

## **FOCUS:**

### **To examine best practice for distance education**

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My sabbatical is to look at effective distance education. Our school is part of an eight school consortium offering distance education by video conferencing. To date we have offered subject teaching via video conferencing and a little professional development of staff. We are now moving into diversifying by offering courses such as for gifted and talented students and subject specific professional development for staff.

I have reservations on the effectiveness of our consortium and was hoping to use my sabbatical to visit other cluster schools in NZ and overseas. I have read material from Australia and see a number of parallels to our aims and objectives. I hope to see good examples of delivering IT distance learning and be able to set priorities for the future.

Over the past twenty years we have been initially slow but over the past five years rapidly moving into the new Education Paradigm. Previous paradigms have lasted for significant time frames and learning and teaching has had a long time to evolve and be embedded into the learning and teaching cultures. The rate of development of the new paradigm means huge changes for teachers and learners if we wish to make the most of current learning and future learning opportunities.

It has become evident that students do not have to rely on their home school to supply all learning opportunities but can draw on recourses from throughout the country and in a number of cases, across the world.

To be successful, distance learning needs resourcing, there are examples of successful learning and teaching on a shoestring budget but there are far more examples of successful learning and teaching where adequate resources are supplied.

## **READINGS**

**The Distance Education Evolution: Issues and Case Studies** Dominique Monolescu, Catherine Schifter, and Linda Greenwood, eds. 2004. Hershey, PA: Information Science Publishing. [ISBN 1-59140-224-7. 326 pages, including index. \$59.95 USD (softcover).]

The objective of the distance education evolution, in the words of Linda Greenwood, is to "provide educators, administrators, and students with a way to gain some perspective on distance education and to evaluate both its strengths and weaknesses" (p. vii). Generally speaking, the volume achieves its goal. The book, however, is not to be taken as a definitive collection of the latest thinking in a non-dynamic field, but rather as a sampling of practitioners' perspectives in a rapidly changing field. Whether that field is evolving or devolving is a matter of debate; this book offers some advancement in the discourse.

The book is divided into two sections: "Distance education issues in higher education" and "case studies in distance education." Among the more interesting entries in section I are "Universal design for online education: Access for all," by Rosangela K. Boyd and Bonnie Moulton; and "Education mirrors industry: On the not-so surprising rise of Internet distance education," by Donald A. Hantula and Darleen M. Pawlowicz.

**Gifted Child Today. Waco: Summer 2005. Vol. 28, Iss. 3; pg. 6, 2 pgs**

The National Centre for Educational Statistics has issued a new report, Distance Education Courses for Public Elementary and Secondary School Students, that shows significant growth in distance learning, with 1 of every 10 public schools in the country enrolling students in either Internet or video-conference courses. Frequently, schools offer online courses that are not available to students in school (e.g., Advanced Placement) or to reduce scheduling conflicts. Distance-learning courses have been particularly useful to schools in rural areas, with 46% of rural districts offering online courses as compared to 28% in suburban areas and 23% in urban areas. For the most part, distance learning is offered at the high school level, with 76% reporting distance-learning courses. Only 7% of middle schools and 2% of elementary schools offer such options. Some school administrators expressed some concerns regarding the costs of equipment and losing per-pupil funding if a student who enrolled in online courses was not counted as part of the district's regular enrolment.

**Distance Education. Melbourne: May 2005. Vol. 26, Iss. 1; pg. 111, 15 pgs**

One purpose of online group projects is to encourage collaborative dialogue for new knowledge construction. During such projects students have a dual objective: learn through constructing new knowledge together while also completing the task. Cooperative approaches to task completion are an alternative to collaborative dialogue. The impact of task type on collaborative versus cooperative approaches to group projects has not been greatly examined in online environments. Transcripts of 10 small groups completing two types of tasks, synthesis or application, in an online graduate course were analyzed using Herring's computer-mediated discourse analysis and Pearson's chisquare tests to determine (a) whether groups took a collaborative or cooperative approach to task completion when explicitly encouraged to collaborate; and (b) whether the type of task affected the approach used. Overall, groups chose to cooperate more than collaborate, with application task groups taking a significantly more cooperative approach and synthesis task groups a significantly more collaborative approach. Implications for the design of online group tasks are discussed.

