fit into the Intranet equation? Teacher librarians have been dominant proponents of the integration of information literacy skills education into relevant curriculum. They have also readily adapted to changing technologies. Great scope is offered by an ICT environment to seamlessly integrate information literacy skills development. The role of the information professional in this time of change has become one of knowledge interface between the user and repositories of information whether internal or external, online or hardcopy (Skyrme 1997). With their broad view of the curriculum, teacher-librarians know how knowledge, information and data are utilised within the school learning community, they must therefore take an active role in ensuring that the intranet becomes the 'melting-pot' that amalgamates tasks and resources with student information literacy as a major outcome.

Richardson (2001) states that the full potential that ICT has for enabling learners to understand and have control of their own learning, is likely to remain rhetoric unless ways can be found to structure the new technologies into the heart of the process of learning. An intranet has the potential to achieve this. They are not a one-size-fits-all concept but are accessible to every school as they can be manipulated to suit local conditions. Students can learn to be discerning and extend their research practices to cover a range of sources giving them greater control of their own learning.

Building a digital information-rich environment for teachers and students draws upon long-known principles of selection that include: relevance to the curriculum, appropriate difficulty level, authority, and quality. Any intranet built with these principles in mind can become, according to Loertscher (2001) an amalgamation of information-rich spaces

with technology and active learners that has the potential to nurture every learner in a world fraught with division and widening disparity.

References:

American Library Association. Presidential Committee on Information Literacy.(1989) Final Report. [online]. Chicago: American Library Association.
http://www.ala.org/acrl/nili/ilit1st.html

Bransford, John D., Brown, Ann L. and Cocking, Rodney R. (Eds). (1999). *How People Learn: Brain, Mind, Experience, and School.* [online]. Committee on Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press: Washington, D.C. Accessed 12 December, 2002.
http://www.nap.edu/html/howpeople1/

Bracewell, Robert, and others. (1998) *The emerging contribution of online resources and tools to classroom learning and teaching.* [online]. A Report submitted to SchoolNet / Rescol by TeleLearning Network Inc. Accessed 16 May, 2001.
http://www.tact.fse.ulaval.ca/ang/html/review98.html

Bruce, Christine. (1997a) *The seven faces of information literacy.* Adelaide: Auslib Press.

Hargreaves, Andy. (2002). *Teaching in the knowledge society.* [online]. Vision 2020 Second International Online Conference 13-26 October and 24 Nov-7Dec 2002. Accessed 30 October, 2002.
www.cybertext.net.au/tct2002/keynote/printable/hargreaves%20-%20printable.htm

Internet Tops Library as Research Source for Students, (2001), [online]. Cyberatlas. Accessed 16 July, 2002.
http://cyberatlas.internet.com/markets/education/article/0,,5951_877891,00.html

Jones, Beau Fly et al. (1995). *Plugging in: choosing and using educational technology.* [online]. Council for Educational Development and Research. North Central Regional Educational Laboratory: Washington D.C. Accessed 20 January, 2000.
www.ncrel.org/sdrs/edtalk/toc.htm

Learning in an online world. (2000). Education Network Australia (EdNA) Schools Advisory Group (SAG).

Loertscher, David. (2002). *Building Knowledge-Rich Environments for Youth: A Worldwide Challenge for Schools and School Librarians.* [onine]. Accessed 12 December, 2002.
http://www.iasl-slo.org/conference2002-loertscher.html

Long, Rob and Smith, Greg, (1996). *The educational power of the intranet – a case study.* [online]. Accessed 13 March, 2000.
http://crilt.canberra.edu.au/Intranets/issues/intranets.html

McKenzie, Jamie. (1994). *Grazing the net: raising a generation of free range students.*
[online]. Accessed 11 November, 2000.
http://www.fno.org/grazing1.html

McKenzie, Jamie. (1999). *Scaffolding for success*. [online]. Accessed 14 April, 2000.
http://www.fno.org/dec99/scaffold.html

Richardson, Tony. *ICT, learning and leadership: implications for the school of the future*.
[online]. TIPD Virtual Conference 2001. Accessed 8 July, 2001.
http://www.cybertext.net.au/tipd/keynote/weeks1_3/richardson.htm

Skyrme, David. (1997). *From information management to knowledge management: are
you prepared?* [online]. Accessed 21 August, 2000.
http://www.skyrme.com/pubs/on97full.htm

Todd, Ross. (2001). *Transitions for preferred futures of school libraries: Knowledge
space, not information place. Connections, not collections. Actions, not positions.
Evidence, not advocacy*. [online]. The 2001 IASL Conference, Auckland, New Zealand,
9-12 July. Accessed 2 September, 2001.
http://www.iasl-slo.org/virtualpaper2001.html

Cook, Margaret. (2003). *Caught in the middle*. Education. The Age, 26 March, p. 13.

Uhlig, Daniel. (2002). *Internet useful tool, hindrance to social life*. Technique. September
13, Atlanta. Accessed 16 October, 2002.
http://nique.net/issues/fall2002/2002-09-13/10.html

Why have a school intranet? (2001). Department of Education, Training and
Employment. Accessed 11 December, 2002.
http://www.tsof.edu.au/lt.sa/spotlight/etools/intranet/why_intranet.htm

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