



Motivating & Retaining Adult Learners Online

Series Editor

Vicky Phillips
GetEducated.com, LLC
www.geteducated.com

Volume Editors

Barb Elwert
Leslie Hitch

Production Editor

Cindy Yager
GetEducated.com, LLC

The Virtual University Gazette

© 2002 by
GetEducated.com, LLC
4 Carmichael Street, Suite #2160
Essex Junction, Vermont 05452 USA
Phone: 802-879-1379
Email: info@geteducated.com
URL: www.geteducated.com

Motivating & Retaining Adult Learners Online

Series Editor

Vicky Phillips
GetEducated.com, LLC

Volume Editors

Barb Elwert
Grade A Editing
www.gradeaediting.com
belwert@norlink.net

Leslie Hitch

Production Editor

Cindy Yager
GetEducated.com, LLC

The Virtual University Gazette

© 2002 by
GetEducated.com, LLC
4 Carmichael Street, Suite #2160
Essex Junction, Vermont 05452 USA

URL: www.geteducated.com
Phone: 802-879-1379
Fax: 802-288-1083
Email: info@geteducated.com

ABOUT GETEDUCATED.COM: GetEducated.com, LLC operates online as a research and clearinghouse for consumers, colleges and corporations seeking accurate, timely information on the integration of technology into adult education programs. GetEducated.com publishes free, online, The Virtual University Gazette, a monthly email newsletter that announces new elearning programs, jobs in distance learning, and new places to go online the learn more about elearning. GetEducated.com also publishes, online, Best Distance Learning Graduate Schools, an annual series of 100% free, downloadable guides to accredited higher education opportunities. For more information on GetEducated.com, visit www.geteducated.com.

DISCLAIMER: Motivating and Retaining Adult Learners Online represents the collective work of a number of independent authors and editors. Every effort has been made to create a quality work that represents the best efforts of contributors. Sources and references are listed following each chapter. Neither the authors/editors, nor publisher can assume responsibility for the validity of the information contained herein or for the uses made of this information by any party.

TO ORDER COPIES: To order a print copy of Motivating & Retaining Adult Learners Online, send \$39 (US Dollars) by check, money order, VISA or Mastercard (Include card number and expiration date.) Add \$5 postage and handling per copy for orders shipped to the USA or Canada (\$44 per copy). Add \$10 postage and handling per copy for overseas orders (\$49 per copy). GetEducated.com, LLC – 4 Carmichael Street #2160 - Essex Junction, Vermont 05452. Phone: 802-879-1379. Fax: 802-288-1083 - Email: info@geteducated.com.

© 2002 by GetEducated.com, LLC. All rights reserved. No part of this collected work may be reproduced or transmitted in any format, without the prior written permission of the publisher. For permission to reprint or reuse any part of Motivating & Retaining Adult Learners Online contact GetEducated.com, LLC – 4 Carmichael #2160 - Essex Junction, Vermont 05452. Phone: 802-879-1379. Email: info@geteducated.com.

Motivating & Retaining Adult Learners Online

Table of Contents

1. Student Retention in Distance Education Mary Hricko Kent State University, Geauga Campus	3
2. From Face-to-Face to Virtual Tutoring: Exploring the Potential of E-Learning Support V. Venugopal Reddy & Manjulika Srivastava Indira Gandhi National Open University	11
3. Persistence in Distance Education: A Case Study Lise Desmarais Canadian Foreign Service Institute	23
4. Facilitating and Sustaining Interest Through an Online Distance Peer-Tutoring System in a Co-Operative Learning Environment Olugbemiro J. Jegede Open University of Hong Kong	35
5. How to Initiate Intrinsic Motivation in the Online Student in Theory & Practice Paul Kawachi Kurume Shin-Ai Women's College	46
6. Retaining Adult Learners in a High-Stress Distance Learning Environment: The Purdue University Executive MBA in Agribusiness Jay Akridge, Luanna DeMay, Liza Braunlich, Mike Collura & Mike Sheahan Purdue University	62
7. Practical Considerations on the Use of Message Boards to Enhance Learning in a University Setting Sharon Garrison & Marina Onken University of Arizona & Loyola University New Orleans	72
8. The Importance of Learning Communities in Motivating and Retaining Online Learners Holly McCracken University of Illinois Springfield	81

9. **How to E.N.G.A.G.E. 'Em: Tips for Encouraging Continual Student Involvement**
Mary Dereshiwsky
Northern Arizona University 97
10. **Setting Students Up for Success: The Instructor's Role in Creating a Positive, Asynchronous, Distance Education Experience**
Gloria Sciuto
Northeastern University 108
11. **Good Practices and Motivation in Online Courses**
Carla Payne
Norwich University 119
12. **Processes for Motivating Online Learners from Recruitment Through Degree Completion**
Heather S. Gibbons & George P. Wentworth
Brenau University 127
13. **Non-Traditional Pharmacy Doctorate Degree Upgrade Program at the University of Kansas Edwards Campus**
Sheri Perry & Ronald E. Ragan
University of Kansas Edwards Campus 136
14. **Maximal Interaction in the Virtual Classroom: Establishing Connections with Adult Online Learners**
Walter P. Rankin
George Mason University 142

1. Student Retention in Distance Education

*Mary Hricko, Library Director
Assistant Professor of Library and Media Services
Kent State University, Geauga Campus
Library liaison for DE at Kent State University's regional campuses
Email: mhricko@kent.edu*

Abstract

Although there are several variables that influence student retention in distance education (DE), research indicates that the reduction of institutional and epistemological barriers can greatly decrease attrition in the DE learning environment. Models that detail a specific protocol, as well as initiatives to develop academic support services for remote access students, lead to more successful DE programming. This paper provides a discussion of the ways to improve student retention in DE courses. An overview of the existing research is included.

Introduction

Throughout the world, research has indicated that distance education (DE) students have a higher attrition rate than their campus-based counterparts (Brindley, 1985; Parker, 1995). Although several studies have attempted to identify the variables that contribute to student dropout in DE courses, “the decision to drop out or to persist is a result of the interaction of both internal psychological variables and the external environment” (Morgan & Tam, 1999, p. 96). Consequently, it is difficult to determine a single causal explanation for student dropout in DE courses. For this reason, postsecondary institutions have tried a number of strategies to improve student retention in DE courses.

Models developed to improve student retention in DE courses are based on three areas of research on student attrition: a) classifying students according to characteristics that identify those students who are the most vulnerable to drop-out (i.e., the “at-risk” students); b) identifying the features of courses that contribute to high or low drop-out rates; and c) asking students who drop out what led to the decision to withdraw from their courses (Morgan & Tam, 1999).

Garland (1993) suggested that the reasons students give for withdrawing from DE courses can be placed into four categories:

Situational: Situations that arise from students’ particular life circumstances, such as a change in employment status.

Dispositional: Personal problems that impact on students’ persistence behavior, such as learning styles and motivation.

Institutional: Difficulties students experience with the institution, such as limited support services.

Epistemological: Impediments caused by disciplinary content or perceived difficulty of the content.

In many cases, situational and dispositional barriers have proven to be the primary causes of attrition in DE courses. Woodley and Parlett (1983) found that sex, age, previous educational qualifications, occupation, and location of residence are related to student attrition in the Open University. Kember (1989) noted significant relationships among persistence and age, number of children, and housing conditions.

Even though student work conflicts and time management may be addressed by universities through modifications to course schedules and better advisement, institutions cannot always make accommodations that meet the needs of every student. Research that examines common characteristics of persistence in students may help educators develop pretests to determine whether individuals have the capacity to complete DE courses. However, targeting at-risk students based upon their life

situations is problematic because there are many cases of students who drop out of their DE courses actually completing their degrees in traditional classroom settings.

The difficulties of measuring attrition in DE courses add to the challenges of retention in DE. Coldeway and Spencer (1980) conducted a study examining the varying levels of measuring attrition in DE courses and found that conflicts arise in determining how to tabulate attrition rates when students do not actually withdraw from their particular university. The varying formats (i.e., Web based, computer mediated, or videoconferencing) in which DE courses are presented also influence the levels of measuring attrition.

Studies addressing the attitude of students who withdraw from DE courses have provided essential information to help develop more effective DE orientation programs. Nevertheless, even after such programs are created, the attitudes of one student population may not readily reflect the motivations of another. Although many postsecondary institutions are developing self-assessment tools to determine if students are prepared to participate in DE courses, Belawati (1998) found that a universal DE orientation program may not address specific issues within courses that can lead to students dropping out. Furthermore, to meet the demands of emerging technologies, DE orientation programs have to be modified on a continuous basis, a practice that may prove costly for some institutions.

Although it is best to develop a model that addresses the internal and external variables that lead to students dropping out, it is more realistic for institutions to self-evaluate their DE courses to determine which areas have room for improvement. There is a greater chance that institutions can be more proactive in these areas because the changes are much more tangible.

In addition, Morgan and Tam (1999) found that institutional and epistemological barriers provide the greatest number of reasons why students withdraw from DE courses. If educators reexamine their DE courses, they might make improvements that can increase student retention. A reduction in the aforementioned barriers may enable educators to concentrate on developing DE courses or projects that respond to the problems associated with them.

Institutional Challenges

Institutional challenges include problems associated with administrative organization, academic and technical support, and instructional quality issues. In some DE courses, there is a lack of consistency among academic departments regarding the way in which administrative matters are handled. All departments and campuses should develop a detailed contingency plan that outlines who is responsible for what facet of a DE course; the protocol that DE participants (i.e., staff, instructors, and students) are to follow; and detailed instructions about responding to administrative, instructional, and technical problems.

More than one person at each remote site should be thoroughly trained to respond to issues that may occur regarding the administrative and technical aspects of DE courses. All too often, institutions delegate responsibilities to a few people who may not always be available to answer questions when problems arise. Training of faculty is crucial in relation to the use of hardware and software. Faculty members should take time to familiarize themselves with the facilities available at the remote sites prior to the beginning of the courses. Knowing the limitations of each remote site will assist in improving the design of DE courses.

For example, is there a mechanism whereby learning materials can be obtained if they have not arrived at the remote site as scheduled? How do students enrolled in video-conferencing DE courses take makeup exams? Where can Web-based students receive tutoring? What is the procedure for contacting instructors at the remote sites? These questions, as well as others related to management, should be addressed prior to the development of DE courses. Continuous evaluation and assessment must be done to ensure the ongoing success of DE courses. Evaluation should occur in a multilevel manner, not only at the end of the courses.

One way to evaluate the success of DE courses is to organize focus groups of the staff, instructors, and students involved in the courses. Discussions about course development and delivery, training of participants, and other issues should be done throughout the year. To adequately prepare those individuals who will be involved in DE courses, orientations should be created for the support staff who coordinate the courses at remote sites, the instructors who teach the courses, and the students who enroll in them. Very seldom do DE courses provide comprehensive training to support staff members assigned to manage administrative duties at remote sites. In many cases, someone is simply delegated the duties of managing the work related to the class and is given little or no instruction about what to do should problems arise.

When problems do occur, support staff may react in a way that causes more frustration for students. Brindley (1985) found that expanded support services contribute to improved student persistence. DE administrators should be ardent about developing academic support services to meet the needs of individuals involved in DE courses: Web-based library resources, computer support for technological problems, tutoring assistance, and such on-line student services as registration and advising (Hara & Kling, 1999).

Likewise, instructors need to be aware of the appropriate uses of technology to present DE courses. DE orientation for instructors should include models on how to manage coursework in the DE learning environment and ways to improve interaction with remote access students. There are many strategies that can improve the manner in which students and instructors collaborate to complete the course material. Instructors not prepared to manage the extensive e-mail they receive in a Web-based environment can become overwhelmed with the workload. Hara and Kling (1999) found that students' frustrations with Web-based courses originate from "minimal and not

timely feedback from the instructor and ambiguous instructions on the Web site as well as via e-mail". Kember (1981) noted that variables such as "the frequency and nature of contacts, the speed of response to student-initiated contacts, [and] the provision of local tutorials...can contribute to whether or not the student has any positive feelings of association with the institution (p. 295).

Administrators who are responsible for the scheduling of DE courses must ensure that synchronous courses do not conflict with traditional courses required for specific programs. DE instructors should submit hard copies of their syllabi to the remote sites, along with detailed information about course materials, at least 2 weeks prior to the semester in which their courses are being offered.

Although this practice may be criticized by instructors assigned to teach DE courses, it is important that the remote sites receive this information well in advance of the start-up dates of the courses. All too often, when instructors attempt to mail course material during a semester, it may not arrive, or it may get lost. Having all the course material available on-site enables support staff to schedule proctors for exams, copy course materials for students, order textbooks and other course items, and establish a better sense of organization. These measures will vastly improve the perception of how DE courses are facilitated.

In addition to improve the provision of services to remote access students, academic support services must be modified to meet students' needs. Library staff, tutors, academic advisors, and financial aid counselors should be involved in the coordination of DE courses. All Web-based materials on the institution's Web site should follow universal design guidelines. Having more accessible Web-based materials makes retrieving information from the Web site easier. More information and resources on Web accessibility guidelines can be found at <http://wiscinfo.doit.wisc.edu/ltde/access/2011conference>.

DE administrators recognize the importance of developing courses that do not create additional barriers for students with special needs. All too often, accessibility requirements are not addressed in the planning and purchase of software, hardware, and other materials for DE classrooms. It is extremely important that DE administrators include staff members from the institution's office of disability services when developing DE facilities. It is much more practical to develop an already accessible DE classroom than it is to purchase additional peripherals (i.e., software and hardware) to accommodate students and faculty with special needs. Careful consideration regarding the classroom setup can influence student retention. If students feel that the classroom setting is uncomfortable, they may be distracted by it.

Finally, it is very important that support staff, instructors, and students know how to deal with technological problems. For example, in a videoconferencing course, students should be instructed to alert the instructor when there are technological difficulties, such as no audio or no video. Hard copies of documents that students need to download from a Web site should always be made available at the remote sites. Having an

organized and efficient Plan B in place rather than responding in a disorganized manner is the preferred way to resolve problems. In the end, regardless of the problems that occur, institutions will then be prepared to address them in an effective and efficient manner.

Epistemological Challenges

Developing content for DE courses is *not* the same as developing material for courses in a traditional classroom setting. Instructors should evaluate the construction of their courses from the students' perspective. If the course content is difficult to master, its level of difficulty may be exacerbated by the format in which it is presented. Chacon (1985) determined that "the workload or amount of assignments in the course and the instructor's focus on reactive, assessment-centered support" (p. 44) increase the difficulty of completing DE courses. Educators should select the best format (i.e., videoconferencing, computer mediated, or Web based) to present material. Student retention is greatly improved when the quality of instruction is planned and student centered.

Instructors should also realize that DE courses require instruction and communication techniques that overcome the physical separation between the instructor and the students. In videoconferencing, for example, instructors should call their students by name, not by the name of the remote site. Instructors should make a concerted effort to divide attention equally among all the remote sites. If it is feasible, instructors should consider conducting classes from different sites. Students at the remote sites will then have more opportunity to bond with their instructors.

Finally, DE instructors should be given mentors to assist them with concerns or questions regarding the development of their course materials and classroom management. Doing so provides additional support to instructors who are just learning how to transform their traditional instructional practices to the DE format. It also helps to build a network to share ideas, teaching strategies, and other resources that will improve the quality of instruction.

Because most educators do not have time to review all the elements of DE programming, networking with other DE educators is vital. Institutions can create a listserv or newsgroup for staff members participating in DE courses to act as a forum for continuous discussion about projects, concerns, and new ideas.

Conclusions

Because institutions are allocating more funds to expand the number of DE courses, careful consideration must be made to ensure that educators are prepared to distribute their course material in a DE format and that DE students receive the same level of support as their on-campus counterparts. Time must be spent evaluating and assessing the courses, and training novice participants (i.e., support staff, instructors, and

students). In addition, further research must be done on ways to improve student retention rates. The success of DE courses depends on these considerations.

References

Belawati, T. (1998). Increasing student persistence in Indonesian post-secondary distance education. Distance Education, 19(1), 81-109.

Brindley, J. (1985). Completion and attrition in distance education: The learner's perspective. Paper presented at the 13th annual International Council for Distance Education World Conference, Melbourne, Australia.

Chacon, F. J. (1985). Building academic quality in distance higher education. Monograph presented at the Centre for the Study of Higher Education, University Park: Pennsylvania State University.

Coldeway, D., & Spencer, R. (1980). The measurement of attrition and completion in distance learning courses. Project REDEAL, Technical Report 8. Athabasca University.

Garland, M. R. (1993). Student perceptions of the situational, institutional, dispositional, and epistemological barriers to persistence. Distance Education, 14(2), 181-198.

Hara, N., & Kling, R. (1999). Students' frustrations with a Web-based distance education course. Retrieved December 20, 2000, from the World Wide Web: <http://www.slis.indiana.edu/CSI/wp00-01.html>.

Kember, D. (1981). Some factors affecting attrition and performance in a distance education course at the University of Papua, New Guinea. Distance Education, 2(2), 164-188.

Kember, D. (1989). A longitudinal process model of drop-out from distance education. Journal of Higher Education, 60(3), 278-301.

Morgan, C., & Tam, M. (1999). Unraveling the complexities of distance education student attrition. Distance Education, 20(1), 96-108.

Parker, A. (1995). Distance education attrition. International Journal of Educational Telecommunications, 1(4), 389-406.

Woodley, A., & Parlett, M. (1983). Student drop-out. Teaching at a Distance, 24, 2-3.

2. From Face-to-Face to Virtual Tutoring: Exploring the Potential of E-Learning Support

*V. Venugopal Reddy
Deputy Director & Incharge, Student Services Centre
Indira Gandhi National Open University, New Delhi, India
Email: vgreddy@hotmail.com*

*Manjulika Srivastava
Reader, STRIDE
Indira Gandhi National Open University, New Delhi, India
Email: smanjulika@hotmail.com*

Abstract

As we move into the 21st century, distance educators are becoming increasingly aware of the mounting pressures of the rapid pace of development of information and communication technology (ICT) and the phenomenon of globalization. The development of ICT has changed the scene of higher education, namely, the source and the delivery of knowledge. Open education (OE) and distance education (DE) have overtaken conventional education in the use of ICT.

One of the most visible benefits of DE is its emphasis on the use of technology to accomplish its goals. In fact, DE derives its strength from two-way communication and from the types and levels of interactivity it can support. Since the beginning of the 20th century, institutions offering DE courses have explored a variety of technological platforms to support interactions between teachers and groups of learners and among learners separated by distance, time, or both: text-based correspondence, telephone, radio, television, videoconferencing, and so on. Despite the fact that DE learners are encouraged to be independent, self-reliant, and autonomous, they still need to be motivated and supported. Hence, the emphasis of this paper is on the provisions of learner support services by all OE and DE learning institutions.

Genesis Of Learner Support

Emulating the example of the Open University of the United Kingdom (UKOU), similar universities provide learner support services through study centers where DE learners have face-to-face contact with teachers or tutor counselors. The genesis of such support lies in the belief that tutorial work is an essential component of DE. Such thought and action are a consequence of how the founders of UKOU, as well as the open universities that followed, viewed DE within the framework of conventional education, which is essentially institution or teacher centered.

Over a period of time, distance educators have come to realize that learner support services should be provided for altogether different purposes from those for which they were initially conceived. Learner support services have become an important component of DE because of the special characteristics of this system of learning. The need for learner support becomes more clearly understood by looking at the type of learners who enroll in DE courses and their unique needs, along with the specific features of the learning material and methods used to promote the culture of learning against that of teaching. We know that DE is a transaction of learning unlike conventional education, which is a transaction of teaching. Therefore, whatever is provided through support services needs to promote learning.

DE educators have also recognized the need to provide opportunities for social interaction to support effective learning. They have tried to stimulate face-to-face communication through the development of instructional systems based on such technologies as audioconferencing, teleconferencing, audiographic communication systems, videoconferencing, and computer-mediated communication (CMC) between learners and teachers.