**Distance Education. Melbourne: May 2005. Vol. 26, Iss. 1; pg. 149, 3 pgs**

Discussion of the role that learning objects (LOs) are likely to play in the design of courseware is beginning to dominate conversation amongst specialists in online learning. Proponents of the concept of reusable courseware speak passionately of the advantages-pedagogical, as well as economic-of moving to this approach. Those who have day-to-day responsibility for ensuring that students receive their courses in time tend to be more cautious in their assessment of its merits. The latter realize that it is easy to overlook the practical limitations of an innovation when one doesn't have to be accountable for having courses delivered on time. They are starting to ask questions about the practicability of the LO model, about the advantages that it offers compared with the ways in which courseware is presently developed, about the cost of implementation, and about the long-term future of this model of courseware development. They want to know whether the LO model is yet able to deliver on the promise of higher quality and lower cost, or, if not, whether this promise is ever likely to be met. They are acutely aware of the big differences between small-scale proof-of-concept systems and systems designed to support the whole of an institution's offerings.

**Distance Education. Melbourne: May 2005. Vol. 26, Iss. 1; pg. 29, 20 pgs**

This article reports on a large-scale (n = 1,056), exploratory factor analysis study that determined the underlying constructs that comprise student

barriers to online learning. The eight factors found were (a) administrative issues, (b) social interaction, (c) academic skills, (d) technical skills, (e) learner motivation, (f) time and support for studies, (g) cost and access to the Internet, and (h) technical problems. Independent variables that significantly affected student ratings of these barrier factors included: gender, age, ethnicity, type of learning institution, self-rating of online learning skills, effectiveness of learning online, online learning enjoyment, prejudicial treatment in traditional classes, and the number of online courses completed.

**Distance Education. Melbourne: May 2005. Vol. 26, Iss. 1; pg. 153, 5 pgs**

Simpson discusses some of the issues surrounding Web-based learning. Among other things, he comments that voicemail support system or audiotext will not replace online learning, but they are reminders that there are technologies for distance learning other than the Internet. The future for distance education is likely to comprise a mix of delivery methods that can support openness and flexibility.

**School Planning & Management. Dayton: May 2005. Vol. 44, Iss. 5; pg. 5, 1 pgs**

In March, the National Center for Education Statistics (NCES) released their Distance Education report, the first national survey exploring distance education courses for public school students. To date, no national study has examined technology-based distance education. The report found that despite the many needs for distance education and the plans for significant expansion, only 1/3 of schools have students who are enrolled in distance education courses, and at the elementary, middle and junior high levels, distance education is extremely scarce. Liz Pape, president & CEO of nonprofit Virtual High School<[www.govhs.org](http://www.govhs.org)>, the pioneer of online learning and online course design for teachers, says "To equip students for higher levels of education and their future careers, making online learning widely available to middle and high school students must be addressed immediately.

**T.H.E. Journal. Tustin: May 2005. Vol. 32, Iss. 10; pg. 51, 2 pgs**

For six years, Fort Vermillion School Division, a school system consisting of 6 branches in northwestern Alberta Canada, has been using audio graphics to synchronously deliver eight academic courses to all of its high schools. Aware that the system is not highly satisfactory, the school launched the Rural Advanced Community of Learners (RACOL) project, a videoconferencing system, in Sept 2003. More details about RACOL are presented.

**Education Week. Washington: Mar 9, 2005. Vol. 24, Iss. 26; pg. 6, 1 pgs**

Students in one-third of the US' public school districts took distance education courses in the 2002-2003 school year, illustrating such classes' growing popularity, says a report released last week by the National Center for Education Statistics (NCES). The report--which the NCES says is the federal government's first-ever survey of distance learning in K-12 schools--found thousands of students enrolled in courses that are conducted via the Internet or through video- or audio-conferencing, with the teacher and students in separate places.

**Intervention in School and Clinic. Austin: Jan 2005. Vol. 40, Iss. 3; pg. 171, 6 pgs**

Individuals with visual, motor, or learning disabilities constantly encounter the challenging predicament of attempting to use computer files, software, and Web sites that are not accessible. Any consumer of distance education; Web applications; packaged software, such as PowerPoint or Adobe PDF documents; or software-based learning should be aware of accessibility issues. Hoffman et al offer accessible guidelines for creating and refining digital learning materials for individuals with disabilities.

**The Clearing House. Washington: Jan/Feb 2005. Vol. 78, Iss. 3; pg. 105, 4 pgs**

Over the years, instruction has shifted from the traditional face-to-face delivery to instruction that is done from a distance. Distance education is instruction that occurs when the instructor and student are separated by distance, time, or both (WCET 2004). Some common technologies used in distance education are videotape, broadcast television, ITFS (instructional television fixed service), satellite, interactive video, audio tapes, audio conferencing, CD-ROM, and computer (WCET 2004). More recently, the computer and Internet have played a large role in distance education through computer-based instruction (CBI) and Web-based (online) courses. These innovations have changed the face of distance education and revolutionized the concepts of teaching and training. In CBI, the computer is the primary medium for instruction and learning; in online instruction, the learning is delivered via the Web and often through a Learning Management System (LMS; Wise 2004).

Distance education, specifically online courses, is now commonly judged by the number of schools and colleges advertising for diplomas or degrees without leaving one's home (see Florida's Virtual High School or the

University of Phoenix). Fast becoming a reality are "virtual high schools" (VHS) in which the entire school has access to online courses (Emeagwali 2004; Winograd 2002). It is estimated that 25 percent of public schools have distance learning programs, while nineteen states have officially recognized VHS (Emeagwali 2004).

**Journal of Technology and Teacher Education. Norfolk: 2005. Vol. 13, Iss. 3; pg. 459, 16 pgs**

Many things are not understood about distance education despite its popularity and growth in institutions of higher education (IHEs). That is why it is important to recognize faculty and students' attitudes, perceptions, and experiences to help faculty design and prepare an online course, to provide educators with information about recruitment, to assist students so they can achieve meaningful and positive learning, and possibly, to establish a successful distance education program at RSU. The purpose of this study is to find out the attitudes, perceptions, and experiences of professors and graduate students about teaching and learning in a distance learning environment using a web-based course delivery. Both professors and students are from the College of Education in a Southwest border institution. This research provides a qualitative description of faculty and students' attitudes, perceptions, and experiences, so awareness and understanding can be achieved to meet a new vision in teaching through distance learning.

Although online education has increased, it has not been without challenges. Teaching distance education is not the same as teaching in a face-to-face environment; administration of distance education programs requires different experience; and for students, learning in face-to-face environments is unlike learning online. Because of the growing demand for distance education and the unique experience it creates, it is important for high schools to know the benefits, pitfalls, and challenges of distance education

## **DISTANCE EDUCATION FORMATS**

A number of distance education formats are in use, each with its own advantages and disadvantages. Common formats include Sky television and public broadcast television, correspondence, video conferencing and online (Web-based) courses.

1. Sky television. The sky television format (for example, the History Channel) allows for the broadcasting of topics live through a satellite network. Students

watch classes at home, interact with the teacher, and submit and receive assignments through school or distance format.

2. Correspondence courses. In contrast, the correspondence or "course-in-a-box" format provides students with a box of videotapes or compact disks (CDs) containing the course material. Students complete the assignments and send them back to the instructor. Lately, the more portable and easily accessible CDs have become popular. They save paper and allow students to access a large volume of material, including extremely detailed images and video clips, without the download speed concerns associated with Internet images (Brisbane School of Distance Education).

3. Video Conferencing (VC). The VC format is for synchronous classes held over an interactive network (for example, CORONET). In this format, the instructor and students are in different classrooms or locations, but the class is totally "live" and "interactive": The instructor can see and hear the students at the remote site and vice versa. The result is that students at a remote site can join a class that is being taught at school.

4. Online courses. The online (Web-based) format allows students to pursue their studies entirely on the Internet without attending classes in person. This format uses a course management platform such as Knowledge Net, which is entirely Web-based and does not require lengthy downloads or installation. Students can access course information and assignments, e-mail the instructor and classmates, submit and receive assignments online, participate in online discussions, and link to other online resources through the course management platforms. Many courses combine technologies to enhance the students' learning experiences.

5. Hybrid model. Although satellite and correspondence were once the primary means of distance learning, they have been replaced by video conferencing and completely online educational experiences. The most widespread approach to using the Internet for coursework is the course supplement, Web-assisted, or hybrid model. This is a face-to-face course augmented with assignments, readings, discussion groups, and tests that are completed online

## **BENEFITS OF DISTANCE EDUCATION**

Distance learners come from a variety of backgrounds and range in age. The students select distance education to suit their social and work commitments and generally are people who, because of time, geography, financial considerations, family obligations, work requirements, or other constraints,

choose not to attend a traditional classroom. Distance education students also enjoy the flexibility of time and space. "Regardless of where they live, students have equal access to quality courses through the web. [At times] students have flexibility in when and where they take needed courses, and schools can expand their offerings". Other groups of students that prefer distance education are rural students, sick or hospitalized children, gifted children, travelling families, and students who have problems in regular classrooms (WCET 2004). With this amount of flexibility, it is unsurprising that a greater percentage of students with special needs enrol in distance education programs.