Taylor (1998) identified five models of DE associated with delivery technologies. The first model is the correspondence model. Print is the only medium of instruction, without any type of support. The second model is the multimedia model, which entails the use of highly developed and refined teaching-learning resources—printed study guides, selected readings, videotapes, and audiotapes—and computer-based conferences, including computer-managed learning, computer-assisted learning, and interactive video. The third model is the telelearning model, which is based on the use of information technologies—audioconferencing, audiographic communication systems, videoconferencing, and broadcast television/radio—with attendant teleconferencing bringing in interactivity through technologies. The fourth model is the flexible learning model, which combines high-quality interactive multimedia with access to an increasingly extensive range of teaching-learning resources and enhanced interactivity through CMC offered through the Internet.

Taylor (1999) termed the emerging fifth model of DE, which is essentially a derivation of the fourth generation, as the intelligent flexible learning model, which involves the use of automated response systems to reduce the variable costs of CMC.

Paradigm Shift

Developments in communications technology have led to a subtle paradigm shift. Concern for the individual and personal media for instruction in the home and at work have begun to emerge, and a broader definition of the place where learning occurs has begun to develop.

The advent of the information age makes continuous education a necessity. Traditional DE instructional media are not effective, just as face-to-face classroom instruction is not feasible in a lifelong learning environment. Flexible delivery is likely to play a more significant role at all levels of education and training as globalization becomes the norm.

There is a trend toward resource-based learning, which is different from transmissive models of DE. It is an extremely learner-entered approach. Resource-based learning allows DE learners to access information in the form of text, audio or video clips, graphics, and so on. The freedom to browse through information at home or at work at any time gives DE learners control over their own learning.

Interactivity is the major advantage of resource-based learning, and it is enhanced by the ability to interact after time for reflection. The resources provided by the Internet are enormous. Thus, the power of information and communication technology (ICT) lends a new dimension to the concept of learner support. The regard for face-to-face interaction, even though limited in DE courses, as being patently superior to all other forms of interaction will be overcome by the widespread use of new ICTs. Geographic isolation, which was a primary factor in promoting DE, is becoming increasingly irrelevant.

Just as electronic media have transformed instructional methods, they have also transformed the method of providing support to DE learners. Let us consider the different types of electronic e-learning support.

Types of E-Learning Support

There are various ways institutions can use ICT to improve their teaching-learning systems (see Table 1). Web-based courses have extended the classroom beyond its physical and temporal boundaries in the context of conventional education; when applied to DE, they signify the death of distance. As mentioned earlier, "distance" has become irrelevant today with the introduction of Web-based education. Courses can be provided to DE learners anywhere, anytime. Similarly, the teacher or the tutor can get immediately connect with their DE learners anywhere, anytime. Class discussion,

individual teacher-student discussions, individual student-student chatting and other activities can occur anywhere, anytime.

Table 1: Types of E-Support

Access to the Institution	Dial-in access, Home page, E-mail
General Information	Web pages/Home page, Interactive Voice Response System (IVRS), Bulletin boards
Preadmission Counseling	IVRS, E-mail, Bulletin boards
Registration	On-line
Course Content	CD-ROM, On-line, Hyperlink to other www sources
Counseling-Tutoring	E-mail, IVRS, conferencing, chat sessions
Group Discussion	Conferencing
Projects	On-line
Assignment	On-line
Feedback on Assignments and Projects	E-mail
Examination	On-line

Thus, paper-based print materials are prepared in digital format as CD-ROMs or on-line, Web-based courses. Other supports to virtual learning include a virtual library and call centers that can provide schedules, updates, assignment announcements, frequently asked questions (FAQs), bulletins, student information, and instructor information. Interactive learning modes, such as on-line discussions, tutorials, counseling, quizzes, consultations, and feedback on assignments can then be used effectively synchronously and asynchronously.

Though self-learning is the basic thrust of virtual learning, it needs to be supported by adequate interactions to ensure the quality of learning. There are various delivery modes that can be utilized to create the aforementioned interactivity. Interaction occurs mainly through CMC (i.e., e-mail and Web-based conferencing). The effective use of asynchronous CMC can ensure interactivity, which is a key element in the teaching-learning process. E-mail is more individual centered than the “one-to-many” communication systems such as bulletin boards, mailing lists, and threaded discussions.

Taylor (1999) suggested the use of an automated response system and intelligent object databases to deliver major economies of scale in managing teaching and academic support to DE learners. The adoption of an interactive voice response system (IVRS) integrated with an automated e-mail response system is one such example of providing effective and efficient support to DE learners at minimal variable cost.

IGNOU'S Virtual Learning Experiment

Recently, Indira Gandhi National Open University (IGNOU) introduced two computer programs: a Bachelor's Degree in Information Technology (BIT) and an Advanced Diploma in Information Technology (ADIT) on the Internet. It is a collaborative venture of IGNOU and Edexcel Foundation in the United Kingdom.

IGNOU-Edexcel

The IGNOU-Edexcel collaboration offers Indian students a Higher National Diploma (HND) in Computing while they pursue a BIT. HNDs are work-related qualifications that are accepted worldwide for employment and entry to university degree programs. Edexcel's curriculum is devised and regularly upgraded to keep pace with changes in technology, market conditions, and employers' demands.

As a result of this arrangement, IGNOU will offer HNDs in Computing and in Computing and Multimedia that will equal the delivery and quality norms of the Business Technology Education Council (BTEC). The quality of the programs will be jointly monitored by IGNOU and BTEC to ensure their conformity to international standards. Embedded in HND's curriculum is the requirement that IGNOU's students must study 4 more trimesters to obtain their first degree in BIT. This initiative is part of IGNOU's ambitious plan to introduce virtual programs that will lead to postgraduate and doctoral qualifications.

These programs have been developed to meet changing market demands, particularly the demands of more multinational employers entering the Indian scene due to economic reforms over the last 5 years. The courses will provide ample opportunities for learners to choose from in the ever-changing computer technology field. To keep pace with changing technology, the courses will be regularly updated (IGNOU, 1999).

Teaching-Learning Methodology

In this model, innovative teaching methodologies are used, with the emphasis on using emerging technology to empower learners. The components of teaching methods include:

- Live satellite-based teleconferencing lecturers (one hour per week).
- Recorded video lectures.
- Practical laboratories.
- Internet learning resources by Internet browsing.
- On-line interactive chats with peer group, faculty, and external experts.

The programs are offered on a trimester basis. The learning model available to learner is as follows:

- The teacher does on-line counseling of a course on the Web. The schedule is available on IGNOU's Web site (<http://www.ignou.edu>). Learners pursue the materials, do self-check exercises, and interact with the peer group as well as the mentor/instructor through e-mail. The course coordinator posts a summary session at the end of the week and move on to the next week's activity. Before the examination at the end of the term, the course material and all the interactions are made available to help students prepare for the examination.
- The learning materials are divided into small, intense interactive sessions of about 25-to-30 minutes each. Each study session has some course content, self-check exercises, links to other part of the course, and so on. Then there is an advisory mechanism that refers to the status of what the learner has achieved during the course thus far.

During the first trimester, the learners rely mainly on an instructor-delivered video lecture format supplemented with self-learning through Internet-based resources. Gradually, this format takes on a greater self-learning and mentoring approach (IGNOU, 1999).

All BIT learners have been inducted into this new model using the aforementioned modes of delivery. The induction programs were face-to-face contact sessions at designated centers. This program is being delivered through telelearning centers (TLCs), which have a state-of-the-art infrastructure to facilitate the effective delivery of these programs. Teleconferencing-based lectures are accessible to learners at the TLCs. Because the TLCs are interactive in nature (two-way audio and one-way video), DE learners can interact with experts and faculty members in the studio.

Learners can access the course material through CD-ROMs and IGNOU's Web site. Learners can also access material through the Internet and FAQs that have been organized and structured for each course. If learners need to ask a question that is not covered in the database, they can submit a form, available through IGNOU's Web site, via e-mail. This could, in some sense, be the equivalent of an electronic post card. Questions would be handled by the academic team in charge of the course, and learners would receive their answers over a period of time. If questions seem to be of general interest, they would be added to the FAQs database. E-mail is used as a very effective but asynchronous mode of counseling.

Although many learners navigate the learning resources at their own convenience and may not feel it important to have an instructor available, other learners are more comfortable in the traditional face-to-face classroom experience. For this purpose, the chat mode feature is available on the Internet. Regular chat sessions are scheduled, and course coordinators conduct the sessions. Learners are assessed periodically

through traditional and innovative methods: case studies, assignments, time-constrained assessments, and work-based projects.

Objectives

The objectives of this study were:

- To analyze learners' attitudes toward resource-based learning.
- To critically examine the utilization of the resources provided by the university.
- To suggest measures for improving the effectiveness of resource-based learning.

Survey

In the 2000-20001 academic year, 1,266 learners who were enrolled in BIT at IGNOU formed the nucleus of the study. Questionnaires were sent to all of them for data collection. The questionnaire consisted mainly of a few open-ended questions. Learners' opinions were obtained on a 3-point Likert scale, namely very useful, just about useful, and not useful at all. Out of 1,266 learners, 372 (29.4%) returned the completed questionnaires, and 15 (1.2%) returned blank or incomplete questionnaires, stating that they were no longer pursuing a BIT diploma and had dropped out. The response rate of 387 was almost 31% of the total number enrolled in BIT.

Profiles of the Respondents

The profiles of the 387 respondents revealed that 92% of them were male, and 97% of them were under 30 years of age and unmarried. Barely 3% in the 30-to-40-year-old age group were married. Ninety-five percent of them were full-time students in BIT at IGNOU. Barely 5% of them were employed.

Findings

Attitudes Toward Response-Based Learning

The second part of the questionnaire was designed to establish the attitudes of the learners toward resource-based learning. Seventy-one percent of the respondents answered in the affirmative. Their reasons varied according to their personal choices:

- 100% of them felt that they could construct their own individual knowledge base.
- 62% of them liked the flexibility in study routes.
- 41% improved their study skills
- 27% could think more.

- 25% found it interesting and stimulating.
- 22% enjoyed the independence.
- 21% liked the choice of readings.

However, 29% of the respondent answered in the negative. They did not enjoy resource-based learning for the following reasons:

- 100% of them felt they needed more guidance.
- 20% of them found it tiresome and time consuming.
- 17% found themselves drowning in a sea of information.
- 7% lacked the skills to access relevant information.

Where Did They Study?

The learners were asked where they studied. Fifty-three percent of the respondents studied at a business center or cybercafé in the market, 19% at a TLC, 17% at home, and 11% at a friend's house.

How Did They Study?

The learners were asked to describe how they studied. It is interesting to note that 98% of them downloaded materials. Sixty-six percent studied on a personal computer (PC) and from printed materials, 31% only studied from printed materials, and barely 2% studied on PCs. Twenty-five percent also referred to books to supplement the course materials.

When asked whether they liked reading from a computer screen, 52% found it strenuous on their eyes; 39% felt constrained because they could not underline or highlight the material or make notes in the margins; 26% found it an unfamiliar habit; 21% found it difficult to glance through pages, as is possible with printed materials; and 3% found it extremely tiring.

The respondents gave several reasons for downloading and printing materials. The major reason given by 66% of them was that they did not possess a PC. Other reasons were that 33% of them did not find the time at access points to be convenient, 2.3% of them did not have an Internet connection, 16% had insufficient time available at the PC located outside their home or office, 15% lacked study time on the PC due to a heavy workload, 11% lacked study time on the PC due to family duties, 10% mentioned that they could study only at a quiet place away from home or office that had no PC, 5% were used to reading in bed or in the bath, 2% could not find peace at home or at the office to study on the PC, 2% had family members who did not allow them to use the PC in peace, and 2% stated that their office colleagues did not allow them to use the PC when they wanted to.

Utilization of Facilities

Respondents made use of e-mail for communicating with institutional staff tutors (60%), for discussing course-related topics with their tutors (53%), for socializing (38%), for communicating with their peer groups (35%), and for seeking clarifications related to operational aspects (16%). When asked how they used the Internet, the majority of them revealed that they used it to obtain information (82%), to reference materials (60%), to study for examinations (44%), to browse through materials (32%), and to complete research (23%).

Seventy-four percent of the respondents used search engines to complete their assignments. Forty-four percent did their assignments by going through entire Web pages systematically, 23% by going through the concept maps at the beginning of each unit, and 5% by the hit-and-miss method. Their utilization of the support services provided to them by the university is illustrated in Table 2.

**Table 2:
Utilization of Support Services**

Sl. No.	Support Services Provided	Very Useful	Just About Useful	Not Used At All
1.	Web-based course material	38%	60%	02%
2.	E-mail	56%	31%	13%
3.	Computer conferencing	-	-	100%
4.	Teleconferencing	32%	45%	23%
5.	Videos	26%	29%	45%
6.	CBT/tutorials	-	-	100%
7.	Internet-based resources	43%	37%	20%
8.	On-line chat sessions	15%	16%	69%
9.	Telephone	10%	11%	79%
10.	Library	-	19%	81%
11.	Feedback on tutor-marked assignments	10%	21%	69%
12.	Radio counseling	-	-	100%
13.	Guidance received from TLC	22%	42%	36%
14.	Support from HQ	26%	48%	26%
15.	Support from Regional Centers	21%	48%	31%
16.	Student Handbook	-	69%	31%

From the aforementioned responses, it is obvious that the learners' believed that all these services except e-mail are useful. CBT/tutoring, computer conferencing, and radio counseling were not used at all by DE students simply because they were not provided.

The respondents did not consider library facilities, telephone communication, and feedback on assignments to be useful. Forty-five percent did not benefit from videos; 69% did not find chat sessions useful. This could be linked with problems stated by the learners themselves. As mentioned previously, 66% of them do not possess their own PCs and have to depend on other sources. Only 34% of the respondents found the frequency and timings of the chat sessions to be convenient. The majority of them expressed a desire to hold the chat sessions during morning hours, probably because they are all full-time learners. Only the employed learners stated that either after office hours or Sunday mornings would be the most convenient times for them.

Issues Raised by Respondents

The respondents mentioned that the very limited hours at TLCs are a major hurdle in their desire to pursue their studies. Some of them also complained about the unsatisfactory Internet facilities at TLCs, such as frequently being disconnected from the Internet; lack of proper guidance; lack of previous experience in resource-based learning; and limited space for storing files, which often made their assignments bounce back; and other important issues. Many of them were not proficient in typing and were slow to enter data on the PCs.

Sometimes, power failures prevented their usage. Lastly, the majority of them (75%) felt that the lab hours provided were really insufficient and that without any academic counselor to guide them, the hands-on sessions were not effective. With regard to the TLCs, the respondents mentioned that the centers had insufficient resources and that the counselors could not respond to their queries adequately.

The respondents felt the time allotted to complete on-line examinations was not sufficient for them to answer the descriptive-type questions. They also found that the examinations were too long. Some of them indicated that they often lost data while answering examination questions due to sudden and unexpected power failures. Many of them who were not proficient typists could not complete the examinations and performed unsatisfactorily as a result.

Suggestions for Improvement

The learners were keen to pursue their studies through this relatively new medium. They offered the following suggestions to improve the present system and to make it more effective:

- More lab hours should be provided for this program.
- Proper guidance should be provided by the academic counselors at TLCs during hands-on sessions.
- A proper library facility is absolutely mandatory.

- A hard copy of course materials should be made available to learners. It is very expensive for them to make multiple copies at TLCs.
- Limited face-to-face counseling sessions may be provided at TLCs for peer group interaction and group discussion.
- More hands-on sessions are required.
- More interactive activities should be introduced.
- There should a full-time, on-line academic counselor to answer academic and operational questions.
- A detailed syllabus should be provided at the beginning of the semester.
- Interactive CDs on topics dealing with hands-on sessions should be given to students.
- Professionals in the field may be asked to monitor the quality of program delivery.
- Regional centers should be made more accountable to ensure the effective and efficient functioning of TLCs. The services provided by TLCs should be regularly monitored.

Conclusions

It appears that many aspects of resource-based learning appeal to IGNOU's DE learners, who support a multitude of new learning styles and methods of delivery. A minority of DE learners have not been able to adjust to this new high-tech method of delivery using new ICTs. However, the majority of the learners have adapted their study patterns to the demands of resource- based study, despite their resorting to making hard copies of the course material for greater flexibility. This is IGNOU's first attempt to provide e-support to its DE learners. This dynamic initiative of IGNOU to create a virtual campus is just the beginning. More programs will soon follow.

References

IGNOU. (1999). School of computer and information sciences [Brochure]. New Delhi: Author.

Taylor, J. C. (1998). Flexible delivery: The globalization of lifelong learning. Indian Journal of Open Learning, 7(1), 55-65.

Taylor, J. C. (1999). Distance education: The fifth generation [CD-ROM]. Proceedings of the ICDE Conference, Vienna, Austria.

3. Persistence in Distance Education: a Case Study

Lise Desmarais
Canadian Foreign Service Institute
Email: lisian@magi.com

Editor's Note: This research originally appeared in French in the Web journal ALSIC, <http://alsic.univ-fcomte.fr/>, Vol. 3, #1, June 2000, as *La persévérance dans l'enseignement à distance – Une étude de cas*.

Abstract

The persistence phenomenon has been studied mainly in psychology as an important characteristic of intentional behavior. Some researchers have associated persistence and motivation, meaning complex problem solving, where the individual is confronted with the choice of continuing with an unresolved task or starting another one. Other socio-cognitive learning theories related to persistence in learning envision persistence as a consequence of motivation. (Bourdages, 1996). The study of persistence in distance education is part of the socio-cognitive trend and is closely related to the study of individual factors that influence a participant's decision to either continue in a course or abandon it. A fair body of research is devoted to this phenomenon that can have a major impact on the decision to continue the delivery of courses by distance technology. In a qualitative study aimed at identifying potential factors that may influence persistence, Garland (1993) identifies four types of barriers: situational barriers related to the context of the learner; institutional barriers associated with the rules that the institution offering the program wants to enforce; dispositional barriers related to learner attitude and work habits; epistemological barriers related to the content of the course. This type of taxonomy should allow the analysis of a teaching environment and isolate factors that contribute to dropout. In this article, I will examine the persistence phenomenon based on a case study of the implementation of a distance training writing program in foreign languages (Spanish and German) offered since 1997 as part of the language training program for Canadian Foreign Service personnel. Details on the implementation of those courses and their contents can be found in Desmarais (1999). In this article, I will try to isolate factors related to persistence in this specific context and share some of the interventions that have helped reduce the dropout rate.

Context

Distance education is a teaching format totally adapted for the Canadian Department of Foreign Affairs and International Trade where more than 1,000 Canadians work abroad in 158 missions worldwide. As the language training offered before posting is, for the most part, centered on speaking and listening skills, writing skills receive short shrift. To remedy this situation we decided to develop writing courses that meet the needs of our employees. They are required, in the course of their duties to:

- check translations (English/French towards the target language)
- proofread texts
- write short texts (thank-you letter, information, suggestion)

Background

From January 1997 to April 1999, we offered writing courses five times. Due to a high dropout rate for the first sessions we modified several aspects of course delivery. We can identify two major phases in course delivery:

Phase 1: We implemented a training format in which collaboration among participants was planned;

Phase 2: Collaboration was abandoned and we introduced the use of annotation software.

Table 1 presents the number of registrations for the offerings in both phases 1 and 2. The high number of registrants for this type of course is an indication of the interest and pent-up demand for this type of teaching and delivery in our setting.

Table 1. Registrations

Language	Phase	Registration
Spanish	1	12
Spanish	1	20
Spanish	1	34
Spanish	2	16
Spanish	2	10

German	1	14
German	1	13
German	2	6
German	2	4
Total		129

The courses are 8-weeks long and follow the steps presented in Table 2. Tasks are directly related to the training objectives.

Table 2. Learning Activities

Weeks	Tasks
	Pretest
1-2	Check translation
3-4	Proof-reading
5-6-7	Directed production
8	Post-test

Completion Rates

When we looked at the completion rates of the first and the last tasks we noted a very high dropout rate for both the Spanish and German offerings. The slightly higher dropout rate for German can be explained by the fact that students of German do not need to use the target language to the same extent in their professional tasks as do the students of Spanish.¹ Fjortoft (1995) concludes, based on his experiment, that subjects that are interested in the field itself are more inclined to complete their training. This factor alone explains 23% of the variance.

¹The comparison is based on a pre-course questionnaire (presented in the appendix). Students of Spanish have to perform a larger number of written tasks and they have to perform these tasks more often.

The dropout rate is highest for the production tasks (weeks 6, 7, 8). This is probably related to the difficulty of this type of task, which is real production whereas in the other tasks students were only required to modify documents presented to them in the target language.

We also observed an important difference between the completion rate for the first and the last deliveries of the Spanish course. The same phenomenon occurred when we reviewed data from the German course. We will identify factors that could reasonably explain this variation.

Factors Influencing Completion Rate

Cooperative Format

When we started the distance training program, we wanted to use a cooperative format among participants that required them to exchange their assignments with a colleague before sending them to the tutor. Participants were matched to work in dyads consisting of a more advanced student and a lower level student. The lower level student would make corrections and modifications to the text and then forward a copy to his more advanced learning partner who would in turn make changes thought necessary. This modified version was then returned to the initial student who was free to agree or further modify the text. After several iterations and agreement by both members of the dyad the agreed to corrected test was forwarded to the tutor. The course evaluation revealed that participants found this method of working cumbersome and had doubts about the relevance and quality of the remarks offered and corrections suggested by their counterpart. Rada & Wang (1998) came to the same conclusions when dealing with university level students who had little interest in sharing their ideas and their assignments with colleagues and who complained about the difficulty of the collaboration process. Results did not reveal any improvement in the individual's performance even though the group production was of higher quality than the individual production.

When students enroll in a course they are required to complete a questionnaire designed to obtain their attitude towards various aspects of the methodology, one of which being cooperative learning. When comparing responses of those who persisted to those who dropped out we note an obvious difference between the groups. For the three questions related to cooperative learning, the attitude of the completers was systematically more positive ($p = 0.07$; $p = 0.09$; $p = 0.07$) than those in the dropout group. Even though not statistically significant ($p < 0.05$) we can infer that for some participants, the cooperative format of the course influenced their decision to drop out of the course.

Relevant Corrections

During phase 1, tutors used their own correction and feedback strategies when correcting assignments. Though they were all confronted with the same types of errors there was little cross tutor consistency in the number of corrections or the quality of feedback offered. Also, because tutors lacked time and had too much to do, they made fewer and less informative comments than the optimum.

To address the above problem we decided to introduce annotation software, which allows users to prepare comments in advance for the anticipated types of common errors. We chose Markin (version 3.2). This software allows for the creating of a maximum of 32² buttons that can be used to annotate errors (for example: use of accents, subject-verb agreement, noun-adjective agreement, etc.). This program also allows for the use of comments on specific elements such as an explanation of a grammatical point or presenting the correct form. The program also allows the tutor to offer use of general feedback on the overall production such as: *Good work* or *You have demonstrated a good understanding of this topic... but you should pay more attention to ...* The Markin software was developed in the context of ESL but it is very easy to change its configuration for use in Spanish or German environments. More information on this software can be found in Holmes (1998)³.

Markin makes the correction and feedback phases much easier and faster for tutors enabling them to provide a faster turnaround time of participant assignments. This quick turnaround is a large factor in keeping the participants engaged and motivated.

Sequence of Activities

During phase 1, participants had to review two translations and two letters. They were also required to produce three documents on their own. In phase 2, we decided to take advantage of the annotation capabilities and follow the methodology outlined in Table 3. With this sequence, a participant works on a text and then submits it to the tutor who provides only annotations. Annotations at this stage are in the form of indications as to the type of error and comments to help steer the participant toward worthwhile revisions. The participant then reworks the text and submits it, this time for final correction. When the task involves two assigned texts (revision and production), due to time constraints, there is no annotation step in the feedback loop for the second text.

²The 2001 version of the program does not limit the number of buttons.

³It is possible to download a demo version of Markin from the site presented in the references.

TABLE 3. Sequence of Activities - Phase 2

Tasks	Text 1		Text 2
Translation	Annotation	Correction	
Revision	Annotation	Correction	Correction
Production	Annotation	Correction	Correction

This new sequence of activities provides a more thorough treatment of the first text and gives the participants better indications as to the modifications they should bring to their texts. The advice provided by the tutor for the first text will hopefully be taken into account by the participant when working on the second text. We would have preferred to use the combination of annotation and correction throughout the course but since our program cannot go beyond 10 weeks (including the post-test), it was not feasible.

Results presented in Desmarais (1999) indicate a transfer between the first and the second text regarding grammatical spelling, syntax and use of accents; the percentage of these types of mistakes decreases. However, there is no transfer regarding lexical spelling and lexicon since the percentage of these types of mistakes is identical or increases depending on the type of document. The lack of recurrence of lexical items could explain these results.

Remuneration System

For the first deliveries of these courses, we established a pay scale based on our traditional hourly rate remuneration system. We reasoned that a tutor would have to devote a certain number of hours to effectively interact with a group of participants. Based on a survey conducted in the spring of 1996 in which 116 respondents from Canada and the United States working at the college and university levels, Evans & Minich (1998) concluded that the tutor payment is generally based on the regular remuneration system related to the average number of students without taking into account the particular situation of distance teaching.

Coldeway (1980) compared the completion rate of participants in a study where on one hand, two tutors were paid according to the number of assignments submitted by the participants and, on the other hand, a third tutor was paid according to the traditional rate for the course. He did not find any difference in the completion rates but the interventions of the tutors per participant assignment submitted were more regular and in greater number.

After the first delivery, when we realized that the withdrawal or abandonment rate was rather high and tutors did not have any particular interest in maintaining a heavy workload for the same pay, we changed our pay scale to base it on the number of assignments corrected. The tutor is now paid at an hourly fee per assignment corrected. The more assignments submitted the more remuneration received thus there is a strong incentive to keep participants engaged and motivated.

The Tutor Role

In distance education tutors, even though they may feel isolated (Tammelin, 1999), play a very important role (Lebel and Michaud, 1989). On one hand, the change in the remuneration system has stimulated tutors to follow students' progress more closely. Yet, based on distance learning participant comments, students want fast feedback on their submitted assignments (a 48 hour turnaround seems to be the acceptable limit) and personalized feedback. Both these demands are more easily met with the aid of annotation software.

After closely monitoring such steps as turnaround times, relevance of and quality of feedback comments, timely reminders and encouragement messages, etc. We were able to divide the tutors into two groups, which for simplicity we call, Tutor + and Tutor-. Those tutors who adequately fulfilled the tutor role were placed in the Tutor + group. Those who were found lacking were placed in the Tutor – group.

One example of making it difficult for participants is furnished by a tutor who regularly sent comments or assignments on Friday afternoons which is Friday evening for European based clients rendering it impossible for them to work on assignments over the weekend when they have the most discretionary time. Another example of poor tutoring skills is provided by a tutor who was going to be absent for two weeks. She asked a colleague to replace her and directed participants to forward all assignment queries and correspondence to the replacement. Feeling they were being treated cavalierly, no one complied, and all participants abandoned the course. This last example highlights the close one-on-one relationship that is built between participants and their tutor. This one-on-one relationship is important to distance learners and is an important factor in encouraging participants to complete the work requested⁴ and persist in the course. They know that they are in a dialogue with a live human being who is concerned with their progress.

Individual Factors

⁴We must specify that in our context, participants do not receive a grade on the course or financial remuneration for completing it. Furthermore, the employee receives no reduction in workload to complete assignments. Employees register for courses out of personal interest or from a desire to upgrade their professional skills.

Answers to the attitude questionnaire and the socio-demographic data provided by the participants when they register for a course have allowed us to identify factors that are characteristic of completers and non-completers.

Keyboarding skills

There is significant difference ($p = 0.018$) for keyboarding skills between the group that persisted and completed the course and the group of students who abandoned the course. Non-completers evaluated their keyboarding skills as *rather good* whereas the completers evaluated these skills as *very good*. This difference was reflected in the completion rates.

Attitude towards the usefulness of a computer for writing

Non-completers were generally less positive towards the usefulness of a computer for writing. The difference is significant ($p = 0.006$) between the completers and non-completers for the question *I like the challenge of using a computer*.

Attitude towards communicating by e-mail

For this aspect, we identified a significant difference for the questions *I am more at ease communicating with people in person than by e-mail* ($p = 0.013$) and *Communicating by e-mail in the target language is a good way to improve my skills* ($p = 0.015$). Non-completers preferred communicating in person and had a rather neutral opinion on the usefulness of e-mail to improve their language skills.

Attitude towards the usefulness of the computer and e-mail for learning

We also identified a significant difference between groups for the question *I can learn the target language more autonomously when I use a computer*; completers are definitely more in agreement with this statement ($p = 0.007$).

It seems then that individual factors related to keyboarding skills and the participants' perception towards the usefulness of technologies for language learning would differentiate completers and non-completers.

Conclusion

If we come back to the factors Garland (1993) proposed, we realize that the majority of changes that we put into place are institutional. We were also able to identify factors related to attitude and work habits that could influence a participant's decision to abandon a course. Tutors who are informed that a participant's profile indicates that he or she is more likely to drop a course could intervene more directly with one-on-one communication, which would provide encouragement for the participant to persist. As for epistemological factors related to the course content, participants who completed the course indicated that the course material and the activities used were relevant. This leads us to believe that the course meets the needs of our clients. However, persistence remains a crucial issue and not having captive clients means that the tutor plays a key

role in engaging students in the coursework, which leads to a reduction in the dropout rate.

**Attitude Questionnaire
(scale not included)**

Level in Spanish

Please rate your typing ability

Please rate your knowledge of computers:

Do you have a computer at home?
(if Yes) How often do you use it?

How often do you use the following applications:
Word Processing
E-mail
World Wide Web

How often do you write in Spanish (either a simple note or a full-fledged letter)?

How often do you revise texts written in Spanish for your signature?

For each of the following questions, please write an X besides the one that fits better with your opinion.

1. I can write better when I write with a computer.
2. Revising my writing is a lot easier when I write with a computer.
3. I enjoy writing by computer more than by hand.
4. Writing by computer saves time compared to by hand.
5. I enjoy using the computer to communicate with people.
6. I am more at ease to contact people in person than by e-mail.
7. If I have a question or comment, I would rather contact the teacher in person than by e-mail
8. E-mail helps people learning from each other.
9. An advantage of e-mail is you can contact people any time you want.
10. Writing by e-mail helps me develop my thoughts and ideas.
11. Using e-mail allows me to be part of a group.
12. Communicating by e-mail in Spanish is a good way to improve my Spanish.
13. I enjoy writing in Spanish.
14. Writing by computer makes me more creative.
15. Using the computer is worth the time and effort.
16. I enjoy the challenge of using the computer.
17. I can learn Spanish more independently when I use the computer.
18. Computers isolate people.

19. I can learn to write in Spanish faster when I use a computer.
20. Using a computer gives me more chances to practice Spanish.
21. Computers are usually frustrating to work with.
22. Computers make people weak and powerless.

References

- Bourdages, L. (1996). La persistance au doctorat. Une histoire de sens. Québec: Les Presses de l'Université du Québec.
- Brindley, J.E. (1987). Attrition and completion in distance education: the student's perspective. ED 322, 887.
- Coldeway, D.O. (1980). An examination of tutor management strategies for use in distance education. ED 259, 223.
- Desmarais, L. (1999). Le courrier électronique: un outil d'enseignement en milieu de travail. Computer Assisted Language Learning, 12(4), 323-344.
- Evans, R. & Minich, E. (1998). Faculty Compensation and Support Issues in Distance Education. Washington (DC): Instructional Telecommunications Council.
- Fjortoft, N. (1995). Predicting persistence in distance learning program. ED 387, 620.
- Garland, M.R. (1993). Student perceptions of the situational, institutional, dispositional and epistemological barriers to persistence. Distance Education, 14(2), 181-198.
- Holmes, M. (1998). Approaches to marking electronic texts. In Liddel P. (Ed.), FLEAT III Foreign Language Education and Technology, (pp. 107-122).
- Holmes, M. (n.d.). *Markin* : <http://www.net-shopper.co.uk/creative/education/markin.htm>.
- Lebel, C. & Michaud, B. (1989). Le tuteur et le support à l'étudiant en enseignement à distance. In Post-Secondary distance education in Canada. Policies, practices and priorities. R. Sweet (Dir.) ED 336, 648.
- Rada, R. & Wang, W. (1998). Computer-supported collaborative writing phases. Journal of Educational Technology Systems, 26(2), 137-149.
- Siqueira de Freitas, K. & Lynch, P. (1986). Factors affecting student success at the National Open University of Venezuela. Distance Education, 7(2), 191-200.
- Tammelin, M. (1999). The loneliness of the long-distance teacher: the role of social presence in the online classroom, Presentation at EUROCALL 99 (Besançon).

4. Facilitating and Sustaining Interest Through an On-Line Distance Peer-Tutoring System in a Cooperative Learning Environment

*Professor Olugbemi J. Jegede, Ph.D.
Director Centre for Research in Distance and Adult Learning
Open University of Hong Kong
Email: jegede@ouhk.edu.hk*

Abstract

Computer-supported (CS) cooperative learning engenders several positive outcomes that enhance learning: more frequent use of higher level reasoning strategies; more frequent process gain; higher performance on achievement; positive effects on social, motivational, and attitudinal outcomes; fostering of knowledge about the learning process; encouragement of a spirit of learning to learn; and information for students about the construction and understanding of knowledge. Peer tutoring, the most common approach to peer-based cooperative learning, assumes that closer approximation to equality in the peer-tutoring relationship affects instructional discourse with significantly higher cognitive gains. However, a major problem in peer-based instruction is the absence in the literature of well-planned, supervised, sequenced, and structured peer-tutoring strategies to maximize cognitive gains. Second, within a distance education (DE) environment, there is no evidence that learning technologies using specific strategies to facilitate the social negotiation of knowledge among peers can accomplish that goal. This study tests the on-campus/off-campus peer-tutoring electronic network (OPTEN) model for employing computer-mediated communication (CMC) to support constructivist learning. Using dyad groups linking an on-campus student and a DE student in a tutorial group where roles as tutor and tutee are reversed on a weekly basis, students enrolled in a Law Unit at the University of Southern Queensland participated in this study for one semester. Using several evaluation procedures, the researcher found that the OPTEN model effectively integrates distance and on-campus tutoring using a CMC medium; has potential as a teaching strategy with significant, positive instructional and learning outcomes; and provides a structure in which the learning environment promotes equality and mutuality.

Introduction

In the past decade, the potential for small group learning strategies such as cooperative learning (Johnson & Johnson, 1986; Slavin, 1985), reciprocal teaching (Palincsar & Brown, 1984), and peer tutoring (Fantuzzo, King, & Heller, 1992; Greenwood, Delquadri, & Hall, 1989) to improve learning outcomes has been demonstrated.

Damon and Phelps (1989) identified three major approaches to peer-based instruction in the educational world: peer tutoring, cooperative learning, and peer collaboration. Furthermore, they suggested that these three approaches differ in the quality of the peer arrangements that they tend to foster. Two indices of peer engagement are equality and mutuality (Damon & Phelps). Equality refers to equity between group members: Both parties in an engagement take direction from one another rather than one party submitting to a unilateral flow of direction from the other. Mutuality means that the discourse in the engagement is lively, extensive, and “connected” (Berndt, 1987).

Hooper (1994) implied that levels of equality and mutuality may affect group learning. For example, he suggested that when equality is high, members may be more willing to interact within the group, resulting in a more open and less threatening learning environment. When mutuality is high, the group represents a supportive environment in which students may experiment with ideas, and gain insight and understanding. The peer-tutoring model developed for this project aims to foster group methods high in terms of equity and mutuality, and encourage a more productive learning environment.

Peer tutoring appears to provide a cost-effective instructional strategy (Martino, 1993). Recent research has shown that students participating in well-planned and supervised peer-tutoring situations improve their grade point averages, literacy and study skills, reading comprehension, ability to identify long-range goals, and self-confidence (Fuchs, Fuchs, Bentz, Phillips, & Hamlett, 1994).

Peer tutoring, however, represents a large step away from the traditional model in which the teacher is often assumed to be the sole source of knowledge and skill. Recent research has suggested that students using reciprocal peer tutoring (RPT), where the roles of tutor and tutee are shared on a reciprocal basis, exhibit significantly higher cognitive gains than students who are not using RPT strategies (Riggio, Whatley, & Neale, 1994).

Sobral (1994) also suggested that peer tutoring can facilitate group work without loss of cognitive achievement in long-range conditions of problem-based learning experiences. Furthermore, well-planned, supervised, sequenced, and structured peer tutoring appears to be an effective instructional strategy (Farivar & Webb, 1994). One purpose of the present study is to examine the cognitive gains achieved through RPT.

Many distance education (DE) learning initiatives use technology to deliver instruction in traditional, objectivist ways. One aim of this project is to determine whether learning technologies can be used to facilitate internal negotiation, social negotiation, exploration, and self-assessment in a DE learning situation. Although much literature

has been published on the benefits of cooperative learning in small groups (Bruffee, 1993), little research appears to have been conducted on computer-supported (CS) cooperative work, let alone computer-mediated communication (CMC) as a tool for the delivery of DE peer tutoring (Collis, 1993).

Johnson and Johnson (1984) were among those researchers who made a productive transition from their earlier work on cooperative learning by extending it to the investigation of the effects of competitive, cooperative, and individualistic learning experiences when computer use is integrated into the various experiences. They found that “computer-assisted co-operative [sic] learning promoted greater quantity and quality of daily achievement; more successful problem solving; [and] better performance on factual recognition, application, and problem-solving test items than did computer-assisted competitive and individualistic learning” (p. 15).

While Johnson and Johnson (1984) studied CS cooperative work, another area of research developed from classroom learning projects involving CMC and from cooperative activities involving participants physically unknown to one another and at a distance from one another. For example, Riel (1990) documented positive changes in students’ reading, writing, science, and problem-solving skills when they worked cooperatively through networks with students in distant locations (as cited in Cohen & Riel, 1989) and also in students’ self-esteem.

The work of Riel (1990) and others in the cooperative learning/CMC stream of educational research placed emphasis on the teacher as a member of the cooperative team, not just its coordinator. This project is designed to extend previous work on CMC by supplementing the teacher, in this case the university lecturer, with a system of RPT.

Evidence has suggested that students often do not know what interaction strategies are likely to result in effective learning. McKellar (1986) contended that untrained tutors and students model behaviors that are familiar but not necessarily related to success. Similarly, Yager, Johnson, and Johnson (1985) demonstrated the effectiveness of structured versus unstructured cooperative learning environments. Their results suggest that effective cooperative learning requires students to learn new behavioral patterns and to be prepared to react differently than they do in the traditional classroom.

Although some authors (Crotty, 1994; Garrison, 1993; Jonassen, 1991) promoted constructivist approaches to DE, few of them appear to have recommended any specific strategies for accomplishing that goal. A major problem in peer-based instruction is the absence in the literature of well-planned, supervised, sequenced, and structured peer-tutoring strategies to maximize cognitive gains. Second, within a DE environment, there is no empirical evidence indicating that learning technologies using any specific strategies to facilitate social negotiation of knowledge among peers can accomplish that goal.

In this project, we offer the on-campus/off-campus peer-tutoring electronic network (OPTEN) model for employing CMC to support constructivist learning.

Planning, Sample, Equipment, and CMC Packages

This project was supported through a grant from the Australian National Teaching Development Grant under the Committee for the Advancement of University Teaching. It used as a vehicle one of the units (Unit 51005 - Introduction to Law) taught within a mixed-mode environment (i.e., on-campus and through DE) to students studying at the Faculty of Commerce of the University of Southern Queensland. Initial planning and preparation included obtaining information about students who were registered for the unit during the academic year in which the project was conducted and obtaining information regarding students' access to computing facilities at home or and at the workplace. Follow-up invitations were sent to students to request their voluntary participation in the project.