Distance education programs are an option in financially tight times. Julie Young, the director of the Florida Virtual High School, observes, "With deepening budget cuts, brick-and-mortar schools will have to make every effort to find creative and cost-effective solutions to continue providing the same quality of educational opportunities for their students. Distance learning is one of these solutions" (Winograd 2002).

### **CHALLENGES FACING DISTANCE EDUCATION**

Despite the popularity of distance education courses in schools, critics worry that schools will use online classes to rid themselves of troublesome students or that opportunities for socialization and personal interaction will disappear. Even when such opportunities are provided through other means, a number of issues need to be addressed before providing distance education. Among these are formulating workload policies, changing the existing bias toward face-to-face learning, and training teachers and students for the online environment.

A policy on workload for online instructors needs to be developed. With teacher time being a scarce resource and the dominant cost in most schools being instructional time, educational administrators often seek to decrease this cost by increasing the number of students that each teacher reaches. CORONET is grossly reliant on teacher goodwill as time goes on and new initiatives appear this will dissipate. In Brisbane, teachers involved in similar initiatives get .5 FTE release time to prepare resources and mark students work. Distance education courses, on the other hand, offer a solution to dealing with small school enrolments. Administrators have to come up with a formula for defining the workload of online teachers (for example, how many students in an online class equal the load in a face-to-face class?). Even colleges that have had distance education programs for some time use different formulas for determining workload for online instructors.

Changing biases toward face-to-face learning is another challenge. Raymond Rose, vice president for The Concord Consortium, a non-profit educational research organization, says, "The current model of education is based on a standard of measuring learning based on seat-time. Virtual high school programs are currently restricted by having to fit into the brick-and-mortar model for schools" (Winograd 2002).

Training online teachers and students in times of budget cuts is another challenge. Online programs are sometimes "thought of as a degree-in-a-box, or a piece of cake, but this is not .

### **SUGGESTIONS FOR TEACHING ONLINE COURSES**

Although decisions on who teaches an online course rest with administrators, not just any teacher should be asked to design and teach an online course. By the same token, not all students do well in online environments. Online students need solid technical skills; otherwise, they may have difficulty succeeding in Web-based learning environments. Therefore, to increase success in online classes, both teachers and students need to acquire necessary skills for the environment. One suggestion for teaching online courses is that teachers should attend related workshops and conferences on online teaching before designing such courses and, if possible, also should take an online course themselves and should not just transfer residence courses to online courses; instead, they need to transform them to fit the format.

Another suggestion is to determine the "online instruction readiness" of virtual high school students. Several instruments, such as "Is Distance Education Right for Me?," are available on the Web. Alternatively, the Educational Success Prediction Instrument (ESPI), a more reliable instrument to determine whether students are suited for online courses, can be used. This tool identifies students that need counselling and support to make them more effective online learners (Roblyer and Marshall 2003).

Communicating with online students is one area that needs to be properly managed by online instructors and students.

In addition to attending professional development workshops and conferences and participating in discussion forums on distance education, several other resources are available for preparing and developing online courses. The Brisbane School of Distance Education runs courses for teachers after a selection process for offering a distance education course. .

### **CONCLUSION**

Distance learning, particularly online education, is becoming a norm in education as funding and geographies affect the delivery of educational lessons. The virtual-school market is definitely expanding. The current teacher shortages and geographic isolation and small senior student numbers are driving secondary schools to handle their student learning needs any way they can, including through online programs. Therefore, schools contemplating distance education programs are headed in the right direction but will need to make adequate preparation before embarking on online learning. The government and the Ministry are supporting these initiatives, but it is now time to look at time allowances for teachers and a national training centre for teachers proposing to offer distance learning.

Before schools embark on these types of initiatives they must have the infra-structure in place (i.e. the correct hard ware, software and PD plan.) Most schools now admit that they entered into video conferencing grossly unprepared and have spent an inordinate amount of time and good will in bringing their schools up to speed.

Staff are now suffering burn out, we have to look at sustainability and how to move forward. The good will in the past can't sustain these initiatives, we need to look at staffing for those staff who offer distance learning courses, time to develop these courses and time to teach on line.

From my visits and readings I feel it is imperative that teachers are up skilled urgently on web based teaching and learning if we want to remain in the front of this learning paradigm.

For our school we need to continue with VC but as Knowledge Net becomes easier and more reliable to use we need to invest heavily in staff training so we can maximise the usage of this web based medium for future school based and distance learning opportunities.