From the list of volunteers, a selection of DE and on-campus students was made for the project; access was provided for all other students registered in the unit to participate in the project through an electronic group discussion. A CMC package containing a letter explaining CMC and the project, a CMC access questionnaire, a handbook on electronic services for USQ students, the CoSy User's Guide, the CoSy400 Manual, two software diskettes (IBM & Apple Macintosh)-CoSy400, and Kermit terminal emulation for MS-DOS were sent to the selected volunteers (see Figure 1).

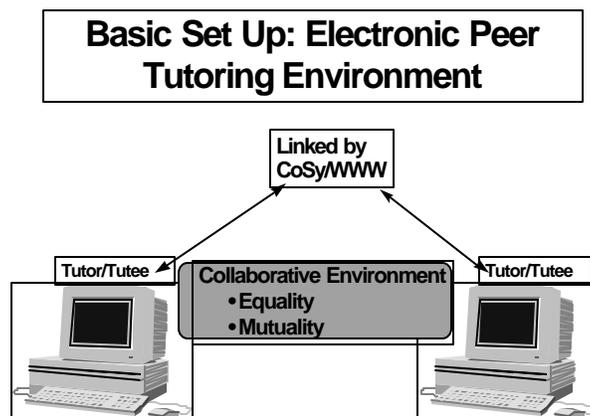


Figure 1. Electronic Peer-Tutoring Environment.

Training

The students, project team members, and staff of the Outreach section of the DE center at the university and the Information Technology Unit help desk underwent a 3-week training period. Everyone involved in the project trained on the use of the equipment and software for one week. In the process, they discovered and fixed all the bugs in the system and gained hands-on familiarization with the CMC environment to be used.

The Experiment

A pilot study was conducted during the first semester to trial the system. It enabled us to assess possible problems with the use of the model, software, and hardware, as well as with the involvement of all members of the project team and associated units of the university. It also provided a chance for students to get used to the new learning environment. Students became so familiar with the use of the CMC environment that we were confident that the project would not be unduly affected by insufficient technical competence.

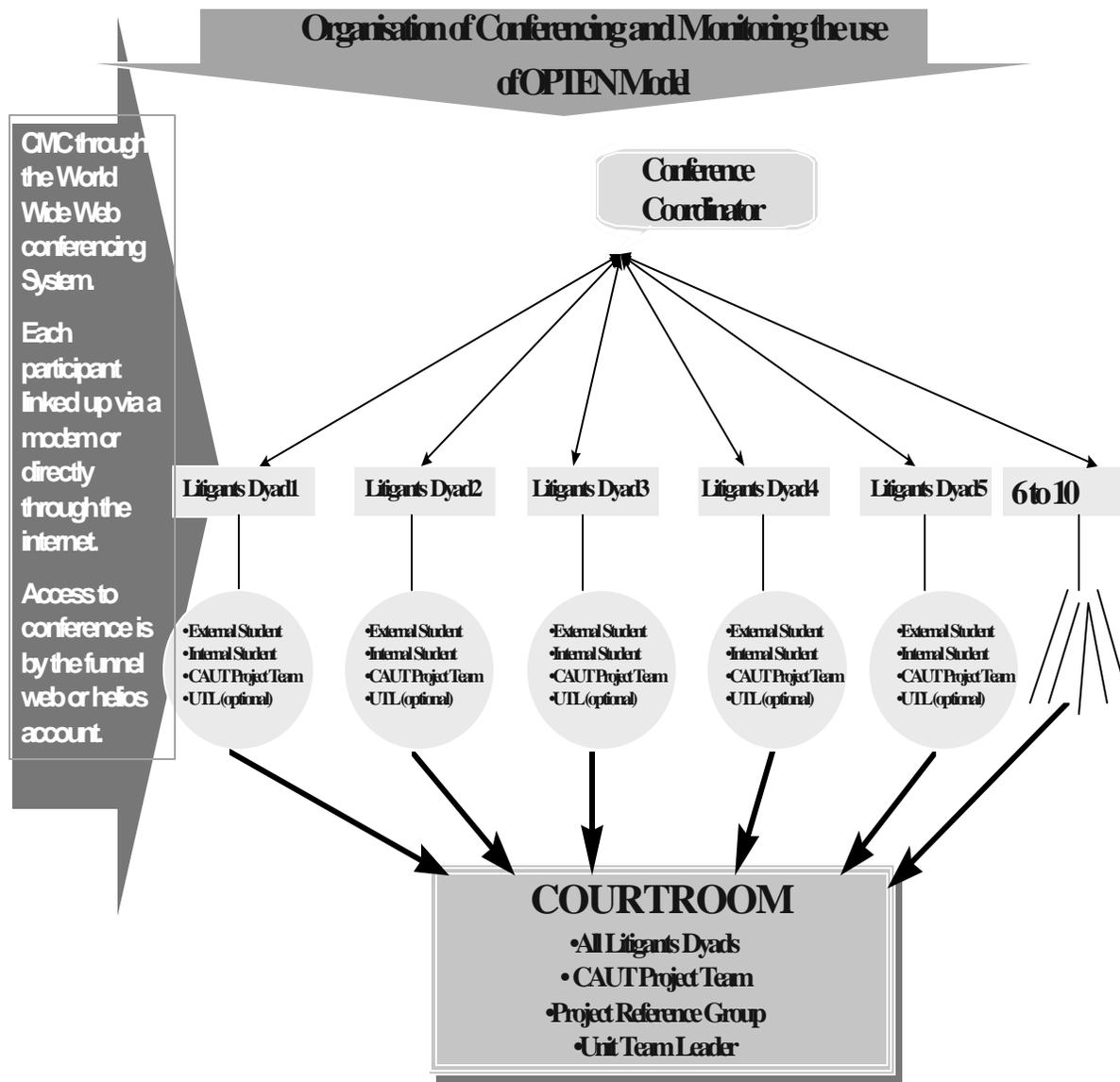


Figure 2. Conference Coordinator.

In phase 2, the negotiation and diagnosis stage, the tutor and the tutee negotiate the issues or problems to be discussed and search for specific difficulties. Following negotiation, the tutor and tutee should reach agreement on issues for discussion. Any difficulties encountered at the negotiation stage may necessitate returning to the previous phase of initiation and preparation to clarify issues for discussion.

Phase 3 involves the execution of mutual helping and the giving of explanations related to the agreed-upon issues for discussion. The execution phase is a stage of collaboration and communication in which meaning is constructed in order to facilitate a common understanding of the issue or problem.

The constant process of reflecting (i.e., phase 4), which is inherent in the OPTEN model, aims at making change and learning a self-generating and self-maintaining process. In this phase, the tutor and the tutee reflect on previous discussions in order to achieve a common understanding of their problems. The project was based upon a number of pedagogical principles established in the research literature as being effective and sound. First, improvement in achievement has been found in situations where students opt for tutoring by knowledgeable peers (Clement, 1990). Second, giving help by exchanging information in a non-threatening, collegial environment has been found to correlate positively with achievement (Webb, 1989). Third, the project was based on the theory of the cognitive effects of social interaction: Knowledge is socially constructed, and social interaction is necessary for effective and meaningful learning to occur (Piaget, 1970; Vygotsky, 1978). Fourth, recent findings confirm that peer tutoring facilitates group work without sustained loss of cognitive achievement in long-range conditions of problem-based learning experiences (Riggio et al., 1994; Sobral, 1994). Fifth, although the DE mentoring system has been found to be successful in workplace learning, its application to other instructional settings (e.g., formal schooling and tertiary education) is nonexistent. Sixth, the project was based upon the case for incorporating ideas from small workgroups and CS cooperative work.

The topics used for peer tutoring were Dispute Resolution, Judicial Process, Nature and Substance of Tort, Elements of Contract, Terms of Contract, Validity and Discharge of Contract, and The Law of Agency. The Internet conferencing system was used as the medium for running the peer-tutoring model for 7 weeks. An open and general discussion forum called The Courtroom was created to enable interaction between members of the dyads, lecturers teaching the unit, project team members, and other students studying the unit who were interested in the project.

The Courtroom was used primarily to seek the opinions and views of other members regarding some issues that were found to be problematic in the dyads, which lecturers wanted to field as catalysts for further discussion. It also served to answer any other queries students might have regarding the unit, the model, or the software.

Evaluation and Assessment

Several avenues and instruments were used to evaluate and assess the conduct and outcome of the project: project's reference group, electronic meeting of reference group and project team, monitoring by a legally qualified teaching assistant, monitoring by a research assistant, on-line questionnaire, on-line focus group interview, indirect evaluation of achievement, and learning outcomes through the end of unit tests and examinations.

Outcomes

The results of the project can be grouped into two categories: learning outcomes and practical outcomes. The learning outcomes include high-level learning; cost-effective alternatives to teletutorials; solutions to intellectual and social isolation; improved attitudes toward other students; improved interpersonal relations; and increased self-esteem of students, especially those studying by DE.

The practical outcomes include the validation of the efficacy of the prototype of the OPTEN model. The project revealed several key elements that must be used for organizing on-campus and off-campus students within a peer-tutoring environment. Finally, the project also provided an enhancement of the mixed-mode delivery of instruction in higher education.

Although the outcomes of the limited trial of the OPTEN model indicate its effective and successful use as an electronic tutoring system in peer-based instruction, I would caution that OPTEN requires further testing and validation for any meaningful conclusions to be drawn from its use and for its extensive adoption.

References

- Berndt, T. (1987). Conversation between friends: An appraisal of processes and theories. In J. Gewirtz & W. Kurtines (Eds.), Social instruction and moral development (pp.89-91). New York: Wiley.
- Bruffee, K. A. (1993). Collaborative learning: Higher education, interdependence, and the authority of knowledge. Baltimore: Johns Hopkins University Press.
- Clement, C. (1990). Cooperative support for computer work: A social perspective on empowering end users. Proceedings of the Conference on Computer-Supported Cooperative Work. New York: ACM, 1, 223-236.
- Cohen, M., & Riel, M. (1989). The effect of distant audiences on students' writing. American Educational Research Journal, 26, 143-159.
- Collis, B. A. (1993). Collaborative learning and work in an inter-networked context: Research Issues and perspectives, Paper presented at the IFIP Working Group Conference, Archamps, France.
- Crotty, T. (1994). Integrating distance learning activities to enhance teacher education toward the constructivist paradigm of teaching and learning. Proceedings of the Distance Learning Research Conference, 31-37. College Station, TX: Texas A & M University.
- Damon, W., & Phelps, E. (1989). Critical distinctions among three approaches to peer education. International Journal of Educational Research, 13(1), 9-19.
- Fantuzzo, J. W., King, J. A., & Heller, L. R. (1992). Effects of reciprocal peer tutoring on mathematics and school adjustment: A component analysis. Journal of Educational Psychology, 84, 331-339.
- Farivar, S. H., & Webb, N. M. (1994). Are your students prepared for group work? Middle School Journal, 25(3), 51-54.
- Fuchs, L. S., Fuchs, D., Bentz, J., Phillips, N. B., & Hamlett, C. L. (1994). The nature of student interaction during peer tutoring with and without prior training and experience. American Educational Research Journal, 31(1), 75-103.
- Garrison, R. (1993). Quality and access in distance education: Theoretical considerations. In D. Keegan (Ed.), Theoretical principles of distance education (pp. 9-21). New York: Routledge.
- Greenwood, C. R., Delquadri, J., & Hall, R. V. (1989). Longitudinal effects of classwide peer tutoring. Journal of Educational Psychology, 81, 371-383.

Hooper, S. (1994). Co-operative learning and computer based instruction. Educational Technology Research & Development, 40(3), 21-38.

Johnson, D. W., & Johnson, R. T. (1984). Co-operative small-group learning. Curriculum Report, 14, 12-18.

Johnson, D. W., & Johnson, R. T. (1986). Learning together and alone (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Jonassen, D. H. (1991). Objectivism versus constructivism: Do we need a new philosophical paradigm? Educational Technology Research and Development, 39(3), 5-14.

Martino, L. R. (1993). When students help students. Executive Educator, 15(1), 31-32.

McKellar, N. A. (1986). Behaviours used in peer tutoring. Journal of Experimental Education, 54, 163-168.

Palincsar, A. S., & Brown, A. L. (1984). The reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1(2), 117-175.

Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), Carmichael's manual of child psychology: Vol. 1 (3rd ed., pp. 703-732). New York: Wiley.

Riel, M. (1990). Cooperative learning across classroom in electronic learning circles. Instructional Science, 19, 445-466.

Riggio, R. E., Whatley, M. A., & Neale, P. (1994). Effects of student academic ability on cognitive gains using reciprocal peer tutoring. Journal of Social Behaviour and Personality, 9(3), 529-542.

Slavin, R. E. (1985). Team assisted individualisation: Combining cooperative learning and individualised instruction in mathematics. In R. E. Slavin, S. Sharan, S. Kagan, R. Hertz-Lazarowitz, N. Webb, & R. Schmuck (Eds.), Learning to cooperate, cooperating to learn (pp. 177-209). New York: Plenum.

Sobral, D. T. (1994). Peer tutoring and student outcomes in a problem-based course. Medical Education, 28(4), 284-289.

Vygotsky, L. S. (1978). Mind in society. Cambridge, MA: Harvard University Press.

Webb, N. M. (1989). Peer interaction and learning in small groups. International Journal of Educational Research, 31(1), 21-39.

Yager, S., Johnson, D. W., & Johnson, R. T. (1985). Oral discussion, group-to-individual transfer, and achievement in cooperative learning groups. Journal of Educational Psychology, 77, 60-66.

5. How to Initiate Intrinsic Motivation in the On-Line Student in Theory and Practice

Paul Kawachi
English Language Design Specialist & Editor
University Lecturer, Open & Distance Education Tutor
Kurume Shin-Ai Women's College
Kurume City, Japan
Email: paul@paulkawachi.com

Acknowledgement: *This review was undertaken during postgraduate studies at the Institute of Educational Technology, Open University, Milton Keynes, England. I thank Dr Fred Lockwood for reading an earlier draft.*

Abstract

This paper presents the four intrinsic and four extrinsic motivations to learn, making the case for there being social intrinsic motivation in on-line distance education (DE). Other taxonomies, along with negative motivations and ways to avoid them, are also discussed. The paper sets out the various ways to initiate on-line intrinsic motivation and the theoretical rationale behind each way, focusing on the three types, and their respective subtypes, of personal intrinsic motivation; challenge, fantasy, and curiosity. They are each related to the courseware and tutor interventions into specific individual and group learning interactions for how to motivate and retain the on-line student.

Background

Research into the approaches to studying now informs much of our theory and practice in tertiary teaching and learning (Kember & Leung, 1998). This research is closely related to the qualitative differences between the deep and surface approaches described by Marton and Säljö (1976a, 1976b). The deep approach derives from students exercising intrinsic rather than extrinsic motivation (Entwistle, 1979). The surface approach has since been associated with a low level of understanding (Fransson, 1977), poor quality learning, and weaker academic outcomes (Svensson, 1977). The surface approach has also been related to overload (see Chambers, 1994), slowing down, and dropping out (Rowntree, 1992; Sherry, 1996).

Consequently, open education (OE) and DE are much concerned with nurturing a deep approach through identifying potential factors and enhancing these factors. However, less attention has been paid to the primary seeding of a deep approach and intrinsic motivation in students. Some students, particularly those in Japan, may be culturally predisposed to or, through overload, at risk to adopting a less-desirable surface approach in their studying (Kawachi, 1999, 2000a, 2000b). These students, as well as others in Southeast Asia with similar educational background, could benefit from measures to initiate the intrinsic motivations and a deep approach.

Introduction

It is generally accepted that “teaching exerts its influence on [learning] achievement through students' motivational processes, which can be controlled directly by the student as well as by the teacher or other people and factors” (Wittrock, 1986a, p. 306). Students can take control, and their tutors can help them take control and become highly motivated to learn if they understand and attribute their learning success or failure to their own effort or lack of it.

Students' motivations to learn may be intrinsic or extrinsic. The current concepts of the various intrinsic and extrinsic motivations to studying derive from the definitions of four educational orientations reported by Gibbs, Morgan, and Taylor in 1984 (almost twenty years ago) based on student survey data from about 40 years ago. Those students were in traditional face-to-face education, so the transmissibility of these concepts to DE, computer-mediated communication (CMC), and virtual classrooms has not yet been validated.

Gibbs et al. (1984) quoted from Taylor's unpublished 1983 doctoral dissertation the discovery of four types of educational orientation - vocational, academic, personal, and social - by Clark and Trow in 1966, that Taylor had divided “into two sub-types according to whether the students were directly interested in the content of the course or whether they were studying the course merely as a means to an end. These sub-types were labeled intrinsic and extrinsic, respectively” (ibid, p. 170). These are given in Table 1.

TABLE 1: The Motivations to Learn

MOTIVATION		COVERAGE
1 Vocational	Extrinsic Intrinsic	Seeking qualification for a better job Acquiring skills for own future desires
2 Academic	Extrinsic Intrinsic	Want to pass exams, get good grades Pursuing own intellectual interests
3 Personal	Extrinsic Intrinsic	Prove one’s capability to others Desire for self improvement
4 Social	Extrinsic * Intrinsic	Extracurricular sports, club activities *Only in online education – Discussed in this paper

There are other taxonomies of the motivations to learn. With respect to adult continuing education, Boshier and Collins (1985, as cited in Deshler, 1996) proposed six adult motivations to learning; social contact, social stimulation, professional advancement, community service, external expectations, and cognitive interest. These can all be subsumed under the categories identified by Gibbs et al. (1984).

A quite different taxonomy was presented by Dörnyei (1994; see Table 2), who proposed that motivations be categorized as being at a content, learner, or situational level. These levels can be correlated to the motivations identified by Gibbs et al. (1984).

TABLE 2: Dörnyei’s Levels of Motivation

Dörnyei’s (1994, p. 280) LEVELS	COVERAGE	Correlated to MOTIVATIONS
1 Subject / Content Level	Culture, community, usefulness of subject	Extrinsic social, academic, and vocational

2 Learner Level	Student's individual characteristics and cognitive aspects	Extrinsic personal, Intrinsic social, vocational, & academic
3 Situation Level	Courseware, tutor, group dynamics	Intrinsic personal, Intrinsic social, vocational, & academic

Since first identified by Atkinson (1964), 'achievement' motivation has been broadly used (see Wittrock, 1986b), but it should now be clear that achievement theory is not sufficient to explain the complexity of all the motivations to learn, which are better treated more specifically. For example, there is an 'effectiveness' motivation, outside of achievement theory, through which the student is driven to repeat a past achievement to improve in speed, to develop performance efficacy, to routinize or make automatic, or simply to enjoy exercising the skill or cognitive procedure (Harter, 1978; McLaughlin, 1987 ; Williams & Burden, 1997). Effectiveness, sometimes termed 'effectance' motivation, is subsumed under self-improvement through personal intrinsic (challenge) motivation. In on-line education, effectiveness motivation offers a clear rationale for the practice and routinization of e-mailing, prior to the students focusing later on courseware collaborative interactivities.

In summary, Gibbs et al.'s (1984) taxonomy offers the most complete comprehensive framework for discussing on-line motivations to learn, provided that we accept and add the existence of a social intrinsic motivation to on-line education. In early studies in conventional education, Gibbs et al. identified only an extrinsic subtype of social orientation when they stated that "social orientation appears to be extrinsic almost by definition as it cannot be related to the course itself" (p. 177). In 1983, Taylor related the social motivation to extracurricular club and sports activities (as cited in Gibbs et al., 1984). A social dimension (probably intrinsic) was later recognized by Morgan (1993) as a motivation in such face-to-face components as group tutorials or residential weekends of correspondence or OE learning courses. As with the other motivations, social motivation has not yet been identified within a group of individuals who interact and learn in a virtual space provided through CMC technology.

Recently, Wegerif (1998) reported the educational need for building a sense of community in asynchronous on-line learning. This suggests that there might be a social aspect to the motivation of an individual studying on-line. It should be noted that the utilization of the virtual 'coffee-shop chat room' (Phillips, 1990) appears to be satisfying the virtual extrinsic (outside of the course content) social motivation of the students - that reduces feelings of isolation, and that may also be involved in developing a community of learning. However, student perceived learning and course satisfaction

have been related more to the amount of information received (satisfying intrinsic motivations) than to on-line rapport with tutors and other students (Walker & Hackman, 1992). Indeed, in an objective study of the quality of learning, Boling and Robinson (1999) found that students enjoyed their DE learning experience most when the on-line lecture was supplemented by CMC video conferencing with other students - more than when supplemented by face-to-face cooperative group discussion, and more than when supplemented by only individual study (the control). However, through testing, their students showed the most learning after the face-to-face group discussion. This indicated that the level of student enjoyment or satisfaction cannot be equated automatically with better quality learning (in other words, that there is some trade-off between them), and that social motivations might therefore not be the most successful in terms of the achieved quality of learning.

Considering any difference(s) between intrinsic and extrinsic motivations, intrinsic motivation appears to be more robust and is more related to deep quality learning, in which knowledge is cognitively reconstructed for personal meaning and is long lasting. For example, the novelty effect is a personal intrinsic motivation based on sensory or technological curiosity and occurs widely and reliably, even in technological illiterates. On the other hand, the interviewer effect, acquiescence effect and Hawthorne effect are personal extrinsic motivations, and have a weak reliability in each individual and are less robust. Depending on each student's personal history, these effects could easily and suddenly change to become negative, especially if students are 'chosen' repeatedly for mundane interviews, questionnaires, or other tasks. (In this respect, we are reminded to keep our questionnaires to students to less than 100 pages if we seek to maintain their complicity.)

It should be noted that the technological aspect could elicit an extrinsic personal motivation, as well as an intrinsic one. However, the extrinsic motivation to prove one's worth to others is fragile and easily reversed by emergent anxiety or frustration with the pertinent technology. To prove one's capabilities to oneself, on the other hand, is discussed later under personal intrinsic challenge. When shared by all members in a group acting as one, without extrinsic competition to prove oneself to others in the group, this personal intrinsic challenge drives group cooperative learning. In such a group of students mutually empathetic with each other, emergent anxiety and frustration with the technology (Hara & Kling, 2000) become a common binding force that can unify them into an educationally desirable community of learning (Feenberg, 1993).

There are also negative intrinsic and extrinsic motivations to learn. For example an over-praised or high-achieving student deliberately tries to learn less or in a known undesirable surface approach (Lepper & Hoddell, 1989). Some students do not want to appear to know more than the other students in their group (Duppenthaler et al., 1989). A student with prior negative learning experiences can become motivated not to achieve by demonstrating a negative-achievement motivation (Rollett, 1987). 'Learned helplessness' (Dweck & Wortman, 1982) is also a negative motivation, in which a student feels so lacking in control over what happens to herself that she avoids re-engaging (there is a gender bias here).

The treatment for most negative motivations is for tutors to stop the teacher-centered instruction, re-elicite the students' own needs and wants, and renegotiate achievable goals. 'Attribution retraining' is effective in converting students from learned helplessness (Wittrock, 1986a) to the belief that success or failure should be attributed to effort, or lack of it, rather than due to aptitude or ability. Attributing prior failure to task difficulty (as in 'self-worth motivation' theory for children [Covington, 1992; Craske, 1988]) is not effective for adults: attribution must be to the students' efforts, and separately difficulty must be renegotiated into achievable stages.

It should be kept in mind by the DE provider that the adult prioritizes among various choices that are competing for time and effort. Having initiated intrinsic motivations, the adult has all the more a range of motivations or reasons for studying, some stronger than others, and each varying according to each learning task and interactivity. Although the adult-student may be motivated to engage in an on-line debate activity (driven by intrinsic fantasy) for future usefulness, the student might not engage and might prefer instead to put the time and effort into rewriting an assignment (driven by intrinsic curiosity) motivated by complexity revealed in tutor feedback.

The DE student who despite all initiating interventions continues to show poor aptitude begins a downward slide towards dropping out and failure. If the decision to give up is not sudden but gradually develops from a self-awareness of poor aptitude, a process of failure becomes evident.

Poor aptitude can be due to one or more factors. The educational factors include insufficient life experience or insufficient language skills required as the medium for interactions. Language skills include the competence to chose appropriate language for use in the technological media in interactions, as well as reading and assimilation speeds reading onscreen, which are different (O'Hara & Sellen, 1997) from reading off-screen printouts or textbooks (Kawachi, 2000a). Another determinant may be insufficient proficiency in technological skills required for competence in interactions. Other factors that may exist outside of the individual include various institutional and cultural barriers (Narita, 1999): social, economic, and political.

The on-line tutor has a tremendous arsenal of powerful and effective psychological techniques that can initiate intrinsic motivation and persuade students to continue studying. The failing student, however, is consuming an increasingly disproportionate amount of the on-line tutor's time and effort. These are valuable resources and not unlimited in supply. All students pay a fairly equivalent amount of money to receive educational services, which do include extra support services in case of individual need when struggling or beginning the process towards failure. Money is a complicated issue, not least because on-line DE students can hail from faraway places that may have a higher cost of living, or they may be experiencing some economic hardship. Support services are provided in the first instance by the on-line tutor. At some point, the tutor cannot cope, and the student must be allowed to drop out and fail.

Methods : How to Initiate Each of the Four Intrinsic Motivations

Concerning the various motivations to learn, the largest and most rapidly expanding purpose for continuing education is vocational (Duke, 1996). Adult learners are known to choose vocational learning more than any other type of learning. Thus, they are generally already intrinsically motivated vocationally (Wlodkowski, 1999). Initiating vocational intrinsic motivation is therefore of narrow concern here and is reviewed only briefly along with initiating academic intrinsic motivation.

Vocational intrinsic motivation (acquiring skills relevant to one's own future desires) and academic intrinsic motivation (pursuing one's own intellectual interests) can be initiated through the 'expressiveness' of the on-line tutor giving vicarious experience of relevance to the student (Hodgson, 1997). G. A. Brown (1987) identified expressiveness as one of the two key qualities of a lecturer in the face-to-face transmission process, with the other key quality being clarity. Brown defined expressiveness as consisting of enthusiasm, friendliness, humour, dynamism, and charisma. The teacher conveying expressiveness has been correlated with students' higher academic grades (Abrami, Leventhal, & Perry, 1982) through influencing students' responses to the teacher and through influencing students' attitudes toward the subject, both of which are important avowed long-term aims of the educative process. The vicarious experience is received relevance of an example or illustration (rather than an underlying issue) pertinent to the student's own life (seeding vocational intrinsic motivation), or is transfer of the student's mind to see the particular subject through the tutor's eyes to experience the tutor's own passion towards the subject (seeding academic intrinsic motivation). This tutor expressiveness for initiating vicarious experience in the student has been described by Thorpe (1999) and Gunawardena and Zittle (1998) as the tutor's emotional presence or on-line 'social presence'.

In the case of virtual learning, there may be effective social intrinsic motivation. Where students are separated from each other, and where students meet only on-line inside a virtual classroom, then subsequent group learning interactivities are so important and so significantly desirable that we must now consider on-line education as having the potential for initiating a social intrinsic motivation.

A major factor in DE related to the student not succeeding to learn has been the individual student feeling isolated, without other students to turn to for support (Abrahamson, 1998; K. M. Brown, 1996; Twigg, 1996). However, in on-line education, there is an opportunity for students to develop a sense of belonging to a group. This potential is facilitated by CMC technology that allows for student-to-student paired interactions and by the course designers building in opportunities for student-to-other-students interactions within the group. Wegerif (1998) stressed the importance of this social aspect to on-line learning: he reported the necessity of developing a sense of community to enable effective learning to take place, in which the individual, initially as an outsider, develops a self-identity as an insider within the group. Feelings of inclusion, in which the student feels a mutual sense of care and respect with others students in a

learning community, are a necessary condition for intrinsic motivation to learn (Wlodkowski, 1999). An effective sense of community can be co-constructed by the tutor negotiating 'netiquette' and rules for future on-line interactions.

Among vocational, academic, personal, and social motivations, personal intrinsic motivation may be educationally the most effective and most desirable. Personal intrinsic motivation is fuelled by the student's desire towards self-improvement (whereas extrinsic personal motivation is the need to prove one's capability to others). According to Piaget, for a student learning alone as an individual, there are three types of personal intrinsic motivation; - challenge (the will to achieve mastery); curiosity (choosing the most informative rewarding context); and fantasy (assimilating the given information using schema from other contexts) (Furth, 1970), and these have been identified in popular computer games (Malone, 1981). The courseware and tutor activities for initiating each of these (with a focus on their respective subtypes) are next discussed in more detail.

To initiate intrinsic personal challenge motivation, the objectives specifying what the student will be able to do, or do better, as a result from learning should be stated explicitly at the outset (Rowntree, 1994). (These objectives could be discovered during the early stages of the course and then agreed upon through negotiations with the student.) Since these objectives need to be personally meaningful to the student, the student's own context should be elicited and involved, or one which the student can sufficiently relate to and identify with. While objectives in the early stages of a course may be fixed in order to assure course quality, objectives or goals in the later stages may be emergent : that is, they may develop from the student's interactions with the early content and are moderated by the tutor (as may be the case for an externally examined thesis). This close monitoring with frequent and timely feedback from the tutor as guide and moderator tailors the difficulty level to fit the student who might otherwise challenge an overly ambitious and thus unattainable goal. (As well as moderating the difficulty level for 'challenge' in emergent goals, feedback also tailors the complexity for 'curiosity', which is discussed later in this chapter.) An emergent goal could involve the student disseminating and publishing his or her own research findings in a suitable forum of appropriate difficulty level advised by the tutor.

In cases where the course is pre-designed and prepackaged, and where there is low interactional dialogue provided between the student and the tutor, then multiple levels of difficulty must be offered, from which the student can choose in order to assure that the difficulty level of the learning task is at an optimal level for each student. Individual choice is necessary here to self-protect against loss of self-esteem and to stimulate growth in self-esteem through self-tailored achievable successes (Weiner, 1992). Moreover, multiple levels of difficulty would accommodate the diversity among a range of students.

With respect to personal fantasy motivation, education is generally concerned with only intrinsic fantasy – that is, fantasy in which the student's activity brings about the learning

objectives - rather than with extrinsic fantasy in which the result is outside the course content.

To initiate intrinsic fantasy, the courseware must show how the learning or skills achieved in the unauthentic experienced schema (the fantasy) can be applied in positive transfer (Perkins & Solomon, 1996) to the student's advantage in new contexts in the student's current or future potential real-world. This translates to a need for the course designer to share with the student(s) the rationale for each activity (for example, explaining that this is the rationale for students to participate in a non-authentic group on-line debate). Providing a rationale is especially important in the case of isolated DE students who do not yet have a fully developed context in which to immediately test out and apply the learning achieved by the activity.

Also, in the case of faraway students, their context for learning (for constructing personal meaning with the content materials) can be considerably different from that envisioned by the course designers. No initiation of intrinsic fantasy - a lack in the perceived relevance of the learning task or a very low ratio of perceived-benefit-to-expended-effort - can lead to the student slowing down or dropping out (Rowntree, 1992; Sherry, 1996). To initiate personal fantasy intrinsic motivation, faraway students' needs must be elicited and integrated at the outset and during the course for courseware quality assurance. The elements in the learning activity that are to be transferred must (Perkins & Solomon, 1996) be identical to those in the new (fantasized) context, if this motivation is to occur.

With respect to intrinsic personal curiosity motivation, there are two subtypes; sensory curiosity and cognitive curiosity (Malone, 1981). To initiate sensory curiosity, the educational designer should utilize the audio and visual potential of the technological media. In print form, this involves page design with a careful balance of text and images. In CMC, audio can be added to interactive graphics on Web pages. Some major Western education providers have adopted theme music as background audio to their Web sites; other major providers are silent. The audio and visual potential of technological media includes the use of prerecorded audiocassettes and videocassettes and of audiovisual CD-Roms (Kirkwood, 1994). These media can initiate sensory curiosity. Seeing or hearing DE tutors can be extremely intrinsically motivating for those students whose preferred learning style is field dependent. Some DE learning software, such as CUSeeMe, adopt synchronous visual potential, which has been found to be intrinsically motivating (unpublished personal data). It should also be remembered that seeing and hearing the tutor can also help to convey the 'expressiveness' of the tutor (or other relevant persons, for example in a video clip of a famous professor in cross-reference with the courseware) to initiate academic intrinsic motivation. However, non-native speakers may find that audio and video media decrease their ratio of perceived-benefit-to-expended-time (Kawachi, 2000a).

To initiate cognitive curiosity, feedback from the tutor to the student should reveal an outcome from the student's thinking unforeseen by the student that cognitively surprises the student and which on self-reflection can be accepted by the student. In this self-

reflection, the student accepts that his or her own knowledge structure was incomplete or perhaps inconsistent. The tutor's feedback is tailored for each individual student to the student's cognitive profile to reveal inconsistency and to facilitate how the student might move to improve his or her understanding. The educational feedback must be constructive and should be informational (Feuerstein et al., 1991) to help the student perform current and subsequent tasks with a greater degree of independence. This technique systematically to expose gaps in learning and then to facilitate reparative further learning has been identified as an important tutoring strategy by Collins and Stevens (1981). The theory behind having tutors tailor questions individually for each student to discover a deeper understanding by using increasingly deeper complexity is closely related to Bruner's spiral curriculum and his concepts of constructivist learning (Bruner, 1966).

Occasionally, DE students want or would have liked to see at the outset of the task, samples of an assignment to gauge the product quality required. Indeed, acculturation of new students into the formal culture of the academic discourse could be facilitated, for example, by providing access to archived transcripts of on-line learning interactions. The invisible danger here is that although the objectives are clarified in terms of difficulty levels for challenge, the degree of complexity may also be disclosed by archived on-line tutor interactions or by access to the best (adequate in terms of complexity) assignment samples. The curiosity of the new student cannot then be initiated by tutor feedback on complexity. Face-to-face teachers and on-line tutors alike should be aware that revealing the required complexity in addition to showing the difficulty levels during the early presentation of the learning objectives lays waste to the potential of later feedback on complexity for initiating intrinsic curiosity motivation.

Summary

This chapter has provided a comprehensive though thin coverage of the current State-of-the-Art with respect to what we are currently doing to initiate intrinsic motivation in students engaged in open and DE courses.

With respect to there being a social intrinsic motivation, evidence has been presented for this new motivation to exist in on-line learning.

The three major categories of personal intrinsic motivation first identified by Piaget – of challenge, fantasy, and curiosity - were investigated in turn and ways to initiate them were highlighted. In summary, personal intrinsic challenge requires pre-task presentation of fixed learning objectives or the early negotiation of these with each student, or close moderating by the tutor in the case of emergent objectives. Personal intrinsic fantasy pre-requires the course designer to convey explicitly the rationale for any course group activity (such as non-authentic on-line debate). And personal intrinsic curiosity can be initiated through the senses utilizing audio and video multimedia technology, or cognitively through receiving measured feedback by the tutor to reveal

deeper complexity hitherto unforeseen by the student and to facilitate how the student might proceed to deeper understanding.

Besides discussing how to initiate intrinsic motivation, this chapter has also dealt with sustaining intrinsic motivation (for example, through tutor feedback to reveal complexity), with retaining the on-line student, and with converting from negative motivations to learning. A thicker coverage should include more examples and vignettes for readers to draw parallels to their own practice. Here, the theory behind various practices has been given, and this should serve to inform and improve current practice. Moreover, it is premature to say whether all the practices for initiating intrinsic motivations described here are undertaken yet by all open and DE providers. Accordingly, most education providers may find one or more of these practices yet to be implemented in their context, and the theoretical basis with detailed references to the literature for these practices given here should promote their wider adoption.

References

Abrahamson, C. E. (1998). Issues in interactive communication in distance communication. College Student Journal, 32(1), 33-43.

Abrami, P. C., Leventhal, L., & Perry, R. P. (1982). Educational seduction. Review of Educational Research, 52, 446-464.

Atkinson, J. W. (1964). An introduction to motivation. Princeton, NJ: van Nostrand.

Boling, N. C., & Robinson, D. H. (1999). Individual study, interactive multimedia, or cooperative learning: Which activity best supplements lecture-based distance education? Journal of Educational Psychology, 91(1), 169-174.

Brown, G. A. (1987). Higher education: Lectures and lecturing. In M. J. Dunkin (Ed.), International encyclopedia of teaching and teacher education (pp. 284-288). Oxford: Pergamon.

Brown, K. M. (1996). The role of internal and external factors in the discontinuation of off-campus students. Distance Education, 17(1), 44-71.

Bruner, J. S. (1966). Toward a theory of instruction. Cambridge, MA: Belknap - Harvard University Press.

Chambers, E. (1994). Assessing learner workload. In F. Lockwood (Ed.), Materials production in open and distance learning (pp. 103-111). London: Sage.

Clark, B. R., & Trow, M. (1966). The organizational context. In T. M. Newcombe, & E. K. Wilson (Eds.), College peer groups. Chicago, IL: Aldine.

Collins, A., & Stevens, A. L. (1981). Goals and strategies of inquiry for teachers. In R. Glaser (Ed.), Advances in instructional technology 2. Hillsdale, NJ: Lawrence Erlbaum.

Covington, M. V. (1992). Making the grade: a self-worth perspective on motivation and school reform. Cambridge: Cambridge University Press.

Craske, M. L. (1988). Learned helplessness, self-worth motivation and attribution re-training for primary school children. British Journal of Educational Psychology, 58, 152-164.

Deshler, D. (1996). Participation: Role of motivation. In A. C. Tuijnman (Ed.), International encyclopedia of adult education and training (2nd ed., pp. 570-575). Oxford: Pergamon Elsevier.

Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. Modern Language Journal, 78(3), 273-284.

Duke, C. (1996). Adult tertiary education. In A. C. Tuijnman (Ed.), International encyclopedia of adult education and training (2nd ed., pp. 627-631). Oxford: Pergamon Elsevier.

Duppenthaler, C., Viswat, L., & Onaka, N. (1989). Learning strategies of Japanese learners of English. In V. Bickley (Ed.), Language teaching and learning styles within and across cultures (pp. 90-99). Hong Kong: Institute of Language in Education.

Dweck, C. S., & Wortman, C. B. (1982). Learned helplessness, anxiety and achievement motivation. In H. W. Krohne & L. Lanx (Eds.), Achievement, stress and anxiety. London: Hemisphere Books.

Entwistle, N. J. (1979). Motivation, styles of learning and the academic environment. Edinburgh: University of Edinburgh Press. (ERIC Document Reproduction Service No. ED 190 636).

Feenberg, A. (1993). Building a global network: The WBSI experience. In L. Harasim (Ed.), Global Networks. Retrieved from the World Wide Web: <http://www-rohan.sdsu/faculty/feenberg/wbsi3.htm>.

Feuerstein, R., Klein, P. S., & Tannenbaum, A. J. (1991). Mediated learning experience: Theoretical, psychological and learning implications. London: Freund.

Fransson, A. (1977). On qualitative differences in learning: IV effects of intrinsic motivation and extrinsic test anxiety on process and outcome. British Journal of Educational Psychology, 47, 244-257.

Furth, H. G. (1970). Piaget for teachers. Englewood Cliffs, NJ: Prentice-Hall.

Gibbs, G., Morgan, A., & Taylor, E. (1984). The world of the learner. In F. Marton, D. Hounsell, & N. J. Entwistle (Eds.), The experience of learning (pp. 165-188). Edinburgh: Scottish Academic Press.

Gunawardena, C. N., & Zittle, R. H. (1998). Faculty development programmes in distance education in American higher education. In C. Latchem, & F. Lockwood (Eds.), Staff development in open and flexible learning (pp. 105-114). London: Routledge.

Hara, N., & Kling, R. (2000). Students' distress with a Web-based distance education course: an ethnographic study of participants' experiences. Information, communication & society. Retrieved Aug/15/2001 from the World Wide Web: <http://www.slis.indiana.edu/CSI/wp00-01.html>.

Harter, S. (1978). Effectance motivation reconsidered: toward a developmental model. Human Development, 1, 34-64.

Hodgson, V. (1997). Lectures and the experience of relevance. In F. Marton, D. Hounsell, & N J. Entwistle (Eds.), The experience of learning (2nd ed., pp. 159-171). Edinburgh: Scottish Academic Press.

Kawachi, P. (1999). Language curriculum change for globalisation. Paper presented at the 34th annual RELC Seminar, Singapore.

Kawachi, P. (2000a). Why the sun doesn't rise: The impact of language on the participation of Japanese students in global online education. Unpublished MA ODE Dissertation, Open University, Milton Keynes, UK.

Kawachi, P. (2000b). The interactions between personality and cultural differences among learners in global distance education. Indian Journal of Open Learning, 9(1), 41-62.

Kember, D., & Leung, D. Y-P. (1998). The dimensionality of approaches to learning: An investigation with confirmatory factor analysis on the structure of the SPQ and LPQ. British Journal of Educational Psychology, 68(3), 395-407.

Kirkwood, A. (1994). Selection and use of media for open and distance learning. In F. Lockwood (Ed.), Materials production in open and distance learning (pp. 64-71). London: Paul Chapman Sage.

Lepper, M. R., & Hoddell, M. (1989). Intrinsic motivation in the classroom. In C. Ames & R. Ames (Eds.), Research on motivation in education: Vol. 3. Goals and cognitions. London: Academic Press.

Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. Cognitive Science, 4, 333-369.

Marton, F., & Säljö, R. (1976a). On qualitative differences in learning, I: Outcome and process. British Journal of Educational Psychology, 46, 4-11.

Marton, F., & Säljö, R. (1976b). On qualitative differences in learning, II: Outcome as a function of the learner's conception of the task. British Journal of Educational Psychology, 46, 115-127.

McLaughlin, B. (1987). Theories of second-language learning. London: Edward Arnold.

Morgan, A. (1993). Improving your students' learning: Reflections on the experience of study. London: Kogan Page.

Narita, M. (1999). Barriers for educational use of the Internet in Japanese higher education. Paper presented at NIME International Symposium 1999. Retrieved Aug/15/2001 from the World Wide Web: <http://www.nime.ac.jp/conf99/pre/Narita-Masahiro.paper/Narita-Masahiro.html>.

O'Hara, K., & Sellen, A. (1997). A comparison of reading paper and on-line documents. Paper presented to ACM's Computer-Human Interface Conference 1997. Retrieved Aug/15/2001 from the World Wide Web: <http://www.acm.org/sigchi/chi97/proceedings/paper/koh.htm>.

Perkins, D. N., & Solomon, G. (1996). Learning transfer. In A. C. Tuijnman (Ed.), International encyclopedia of adult education and training (2nd ed., pp. 422-427). New York: Pergamon.

Phillips, C. (1990). Making friends in the 'electronic student lounge.' Distance Education: An International Journal, 11(2).

Rollett, B. A. (1987). Effort-avoidance and learning. In E. DeCorte, H. Lodewijks, R. Parmentier, & P. Span (Eds.), Learning and instruction: European research in an international context 1, Leuven, Belgium: Pergamon.

Rowntree, D. (1992). Teaching through self-instruction: How to develop open learning materials (Rev. ed.). London: Kogan Page.

Rowntree, D. (1994). Preparing materials for open, distance and flexible learning: An action guide for teachers and trainers. London: Kogan Page.

Sherry, L. (1996). Issues in distance learning. International Journal of Educational Telecommunications, 1(4), 337-365. Retrieved Aug/15/2001 from the World Wide Web: <http://www.cudenver.edu/~lsherry/pubs/issues.html>.

Svensson, L. (1977). On qualitative differences in learning: III - study skill and learning, in the symposium: Learning processes and strategies - III. British Journal of Educational Psychology, 47, 233-243.

Thorpe, M. (1999). Learner support - planning for people and systems. Overview essay, h804 course guide block 3. Milton Keynes: UK Open University.

Twigg, C. A. (1996). Is technology a silver bullet? Educom Review 31(2), 28-29. Retrieved Aug/15/2001 from the World Wide Web: <http://www.educause.edu/pub/er/review/reviewArticles/31228.html>.

Walker, K., & Hackman, M. (1992). Multiple predictors of perceived learning and satisfaction: The importance of information transfer and non-verbal immediacy in the televised course. Distance Education: An International Journal, 13, (1).

Wegerif, R. (1998). The social dimension of asynchronous learning networks. Journal of Asynchronous Learning Networks 2(1). Retrieved Aug/15/2001 from the World Wide Web: http://ww.aln.org/alnweb/journal/vol2_issue1/wegerif.htm.

Weiner, B. (1992). Human motivation: metaphors, theories, and research. Thousand Oaks, CA: Sage.

Williams, M., & Burden, R. L. (1997). Psychology for language teachers: A social constructivist approach. Cambridge: Cambridge University Press.

Wittrock, M. C. (1986a). Students' thought processes. In M. C. Wittrock (Ed.), Handbook of research on teaching (3rd ed., pp. 297-314). New York: Macmillan.

Wittrock, M. C. (Ed.) (1986). Handbook of research on teaching (3rd ed.). New York: Macmillan.

Wlodkowski, R. J. (1999). Enhancing adult motivation to learn (Rev. ed.): A comprehensive guide for teaching all adults. San Francisco, CA: Jossey-Bass.

6. Retaining Adult Learners in a High-Stress Distance Education Learning Environment: The Purdue University Executive MBA in Agribusiness

*Jay Akridge, Luanna DeMay, Liza Braunlich, Mike Collura, and Mike Sheahan
Purdue University*

Email: akridge@agecon.purdue.edu (Jay Akridge)

Jay Akridge is Director of the EMBA in Agribusiness Program at Purdue University and a professor in the Department of Agricultural Economics at Purdue. Luanna DeMay is Program Manager. Liza Braunlich is Distance Education Specialist and Mike Collura is Instructional Technology Specialist, all with the EMBA in Agribusiness Program. Mike Sheahan is Associate Director, Krannert Executive Education Programs, at Purdue.

Abstract

The Purdue University Executive MBA in Agribusiness (Ag-EMBA) Program is an innovative joint master's degree program between Purdue's Krannert Graduate School of Management and its School of Agriculture. Spanning 2 years in four 5-month modules, Ag-EMBA is distinctive in that on-campus instruction is concentrated into 9 weeks of residency (30% of the total program content) spread over a 2-year period (a one-week orientation session, plus 2 weeks of residency every 6 months). Distance-delivered instruction accounts for 70% of the total program content. Students in the program average 37 years of age, hold significant positions in their firms, and travel extensively in their jobs. The program requires a commitment of 20 hours per week during the 20 weeks of distance instruction for each module. Given the pressure of their jobs, the need for a personal life, and the 20-hour commitment to their studies, student retention is a major issue in this program. To address the retention issue, three broad strategies have been developed and implemented: preparing a qualified group of learners to be successful in the program, implementing a delivery philosophy that is highly learner focused, and addressing the engagement of the learners at a much more personal level. This paper focuses on the first and third strategies but also reviews some of the key elements of the second strategy. The specific elements of each strategy are presented, and some insights for developing student retention strategies in distance education (DE) programs are offered.

Introduction

Retention of students is an issue in any institution of higher education today. However, programs involving distance education (DE) learning are likely to face even more challenging issues in retaining students from the time of initial enrollment through successful completion of a course of study. The types of challenges a DE program will face depend on the specific structure of the program. Some of these challenges are likely to include a requirement of more self-discipline on the part of the DE learner relative to a traditional learner; less personal contact between faculty and student, and between students; more immediate pressure from work or home, which may interrupt studies; frustrations with technology and teaching methods; a feeling of isolation and a lack of belongingness; and the sheer ease of dropping out relative to a more traditional course. Effective program design can help to manage most, if not all, of these issues. Therefore, it is imperative that the design of a DE program incorporate an explicit strategy to maximize student retention and avoid design flaws that lead to unacceptable dropout rates.

In this paper, we outline the learner retention strategy that has evolved for the Ag-EMBA Program. This Master's of Business Administration Program is aimed at professionals working in the food and agribusiness industries. About 70% of the total program content is delivered using DE learning methods. The students in the program find themselves under considerable stress as they attempt to balance intense work schedules, the need for a personal life, and 20 hours of study per week that the program requires. It is in this context that the retention strategy outlined here has evolved.

We are quite sure that many of the elements of this strategy are in place in other DE programs. At the same time, we hope that there are some unique elements that program administrators, faculty, and instructional designers will find useful in developing their own approaches to student retention. We first describe the program so that the context for the strategy is clear. Then we define the overriding principles we employ in the strategy and provide an overview of the three broad retention strategies. The remainder of the paper outlines the key elements of each strategy. We conclude with a few of the ideas we have for improving our own efforts in this area.

The Agribusiness EMBA Program

Ag-EMBA is an innovative joint master's degree between Purdue's Krannert Graduate School of Management and its School of Agriculture. This program is a cohort program: All participants in each class enter the program together, take a common set of courses together, and graduate together. Spanning 2 years in four 5-month modules, Ag-EMBA is distinctive in that on-campus instruction is concentrated into 9 weeks of residency (30% of the total program content) spread over the 2-year period (a 1-week orientation session, plus 2 weeks of on-campus residency every 6 months).

The use of DE instruction (70% of the total program content) allows the participants to pursue this degree at times they find the most convenient, while maintaining ongoing responsibilities to their respective organizations. An asynchronous, Internet-based model is employed, and an “anytime-anyplace” learning philosophy followed in the design of the DE portion of the program. Within a 2-week block of DE-delivered material, students have complete control as to when they work on assignments.

However, the program is not self-paced in that work must be completed within these 2-week blocks in order to move to the next topic with the cohort. A wide variety of tools are used by the 15 instructors in the program: voice-over PowerPoint lectures, discussion forums, video presentations delivered on CD, case study assignments, self-graded quizzes, animated spreadsheets, guest audio lectures, reading assignments, timed and untimed examinations, and a variety of written homework exercises, among other tools and approaches. Some of the work is individual; some of the work is done in teams.

Students in the program average 37 years of age, hold significant positions in their firms, and travel extensively in their jobs. The program requires a commitment of 20 hours per week during the 20 weeks of DE instruction for each module. Given the pressure of their jobs, the need for a personal life, and the 20-hour commitment to their studies, student retention is a major issue in this program.

Some Design Principles

Over the 4 years since this program was conceived, and building on the almost 20 years that the Krannert Graduate School of Management has been involved in DE, a series of basic principles have been identified as affecting student retention. We recognize that these principles could be a set of testable hypotheses for researchers in the education arena, so we offer them for what they are, namely, observations made after 4 years of intense effort to launch a new DE learning initiative in a high-stress learning environment:

1. Maintaining student retention starts with the right program for the target audience and the right target audience for the program.
2. Preparing qualified learners for success in the program is essential for retention.
3. Engaging coursework that students find valuable to their professional growth improves retention.
4. Utilizing an efficient, convenient, learner-focused course delivery system improves retention.

5. Receiving immediate, responsive support from staff and faculty reduces learner frustration and improves retention.
6. Discovering student problems early facilitates the development of solutions that may permit learners to remain in the program.
7. Being flexible in accommodating the work schedules and personal situations of students aids retention.
8. Developing close relationships between students and their peers, and students and staff, aids retention.

Although other principles could likely be added to the list, these eight items related to student retention have provided the foundation for the retention strategy we employ. With these basic principles in mind, we turn our attention to how they are implemented in practice.

Retention Strategy Overview

To address the retention issue, three broad strategies have been developed and implemented. The first strategy focuses on student selection and preparation. Without qualified students who are prepared to be successful, it is doubtful that other retention strategies will make much difference. The second strategy embraces a delivery philosophy that is highly learner focused. This learner focus keeps convenience and efficiency of the learning environment high and learner frustration low. The third broad strategy involves engaging the learners at a much more personal level. The notion here is that a close personal affiliation to their classmates, the program, and the university creates an emotional bond that improves retention. We review the elements of each strategy in turn.

The First Broad Strategy: Qualified, Prepared Learners

The first broad strategy addresses the first and second design principles. Student selection is absolutely essential in any DE retention strategy. Students with unrealistic expectations about the program or the workload, students not qualified for the program, or students qualified but not prepared are students at risk. Note that there is an element of symmetry here: Students must be right for the program, but the program must also be right for the students. Ultimately, adjustments must be made in the target audience or the program so that program and target audiences are aligned.

Some key elements of the strategy we use to help the right students get off to a strong start include the following:

- Clearly presenting the nature of the program and the time commitment required. Some students have unrealistic expectations, or perhaps no idea, what DE is or how it works. Advertisements that show people lounging in a field with their laptops while doing coursework do not help much. Finding 20 hours per week to devote to studies for a 35-year-old middle manager who has two children and is working 55+ hours per week is exceedingly difficult. We try to help students understand what life will be like in the program. One of the most effective ways we have found to do this is to put them in touch with current students.
- Utilizing admissions criteria developed around backgrounds that are likely to be successful in the program. Admissions standards must be consistent with the nature of the program. For this program, job responsibilities are an important dimension of the admissions criteria. There is a 5-year work experience requirement. Individuals with this much experience bring a valuable perspective to the program and make the cohort more valuable. In addition, they are more likely to find the course material relevant and engaging. However, work experience is not enough for an academically rigorous program; consequently, undergraduate grade point average, any graduate work, and the GMAT test score are used to assess academic preparation. Our aim is to admit individuals who can be successful in this program, not to admit anyone and let “survival of the fittest” take care of those with inadequate preparation.
- Introducing students to their classmates early, before the program starts. The period of time after admission and before the start of the program is a time when students can be lost for a number of reasons: enrolling in a competing program, second-guessing their decision, delaying entry for another year, and so on. As soon as students are admitted, they are given an URL address and a password to access their cohort group’s Web site. Here they will find additional information about the program, and they will find photos and background information about their future classmates. Once we have admitted students, we want them to feel from that moment on they are part of Ag-EMBA.
- Assessing areas where students have inadequate preparation and where additional preparation is required. As in many MBA programs, the quantitative areas such as statistics, finance, accounting, and economics are typically where students need the most remedial work. For the managers in this program, spreadsheet skills were one of the weakest areas. Trying to learn advanced spreadsheet skills and quantitative methods simultaneously is a very frustrating experience. A set of self-paced tutorials have been identified to help students build background in weak areas.
- Addressing technical readiness prior to program start. Students perform a “tech check” on their computers prior to the orientation session to surface any

problem areas such as corporate firewalls and software incompatibilities. This tech check developed by our staff lets students try to access all of the tools used in the DE portion of the program. Any problems are cataloged, and solutions are developed. As many of these technical issues as possible are taken care of before students come to campus for orientation.

- Holding a face-to-face orientation session where students meet each other and their faculty. This program starts with a 1-week, face-to-face orientation session. Some specific elements of the week are described later in this paper. From a preparation standpoint, this may be the most important element of the retention strategy. Expectations are reviewed, relationships are initiated, and technical issues are addressed. The goal for the week is for the students to leave excited about what they are embarking on and prepared to pursue the program successfully.
- Team building to encourage the group to get to know each other quickly. Study teams are an important element of the instructional and retention strategies. Students are assigned to teams that they work with across all courses in a module. These teams are rotated every module. Backgrounds are carefully considered when students are assigned to teams. These teams are part of group learning activities, but they also become support groups, providing encouragement when attitudes are low and peer assistance when students are struggling with course material. The team-building activity held during the orientation helps the cohort get started much more quickly than if the relationships were simply left to evolve on their own.
- Providing additional technical assistance during the residency. Additional technical assistance is provided during the orientation to insure that laptop computers are set up properly, the program's Web site can be accessed, and all DE-delivery tools are working. The goal is to insure that all the students are technically ready to work on the DE activities after they leave the orientation session.
- Demonstrating the DE process during the orientation. Every student knows what it is like to be in a traditional classroom, but almost none knows what it is like to be in a virtual classroom. Instructors do cover some material in a traditional manner during the orientation as they start their courses, but they also spend time demonstrating to the students how they will use DE tools, helping the students to understand how they will "take" the course once they leave campus.
- Answering student questions about the program. This is an ongoing activity of the residency session. One of the best ways we have found to do it is through a presentation made by a previous student who provides comments and answers questions about keys to success in the program. This presentation has helped address student questions from the perspective of someone who

has been through what they are getting ready to do. Also, it is very motivating for the students to hear and meet someone who has been successful in the program.

The Second Broad Strategy: Learner-Focused Course Delivery

The second broad strategy focuses on the development of a learner-centered course delivery system. This strategy addresses design principles 3 through 7. Addressing effective course design is beyond the scope of this paper, but students who find the courses valuable are certainly more likely to remain in the program than those who find little value.

Instructors who deliver relevant content, instructors who know how to motivate material, and instructors who create engaging learning experiences are the foundation of this process. Although course content and effective instructors are fundamental to program success, there are other elements of course design that are important to student retention. We highlight some of the key elements of this strategy:

- Engaging, on-line course resources. These resources include PowerPoint presentations, streaming audio clips, lectures in audio and text format, and self-tests available for download anytime. Our students have consistently reinforced the use of audio in DE delivery. At 11 p.m., when one is working through a challenging statistics problem, hearing the voice of the instructor talk through a difficult concept is very well received.
- Using on-line “virtual discussions forums.” This is a commonly used method in DE. When done well, discussion forums can create a very strong sense of community among students in the class, and they can help to build bonds between instructors and students.
- Coordinating assignments across courses. Students in this program take three courses at any one point in time. It is imperative that the total workload be managed across all three courses to respect the 20 hours per week we have asked students to devote to the program. This requires staff to work with faculty in coordinating workloads to avoid weeks where all three courses have major assignments due.
- Committing to continuous improvement and utilizing a carefully structured approach for collecting learner suggestions for such improvement. For this broad strategy of learner-centered course delivery, this element may be the most important. We evaluate the program at four distinct points in every module – the halfway point of the first off-campus block, at the residency, the halfway point of the second off-campus block, and at the end of the module. A “Town Meeting” is conducted during the residency, and students are free to discuss any element of the program. Given the evolving nature of DE-delivery

methods and the technology that supports it, a number of changes have been made in the program—some minor, some substantive—but all based on student and faculty feedback. Over time, the fact that we have been responsive is not lost on the students. Even though we cannot do everything that students suggest, we have responded to good ideas. As a result, students are very forthcoming with their suggestions. It is important to note that our focus here is delivery, not content. We cannot master the material for the students, and we are not talking about reducing course rigor. However, we can, and should, develop, maintain, and constantly improve the course delivery system in a manner that helps students to maximize the value of their scarce time resource, allowing them to focus on understanding the material, not wasting time on technology.

- Providing responsive support to student problems and issues. This element encompasses a number of initiatives: On-line help, extended hours for technical assistance, customer-oriented staff, and faculty who respond to e-mail messages within 24 hours are all part of reducing learner frustration. When students have a limited amount of time to devote to coursework, taking 3 days to get back to them on an issue is unacceptable.
- Constantly monitoring student engagement. In part, this is a faculty responsibility, but we also see this as a staff responsibility. If students start getting behind, corrective action must be taken quickly – a 3-week hiatus from this program means that a student is at least 60 hours behind. For students with full-time jobs, this lost time may well be impossible to make up. Ultimately, the responsibility here rests with the student, but detecting problems early, identifying issues, and exploring solutions can help to avoid a situation where a student is forced to drop out.
- Maintaining some degree of flexibility to accommodate the schedules of students. This is a challenging area for program administrators and faculty. Applying an iron rule to assignments and due dates works well with undergraduates; for the marketing manager who is required to take a 2-week trip to Malawi and Mozambique, and who will likely have limited, if any, Internet access, such intransigence may cause considerable frustration. Although it is critical that students communicate and use good judgment, it is also important to accommodate students' incredibly intense work schedules when necessary. Anytime this can be accomplished without comprising the quality standards of the program pays big dividends with respect to retention.

The Third Broad Strategy: Emotional Engagement

Individuals familiar with brand management in marketing or the principles of customer relationship management often talk about the emotional attachment an individual has for a brand or company. Here, we can talk about emotional engagement toward the

program and the institution. Qualified, prepared learners; great courses; and a learner-centered delivery system will likely have a major impact on retention. However, taking all of these elements further with an additional set of activities to build an emotional attachment to the program is the final retention strategy we employ. Some of the key elements in the third broad strategy include:

- Daily updates to the course Web site, which include motivational and humorous messages to encourage students to visit the site each day.
- Small personal touches, such as birthday cards mailed to students.
- Special events during residencies to allow students a more personal level of interaction with faculty and staff.
- Special reminders of their status as Purdue students. An example would be the Purdue football team's trip to the Rose Bowl in January 2001. Each student was mailed a Rose Bowl party kit complete with Purdue banners, streamers, football team information, microwave popcorn, and so on. The cost of this kit was minimal, but the response from the students and their families was extremely positive
- On-line links to Purdue University news, athletics, and campus life so that students can stay connected with what is going on at Purdue.
- A "Fun Facts" section on the Web site that presents information about faculty that has nothing to do with their academic training to help the students know their instructors on a more personal level.

Some may dismiss these ideas as frivolous and not part of a serious academic program. We disagree. Even though these students are at a distance, we want them to know that they are still Purdue University students working on a graduate degree in agribusiness management. These small touches help to build an emotional link and commitment to the university. When job or family pressures exert themselves, which will happen, we believe that students are less likely to drop a program they feel an emotional commitment to rather than one they do not. The other point that makes this area so appealing is that virtually all of these activities are very low cost. Being creative and staying alert for opportunities to build these emotional connections can go a long way to making this broad strategy an important component of an overall student retention strategy.

Some Future Ideas

To date, we have admitted 41 students to this new program. Currently, 34 are in the program. Of the 7 who have left, 3 were forced to drop out due to health or job reasons, but they are enrolling in the next class. Hence, we have lost a total of 4 students to date,

and 2 of them were lost when their firms sold their divisions and they lost their jobs. We do feel that the student retention strategy we are using is paying off with few dropouts and, just as importantly, very positive attitudes about the program from the students.

As we look to the future, we anticipate improvement in all three areas discussed previously. Continuous improvement is just that: continuous. Probably the greatest upside is in the course delivery area as technologies evolve and bandwidth improves. We will continue to explore DE delivery alternatives that allow us to serve highly motivated learners in a high-stress learning environment.

7. Practical Considerations on the Use of Message Boards to Enhance Learning in a University Setting

*Sharon H. Garrison
University of Arizona
Email: garrison@bpa.arizona.edu*

*Marina Onken
Loyola University New Orleans
Email: onken@onken.com*

Abstract

After a decade of combined teaching in online learning environments, the authors have come to appreciate the role message boards can play in enhancing learning. However, after years of observation and research, the authors have also come to realize that there are a number of shortcomings and inappropriate applications of message boards in university settings.

Practical Considerations on the Use of Message Boards

When an instructor plans an online course or even an in-class course that is heavily reliant on technology, there comes a time when the instructor must answer the questions, “How much is enough, and how much is too much?” Instructors have moved beyond first generation courses consisting of a syllabus, course policies, and the ‘sage on the stage’ (Gibson, 1996). Instructors are now becoming the ‘guide on the side’ (Gibson, 1996). They are building second and third generation online courses as interactive learning tools through the use of technology such as radio and television technologies, and most recently, computers, CDs, e-mail, chat rooms, bulletin boards, video conferencing, and audio conferencing (Eastman and Swift, 2001). Courses have moved beyond existing as just informational sources, and now have the potential to provide a richer learning environment for the student through the use of technology (Murphrey, 2001). However, the technology needs to be used judiciously.

At a time when it’s easy to include twirling logos, flashing announcements, and background music on a course web page, the temptation is to do exactly that. If the instructor gives in to temptation, he or she may wind up with an instructional page that is difficult to load and navigate. One lesson that should be obvious, but not easy to learn, is that unless there is a pedagogical reason for doing something, don’t do it.

Perhaps one of the best reasons to include technology in a course is to accomplish a shift from a teaching environment to one of a learning community (McKinnon and Nolan, 1999). Instead of the instructor feeding information to the class, the students play more significant roles as learners, learning not only from the instructor, but also from each other. The instructor then transitions into the role of a facilitator of learning and discussion. In addition, students are more likely to develop social, critical, and ethical literacy as a result of participating in an interactive learning community. If an instructor is developing a course with the goal of developing social, critical and ethical skills, then an interactive design is a good choice (Cook, 2000).

Businesses today want to emphasize problem-solving skills, team skills, interdisciplinary knowledge, information processing and a mastery of technology (Eastman and Swift, 2001). In a lecture-based classroom, students are tempted to become receivers of knowledge because of a lack of interactivity in the classroom. However, with interactive technologies that encourage discussion, and especially in a classroom environment in which technology makes it easier to learn, students develop skills for the workplace. In fact, developing these kinds of skills has become a minimum requirement in the workplace. Businesses expect these skills, and the student is often at a competitive disadvantage without them.

The Realities of Web Boards

When an instructor is designing a web page, certain pedagogical realities need to be kept in mind. One key is: “students learn best by doing, writing, discussing, or taking action, because active learning situations provide opportunities for students to test out what he or she have learned and how thoroughly he or she understand” (David, 1993). Using technology as a way to build interactivity into a course is one way that an instructor can use technology as a value-added component. However, the nature of the technology must be understood.

Message boards are examples of instructional tools that often are used inappropriately. Message boards can prove to be a superb asset to a course. He or she can personalize an online course, provide timely communication, and assist in the learning process. There are many reasons to not include a message board on a course web page. However, there are also a number of reasons to include message boards. Even if an instructor decides on a course message board, there are important considerations he or she must bear in mind. The following are important considerations to use when including a message board in pedagogy.

Trading Off Inappropriate Messages and Censorship

There is a tradeoff between broadcasting inappropriate student messages and censorship. In designing a course, instructors often forget that their students may use course resources in unacceptable ways. Over the years of observing course message boards, the authors of this article have read poorly spelled messages, messages with poor grammar, and poorly worded messages. They have also read sexist, racist, bigoted, hateful, and demeaning messages. Sadly, instructors must anticipate that in spite of best efforts, some students may still post offensive messages. Therefore, instructors must decide how much freedom they will allow students and what are the boundaries of that freedom.

One of the authors of this article had problems with distasteful messages on a course website. The first reaction was to devise a set of rules for message board participation. Eventually the list of rules grew to such a length that it became obvious that no one took the time to read the whole list, to say nothing of the fact that such prescriptive rules were themselves odious.

What instructors eventually decide to do must depend on the circumstances. What is appropriate for a theater class may not be appropriate for a religion class. What is appropriate in an undergraduate class may be unacceptable in a graduate class. Oftentimes in graduate classes, other students do an effective job of defining and maintaining standards. Instructors should also determine if the University has any policies governing message boards and then determine if their individual principles are in line with University policy.

In the end, instructors must realize that they probably cannot allow total student freedom, nor can they effectively police student expression. Some instructors will be comfortable with message boards in certain class situations, but decide to not even offer the option of a message board in others. Probably one of the best controls is to make sure that each message board participant has a registered log-in and password.

Message Boards Require Constant Monitoring

Message boards require constant monitoring by the supervising professor to provide timely feedback. Students often assume, either correctly or incorrectly, that course message boards are maintained and supervised by their instructor. They may pose questions to the instructor, expecting a quick answer. If questions are unanswered, or if questions linger too long, the course instructor looks inattentive at best and uncaring at worst. This may give the impression of not only the student posing the question, but to all participants on the message board.

If the instructor is not willing to monitor the message board *daily*, then he or she probably should not include a message board on the course web page. A message board requires a significant time commitment from both the instructor and the student. In addition, message boards become less effective when the instructors are working with very large classes (Cook, 2000).

Pedagogy Comes First

There should be a pedagogical reason for anything on a course web site. Some instructors include message boards “just because,” then grade students by their participation on the message board. This does nothing to enhance student learning, and often leads to resentment on the part of students.

The authors of this article in the past have observed some course web pages where students are instructed to post 14 messages to the message board during the semester. Some students post duplicate messages each time he or she log on, many just repeat the message of the previous student, and some even eventually post ludicrous messages just to comply with course procedures. There are better ways to evaluate student learning than just counting responses on message boards. The message board should be a convenience to students, an enhancement of the course, but not a device for students to merely tolerate to appease the instructor.

One of the reasons that instructor mandated postings occur is to encourage students to use the message board and guarantee some sort of discussion. However, there are other ways to generate a discussion besides just demanding that students post a certain number of messages on the board. By integrating the message board more completely into the class, and referring to the previous night’s discussion during class, this should encourage students to participate after finding that he or she has been left out of an important discussion. In addition, test questions can also come directly from discussion on the message board, ensuring, at the very least, that

students have read the discussions. Students can also be encouraged to ask questions for homework problems on the message board. These questions may be answered by either the instructor or among the students themselves. The instructor can also post changes in the syllabus to the message board. The potential to miss important announcements is also an encouragement for the student to at least read the message board. Another method to encourage participation by students is to assign a student, or group of students, to lead the discussion for that week on a specific topic.

In any case, the instructor needs to expect that if the students should be participating in the message board, then so should the instructor. This is the best pedagogical reason of all to encourage participation in the message board: for the instructor to facilitate in the intellectual growth of the students by interacting on an individual level.

There should be vehicles for course communication other than message boards. For instance, some students may have questions about course material that isn't appropriate to publicize to other members of the class. They should be comfortable in addressing such questions in email messages directly to the instructor.

There are also situations when communication should be among group members. For instance, if a group project is due, groups may want to keep their work in progress private. Group message boards and file sharing should be included for such situations. This may aid individual groups, but it also eliminates cluttering the overall course message board. On the other hand, it entails additional burdens on the instructor.

However, in group situations where the students would want to keep the discussion private, building password protection into the message board is critical. Only those members who have the correct user id and password would be able to read and post to the message board. The use of message boards for group work is also a way for students to keep a record of the progress of the project, and it also allows the instructor to monitor the students. In case of a problem within the group, the students and the instructor have to just refer to the message board as a way to recreate the events.

Message Threads Get Messy

Message board threads can easily become an undecipherable mess. Most course message boards have one field to which all messages are posted. Then students may post replies to messages that are posted. Then someone may post a reply to the reply and so on. Before long a tangled web of messages develops, and users have a tough time trying to find messages related to a particular topic. Instructors should at a minimum be aware of such a situation. A possible solution is to provide multiple message boards, each related to a different topic.

Message Boards Need Constant Weeding

Messages should be weeded out on a timely basis. In keeping with the previous point, message boards should be maintained weekly with “old” messages perhaps deleted or archived. Some instructors may delete old messages after each exam, some on a monthly basis, some on some other cycle. It depends on the framework of each individual course. There are those who will question the deletion of messages, thinking that there is some value to be gained from reading some of the previous messages from students. If indeed there is some value to be gleaned from old messages, then that value would be more appropriately housed in an FAQ’s section of the course web page.

Use of FAQ’s Instead of Message Boards

Some questions should be included on FAQ’s rather than to have students continually pose the same questions on a message board. If instructors find themselves constantly answering the same question on message boards and in emails, then they should devise a list of FAQ’s for the course. This will minimize time wasted, both on the part of the students and the instructor. Also, as previously stated, when it is time to weed out old messages, the instructor should summarize messages of value and expand the FAQ’s section of the course web page in an orderly fashion.

Consider Course Level

The construction and design of message boards should be appropriate for the type of course and for the level of students. Instructors have found that asynchronous communication is helpful to encourage in-depth, more thoughtful discussions. It also works well when communicating with students whose schedules are quite diverse or involved in group work, particularly when geographically removed. The message board itself serves as a record of the project (Branon and Essex, 2001). If the instructor is designing a course in which a discussion of the lecture and text material adds value to the course, then a message board should be included. However, if the instructor sees no immediate value to the message board and cannot find ways to integrate the message board into the course, then it should be left out.

Also, some students do not have the maturity to deal with an online discussion (Branon and Essex, 2001). Students who have difficulty expressing themselves orally may have better interaction on the message board, but some students find it too difficult to participate in any discussion at all. Some students find it difficult to ask a question in public, fearing social reprisal for asking a ‘stupid’ question.

Other students feel a sense of social disconnection from an online discussion (Branon and Essen, 2001). These students benefit from a face-to-face discussion and from classroom discussion, and some even seem to thrive on a lively debate in class. When these students attempt an online discussion, he or she becomes disenchanted with the asynchronous nature of message boards, which by its nature creates a temporal lag in feedback. These

students like immediate feedback of classroom discussion. A balance of both types of discussion in the course design is appropriate.

The decision, again, depends upon the pedagogical reasons to include collaborative tools on the course web site. If there is no pedagogical reason for a message board, the instructor probably should not include one. Often instructors think, "Why not?" The answer is that without a defined benefit of message board inclusion there is little benefit to be gained and many potential costs and risks. The message board will entail time for monitoring responses and maintaining vigilance over objectionable content. Risks include the possibility that students may misunderstand messages and travel down the wrong learning path. Large classes may be dangerous environments for message boards. Also, lower-level classes with students from heterogeneous backgrounds might be another type of class where the benefits of message boards do not outweigh the benefits.

On the other hand, there are some classes where the benefit of message boards is clear. In a graduate class or an advanced class, particularly where students are collaborating in groups, message boards can be extremely effective. In such a case, the instructor should clearly define the objectives of the course and how technology can aid in achieving those objectives. That may mean multiple message boards (for instance for different groups or different topics), FAQ's, file sharing, videoconferencing, chat, etc.

Do Not Leave Students 'Alone' in a Message Board

Interactive learning is fine, but students shouldn't always be left alone to search for answers. There's no pedagogical reason for learners to see 80 wrong ways to work a problem. Students often turn to each other for assistance rather than turning to instructors. There are certainly some benefits to shared learning. For instance, by working in groups students may push each other to achieve. In tutoring situations, the tutor often learns more by tutoring than he or she would on their own. However, sometimes students share incorrect information and use faulty techniques to aid other students. Message boards can propagate flawed knowledge. Instructors need to realize the potential damage that may result from this proliferation of incorrect information on message boards. One ex-ante course of action to lessen the potential pitfalls would be to address topics likely to be misinterpreted and provide easy-to-follow explanations in course materials or FAQ's. An ex-post course of action is to have very timely monitoring of student messages to stop proliferation of incorrect information. This might require that the instructor monitor the message board several times a day, but it is better to do so than to have students proceeding on an unsound base of knowledge.

Instructors should keep in mind time constraints and other obstacles imposed on learners. Some of learners have to deal with multiple message board environments in other classes, keep up with a large number of passwords, and manipulate scores of email messages.

Summary

With all those considerations in mind, instructors should realize that including a message on a course web site is not just a simple decision, but rather it is a strategic process. Before designing a course, instructors should ask themselves several questions:

- Do I *need* a message board?
- Do I *want* a message board?
- Will my environment support a message board in the form I want?
- What should be the best framework for my message board?
- What are the *pedagogical* considerations of my decision?

References

- Brandon, R.F. and Essex, C. (2001). Synchronous and asynchronous communication tools in distance education. TechTrends, 45(1) 36, 42.
- Cook, K.C. (2000). Online professional communication: Pedagogy, instructional design, and student preference in Internet-based distance education. Business Communication Quarterly, 63(2), 106-110.
- David, B.G. (1993). Tools for Teaching. San Francisco: Jossey-Bass Publishers.
- Eastman, J.K. and Swift, C.O. (2001). New horizons in distance education: The online learner-centered marketing class. Journal of Marketing Education, 23(1), 25-34.
- Gibson, C.C. (1996). Toward emerging technologies and distributed learning: Challenges and change. American Journal of Distance Education, 10, 47-49.
- McKinnon, D.H. and C.J. Patrick. (1999). Distance education for the gifted and talented: An interactive design model. Roeper Review, 21(4), 320-325.
- Murphrey, T.P. (2001). Using the power of technology to enhance online learning anytime, anywhere, anyhow: Are we asking the right questions? The Agricultural Education Magazine, 73(4), 14-15.

8. The Importance of Learning Communities in Motivating and Retaining On-Line Learners

*Holly McCracken
Program Manager, Liberal Studies Online Program
University of Illinois at Springfield;
Adjunct Faculty, University of Illinois at Springfield, Applied Studies, Liberal Studies, and
Credit for Prior Learning Programs;
Adjunct Faculty, Capella University, Training and Development, Instructional Design,
and Online Teaching and Training Programs
Email: mcracken.holly@uis.edu*

Abstract

*A good learning community has great power.
It makes learning a lot more effective –
it makes learning happen!*

*Masha Malka, On-Line Learner, Spain
(personal communication, April 2001)*

Most on-line instructors have experienced the disturbing gradual or sudden disappearance of learners during a course term; there are many reasons for attrition in the virtual classroom. Learners and instructors alike continue to become comfortable and adept with information technologies and e-learning applications. Negative and positive biases persist among faculty members, administrators, and support personnel regarding the efficacy of delivering curricula through this medium. Large-scale research regarding the impact of Web-based systems on learning, as well as the effectiveness of e-pedagogy with students at various academic or professional training levels is unavailable. Organizations promote the ongoing use of Web-based curricula without the requisite infrastructures to effectively support its integration into institutional culture.

Regardless of pedagogical debates, competing budget priorities, and insufficient infrastructures, students continue to indicate via rising enrollments in on-line courses that e-learning is here to stay. Even in the absence of technologically viable systems, learners return to on-line classes because of the connections they have made to mentors, advisers, faculty members, and peers. Interpersonal connections energize intellectual pursuits in the virtual classroom as students' learning is actualized through

participation in relevant and interactive communities integrated into Web-based courses. The following comments consider the importance of constructed learning communities as critical in motivating and retaining students, and they focus on discussion groups formed within virtual learning environments to achieve common academic goals. I assume that the primary mechanisms for managing such communities are synchronous and asynchronous activities delivered through a range of networked information technologies and, more specifically, conferencing mechanisms.

Promoting Learning Through Communication and Interaction

The sense of community makes the learning experience feel real and tangible.... If there is no community, then all we get out of the experience is information. For information to become knowledge it needs to be grounded in discussion, interaction, and experiences with others.... Information, knowledge, understanding, and wisdom only have usefulness in the context of a society.

*Bill Paolini, On-Line Learner
Maryland, USA
(personal communication, April 2001)*

Consider the culture that develops in a traditional physical classroom: the relationships, networks, and mentoring that develop as a result of participation in this educational environment. In a virtual classroom, instructors and students share responsibility for mobilizing these variables, expanding learning experiences beyond factual content to include ongoing communication, process, and collegiality. The collective synergy created through opportunities for continuous exchange, application, and self-assessment is critical to realizing learning effectiveness in a Web-based environment.

In a recent study, Fredericksen, Pelz, Pickett, Shea, and Swan (2001) surveyed 1,406 on-line learners about their experiences in, satisfaction with, and perceptions of the virtual classroom. The largest study completed to date, it substantiates the correlation between, and importance of, learner-to-learner and instructor-to-learner interaction to perceived learning effectiveness in virtual environments. Its conclusions reinforce anecdotal experiences voiced by students and instructors alike: Communication and interaction are essential components to a successful on-line learning experience. Such spirited and intellectually challenging environments create opportunities for dynamic learning, deepening the meaning and effectiveness of the experience as a process for personal, academic, and professional development.

Comparable to the learning that occurs in a physical classroom, significant learning on-line is derived from specific instructional methods that promote ongoing communication and interaction, as opposed to "sitting in front of a computer screen and reading," as is still widely misunderstood. Such methods necessitate the use of a range of tools that facilitate rich and diverse experiences when they are used skillfully and in combination (see Table 1).

For instance, most of us routinely utilize some form of electronic conferencing device that allows for asynchronous and synchronous text-, audio-, or video-based communication. When purposely combined, these tools enhance learning in a virtual classroom, blending synchronous and asynchronous activities, learner-to-one/many formats, and a variety of media. They can be differentiated on the basis of their capacities for:

- Interaction and connectivity (e.g., one-to-one vs. one-to-many communications; one-way vs. two-way connectivity).
- Time/location dependency and spontaneity (e.g., synchronous vs. asynchronous communications).
- Universal access (e.g., availability of requisite software, hardware, media, bandwidth, etc.).
- Structural complexity (e.g., requirement of expertise in navigation, programming, and application).

By integrating these mechanisms with skillful and structured facilitation, activities used in virtual classrooms ensure powerful and diverse interactive learning experiences. The following examples are representative of such methods:

- Using audioconferencing mechanisms, members of a panel consisting of academic and professional experts from around the globe join a synchronous virtual classroom to comment on real-world applications of course information.

Asynchronous, threaded discussions complemented by the synchronous use of virtual white boards and chat rooms allow student teams to collaborate on group projects, coupling real-time learning activities with opportunities to communicate at their convenience.

- Through a combination of preposted lecture notes and real-time, text-based conferencing tools, a student is able to virtually attend an on-line course in the United States while completing the fieldwork component at a local hospital in his home community in Brazil.
- Students participate in a synchronous conference telephone call with the author of the textbook used in their class as she details key points. They compare reactions to the audioconference over the next week in their asynchronous discussion forum.
- Having read preposted seminar lectures, on-line learners attend a virtual conference delivered through the use of a MOO©, participating in this real-time, object-oriented virtual environment for a text-based discussion with attendees from around the world.

Some educators (Collison, Elbaum, Haavind, & Tinker, 2000; Fredericksen et al., 2001; Harasim, Hiltz, Teles, & Turoff, 1995; Kearsley, 1997, 2000; Palloff & Pratt, 1999, 2001) have noted that including these types of collaborative activities is essential to creating an atmosphere inviting ongoing information sharing, knowledge acquisition, and skill development. To utilize them effectively, learners and instructors must understand the

Table 1: Conferencing Environments for Promoting Continuous Discussions

Tool	Interaction & Connectivity	Time/ Location Dependency	Universal Access	Structural Complexity	Virtual Learning Application
<p>E-mail: <i>Example:</i> Hotmail© Yahoo©</p>	<p>Electronic mail, a two-way tool that allows for 1-to-1 & 1-to-many communication.</p>	<p>Asynchronous.</p>	<p>Yes, as long as user has access to an Internet Service Provider.</p>	<p>Variable; however, its use is becoming increasingly standard.</p>	<p>Utilized to provide personalized continuous feedback, response, & access between learners & instructors.</p>
<p>Listserv: <i>Example:</i> tvguide@list serv.tvguide.com</p>	<p>Electronic mailing list used for one-way, 1-to-many communication.</p>	<p>Asynchronous.</p>	<p>Yes, as long as user has access to an Internet Service Provider & e-mail address.</p>	<p>Variable, but becoming increasingly familiar.</p>	<p>Used to communicate information simultaneously to groups of students, e.g., noting changes to a syllabus & course, generating announcements, etc.</p>
<p>Instant Messaging: <i>Example:</i> AOL Instant Messenger© Yahoo Chat©</p>	<p>Chat platform that allows for 2-way, 1-to-1 & 1-to-many communication.</p>	<p>Synchronous, characterized by spontaneity.</p>	<p>Dependant upon factors such as required bandwidth, capacity for the use of multiple media, etc.</p>	<p>Variable, but becoming increasingly familiar.</p>	<p>Used to promote text-, audio- &/or video-based interactions, facilitating personalized & immediate communication among participants.</p>
<p>Video Conferencing: <i>Example:</i> CUSeeMe©</p>	<p>Conferencing platform that uses a computer network or the Internet to facilitate two-way, 1 to 1 & 1 to many (multipoint conferencing) communication</p>	<p>Synchronous.</p>	<p>Dependent upon factors such as access to required bandwidth, hardware/software, capacity for the use of multiple media, etc.</p>	<p>Variable, but becoming increasingly familiar.</p>	<p>Used to promote audio- & video-based interactions, facilitating personalized & immediate communication among participants.</p>
<p>MOOs (multi-object oriented programming) & MUDs (multi-user dungeon) <i>Example:</i> LinguaMOO©</p>	<p>Programming that replicates social experiences through the creation of objects with which users interact for 1-to-1 & 1-to-many communication.</p>	<p>Synchronous or asynchronous.</p>	<p>Dependent upon factors such as access to required bandwidth, hardware/software, capacity for use of multiple media, etc. Use requires comfort in, & experience with, environment.</p>	<p>Relatively complex; effectiveness dependent upon user experience.</p>	<p>Used to promote text- or audio-based interactions, facilitating personalized communication among participants.</p>
<p>Course Management Systems <i>Example:</i> Black Board CourseInfo© WebBoard© Learning Space©</p>	<p>Programs that facilitate interaction through use of chat, virtual whiteboards, & threaded, text-based discussions; Ongoing, structured communication for 1-to-1 & 1-to-many.</p>	<p>Synchronous or asynchronous.</p>	<p>Dependent upon factors such as access to bandwidth, hardware/software, capacity for the use of multiple media, etc. Use requires comfort in, and experience with, environment.</p>	<p>Variable, but becoming increasingly familiar.</p>	<p>Facilitates communication by combining text, video & audio; may incorporate traditional real-time technologies into its use: fax, telephone, & e-mail.</p>

coordinated use of conferencing tools, text-based communication skills, and Web-based facilitation techniques while simultaneously accessing appropriately mediated technical, student, and academic support systems to sustain the learning environment.

Structuring Collaborative Virtual Environments

The classes that were "just right" were excellent learning experiences. The topics were interesting. The instructor posed questions that generated "off shoot" conversations. Dialog with the other learners was rich and meaningful. It didn't seem like a class; rather, a group of people with a common interest coming together for conversation.

*Marie Gould, On-Line Learner
Delaware, USA
(personal communication, April 2001)*

As educators integrate the changing pedagogy that is characteristic of the on-line classroom, it is imperative to revise the roles and responsibilities of instructors and learners alike. In an educational setting in which the medium facilitates and focuses learning, communication and interaction take on a unique function, purpose, and depth when utilized by instructors willing to relinquish traditional control in favor of maintaining a learner-centered approach to class management.

The virtual classroom does not permit learners to be passive receptacles for information dispensed to them by academic third parties; rather, it requires that they be active, self-directed, disciplined, motivated, and participative. Likewise, instructors' roles shift from directing to facilitating the process of knowledge acquisition by balancing individual and group learning needs, curricular mandates, available technology, and sound instructional methodology to create and manage a fully mediated learning system. By encouraging learner self-direction through community involvement, instructors ultimately reinforce goals and identify performance criteria by:

- Furthering curricular intent (e.g., promoting collaborative projects).
- Promoting affiliation and unity (e.g., assigning teams to address key issues).
- Encouraging ongoing personal and course assessment (e.g., facilitating informal, formative evaluation throughout course delivery).
- Furthering knowledge acquisition (e.g., organizing lectures by panelists or guest speakers).

- Assisting in skill building (encouraging learners to take active roles, e.g., delivering presentations, conducting interviews, or participating in topic-specific Web quests).

Mobilizing the community as a mechanism toward learning effectiveness succeeds only to the extent that students and instructors are present, engaged, and invested in its use as a learning and teaching method; once they are convinced of its instructional value, all discussants can utilize the increasing variety of communication tools to continuously interact.

However, even though conferencing mechanisms have variable strengths to enhance interaction in on-line classrooms, they can also pose barriers for students and instructors (Collins & Berge, 1996; Harasim, 1994a, 1994b; Illinois Online Network, 2001; Palloff & Pratt, 2001; see Table 2).

**Table 2:
Strengths and Barriers of Conferencing Tools**

Benefits of Conferencing	Barriers to Conferencing
1. Conferencing allows participants continuous, equal, and individual access to the instructor, learning peers, and global resources.	1. Instructors and learners must use conferencing tools in purposeful and relevant ways, believing in their potential to strengthen instruction so as not to appear contrived.
2. Used asynchronously, it provides a self-paced atmosphere for reflection, composition, and analysis, enabling the preparation of considered and researched responses; used synchronously, it allows for spontaneity and informality.	2. Ideally, conferencing is limited to asynchronous activities because synchronous use is dependent upon coordinated schedules; access to comparable bandwidth, hardware, and software; and assurances that the available technology will not fail.
3. Its use encourages active involvement through interaction and collaboration, assisting learners to structure, connect, and integrate new ideas.	3. The ongoing use of conferencing may be especially demanding in the absence of facial expressions, voice intonation, or eye contact.
4. Conferencing tools facilitate communication for participants from a wide range of backgrounds/experiences; the characteristic anonymity it provides enables open expression devoid of stereotyping based on appearance, physical ability, gender, race, or class.	4. Communication through the use of conferencing occurs at unequal levels because participants may vary widely in their abilities to express themselves in writing and to maintain focus on relevant discussion issues.
5. Conferencing promotes communications	

Benefits of Conferencing

that are revisable and retrievable.

6. Conferencing reinforces the continued use of evolving technology and Web-based applications, furthering the transformative aspects of e-learning.
7. Communication via conferencing promotes self-direction and learning autonomy through supporting opportunities for shared facilitation among learners and instructors.
8. Its use is not restricted to a time/location-specific class period, promoting any time/anyplace access to learning environments.

Barriers to Conferencing

5. Interaction limited to conferencing can reinforce insecurity and vulnerability among discussants, noting that transcripts can be archived and that confidentiality cannot be ensured.
6. Because communication via conferencing is conveyed through the written word, it may present obstacles to learners with reading, writing, keyboarding, or vision challenges.
7. Conferencing relies heavily on peer exchange, frustrating those who desire to solely engage subject matter experts.
8. It demands that instructors and students acquire text-based facilitation, communication, and information management competencies in order to prioritize and manage messages, content, and responses.

As instructors construct virtual classrooms, they must provide students with thorough guidance regarding course navigation by including clear procedures for participation in interactive aspects of communication in order to ensure that the discussion is focused, relevant, researched, and purposeful (Kim, as cited in Clark, 1998; Palloff & Pratt, 2001; Salmon, 2000).

The following list provides suggestions for instructors as they identify classroom parameters:

1. Be aware that students will be self-conscious regarding the quality and quantity of their contributions to the discussion, particularly during the initial weeks of course delivery. Acknowledge and support their initial participation through frequent communication and feedback.
2. Develop proficiency for using the technology characteristic to virtual communication and discussions, and be prepared to troubleshoot as you or your learners confront obstacles.
3. Shape the discussion group, explaining its purpose and overall goals. Provide parameters for proceeding by describing the ways you will engage the group and expect them to interact together.

4. Direct participation by articulating minimum expectations related to performance criteria.
5. Provide guidelines for effective and appropriate interaction and conflict management.
6. Create a predictable schedule for communications (e.g., state when you will post assignments for each unit of study, when the virtual week begins and ends, etc).
7. Become aware of your own communication patterns and virtual persona as you correspond with learners, noting when your responses encourage or inhibit learner-to-learner interaction.
8. Acknowledge learning strengths and barriers, addressing and utilizing them as you continuously assess and reshape the course during the prescribed term.
9. Use the wealth of information available via the Internet to recommend new resources for further discussion, information, or study.
10. Be conscious of the need for acknowledged closure among participants as the course draws to its natural conclusion by noting its particular importance to members who have been especially engaged and interactive.

With tools in place and methods chosen, the instructional tasks progress to measuring learning effectiveness, as evidenced through discussions. It is in the best interest of the class to continuously monitor levels of participation, patterns of involvement, and overall quality of communications to ensure a consistently positive learning experience. In a face-to-face learning environment, we are excited when the community forms in such a way that students engage each other to meet individual and collective learning goals. The same types of indicators confirm that these dynamics are present in a virtual learning space, as evidenced by:

- Increasingly frequent conversations that occur independently of the instructor.
- Communications in which the participants expand on course themes or illustrate principles through the use of personal or professional examples.
- The development of familiar relationships among participants, acknowledging one another's strengths or encouraging each other through challenges.
- An openness to shared resources, academic or professional networks, or technological applications.
- A willingness to make oneself vulnerable through self-assessment, personal disclosure, or the evaluation of peers' coursework.

Likewise, we recognize virtual students at risk of being unsuccessful in meeting their learning goals, as evidenced by a neglect of assignments, a decline in the quality or quantity of work produced, or through a complete lack of participation or visibility occurring as the following behaviors:

- Difficulty beginning a discussion; unfocused or inappropriate interaction.
- Absence from the discussion or noticeable changes in levels of involvement.
- Repeated references to personal problems or other barriers to ongoing participation.
- Continued challenges to access, for example, obtaining requisite connectivity, hardware, and software.
- References to writing, editing, keyboarding, reading, or vision difficulties.

Mobilizing Virtual Discussions: Ideas for Instructors

In an on-line learning community, the instructor is as important as the learners. I like instructors who are active in the discussion, either by acknowledging learner posts, offering summaries and resources, or by providing general guidance and encouragement.

*Rebecca Walker, On-Line Learner
North Carolina, USA
(personal communication, April 2001)*

The following strategies promote the positive use of virtual discussions by instructors by addressing the provision of clear expectations and parameters for participation; the necessity of frequent and open communication; the confident and informed utilization of technology; and the responsiveness to ongoing assessment as new ideas, strengths, and barriers are introduced in the classroom:

1. Professor Sharon Korth noted, “The discussions are...valuable [opportunities] for students...to learn from each other.... I've found that one person in the group can set the tone for the class” (personal communication, April 2001). To ensure a positive start, communicate with learners individually prior to or on the first day of class via e-mail, inviting their ongoing participation in what you are sure will be a thought-provoking series of conversations. She continued by advising us to “...set the tone you expect [from participants].... Be positive and constructive - reinforce what you'd like to see.” Model the types of behaviors you would like learners to demonstrate through your own responses, communicating in a way that is authentic and genuine.

2. Professor Deshae Lott explained that she is continually "...impressed with the ways in which [students] support one another - praising, expressing appreciation for, adding to, and challenging one another's ideas, insights, and observations" (personal communication, April 2001). Encourage learners to interact together, monitoring the quantity of your communications and assisting them to identify ways to maintain contact.
3. Provide individualized and continuous feedback to learners, promoting their continued involvement in the course and discussions. Professor David O'Gorman reminded us of the importance of being supportive, and "careful about the wording of feedback. [For example,] don't say, 'I have assessed your level of participation and it is very low. As you know, participation is a high percentage of your grade. So right now, you are in deep trouble.' Instead, say, 'I notice you have not been participating in the...discussions. Is there something I should know about?' " (personal communication, April 2001).
4. Individually contact learners whose levels of participation change drastically to inquire about their progress, talk with them about what they are experiencing, offer assistance and support, and reinforce course expectations. Adult students, particularly those who are returning to the classroom following a protracted absence, have many competing priorities for their time and often have very valid reasons for changes in levels of participation. Reach out to learners who feel insecure with the text-based discussion forum through voice-to-voice contact.
5. On-line learner Josh Ricciardi (Washington, USA) pointed out that "An instructor with efficient organizational skills and effective communication skills will foster a strong learning community.... When the instructor is disorganized and unresponsive, learners get frustrated and the community interactions die" (personal communication, April 2001). Visit the discussion forum for your course every day if possible. By checking in frequently, you will be able to monitor the discussion, respond to questions, identify potential issues for clarification, and demonstrate that you are engaged with the community. In the event that conflict occurs, consult privately and immediately with those involved.
6. Mr. Ricciardi continued by cautioning, "Trying to 'do community-building activities' without purpose can distract from...personal learning goals and projects for the course. When this happens, it is a negative impact of community" (personal communication, April 2001). He reminded us to ensure that activities are purposeful and relevant to curricular content and that their presentation is timely, organized, and responsive to learner interests. Irrelevant discussions or brief, mechanical responses frustrate participants and lead to their disengagement; solicit ongoing ideas about course modifications from learners, and implement their suggestions visibly in the discussion.

7. Be inventive and imaginative! Experiment with new technologies and innovative conferencing tools to animate and vary discussions. Invite guest lecturers into the virtual classroom, or combine learners from similar courses for a shared discussion. Use current Web-based articles and unique resources to broaden a text-based curricula, making course information increasingly accessible, current, and relevant.
8. Professors Lott, O’Gorman, and Boltuc advised “mak[ing] participation in discussions a significant aspect of the student’s final grade” (personal communication, April 2001). Making grades contingent in part on participation in discussions encourages focused, researched, and consistent interaction, for example, quantifying participation by requiring a minimum number of original communications by participants per course unit/week, or a minimum number of responses to the communications of peers.
9. Maintain consistency regarding the implementation of asynchronous strategies throughout the delivery term; it is very important to guard against creating disparity in access to the instructor and the learning environment. For example, if the course is to be delivered asynchronously, any real-time activities spontaneously implemented must be noncompulsory and non-graded.
10. Enjoy your class! Professor Peter Boltuc reminded us to “react positively and with a...sense of humor” (personal communication, April 2001). Learning does not have to be serious to be substantial; look for opportunities to share laughter and have fun together. Enthusiasm is contagious!

Capitalizing on Community: Ideas for Learners

Community building in the on-line world is extremely important to motivate, educate, and reduce attrition.... Besides coursework, individuals are encouraged...to converse, as if in a friendly social environment. Sometimes, just offering a piece of your personal life is enough to create this; other times, it's the little comments that go back and forth. This is how people socialize, and in the cyberworld, if you want to warm it up, you need this type of exchange as well.

*Joe Zarra, On-Line Learner
New York, USA
(personal communication, April 2001)*

Student impressions about the value of community collectively represent profound insights, advice, and recommendations. They emphasize discussions that can be extraordinarily thought provoking, challenging, and supportive, which are, perhaps, the most valuable aspect of a virtual learning experience. The following ideas can assist learners to effectively participate in virtual discussions:

1. Encourage learners to take the initiative to become involved! On-line learner Mary Lou Ryding (Virginia, USA) noted, “I think a key component of a strong cybercommunity is how much dialog there is between the learners. The

- student needs to be an active participant in the course in order to get the most out of the learning community. It is not enough to read the text and post [an] answer. You need to ask questions of other students and struggle a bit together. You learn more from...and about the people the more you respond to each other's posts" (personal communication, April 2001). On-line learner and faculty member Bill Akins (Arizona, USA) reinforced this opinion, reminding instructors and learners alike to "...be in the class on a regular basis. Take part in the discussions and be a part of the community...." (personal communication, April 2001). Learners should visit the discussion forum routinely, responding genuinely and in an informed manner three to four times per week to capitalize on this course feature.
2. On-line learner Leah Woodke (North Dakota, USA) advised learners to "take risks, say things even if [you] fear [you] are not as smart or experienced as course mates" (personal communication, April 2001). Almost universally, learners remarked at their hesitancy for early participation in class discussions, feeling self-conscious about their interpretations of discussion topics or questions, the ways they have phrased feedback to others, or their writing abilities in general. Encourage them not to let fearful feelings interfere with taking the initiative to participate.
 3. Learners progress through on-line classes in many ways and at different paces; try to engage discussions in a manner that addresses the pace and cyclic requirements of the group as a whole, accommodating one's individual needs to the extent possible, but not at the expense of the group.
 4. On-line learner Christine Lustik (recently attended classes as she traveled across the USA) thinks an "...understanding of each other's lives and experiences...and a joint interest in the subject constitute a strong cybercommunity" (personal communication, May 2001). She reminds us to consider the personalities we create through written communication and interaction, and ensure that they accurately reflect our intentions, values, and insights.
 5. Creative conflict often stimulates the intellect; learners should be encouraged to disagree with the instructor or their learning peers, within parameters set by the class or instructor, noting that techniques for mediation, negotiation, and conflict management apply in the virtual environment just as they would in a classroom setting. Even though we can "attend class in our pajamas," we are obligated to maintain the same standards for behavior in the virtual classroom that we would in its face-to-face counterpart.
 6. All community members should show consideration for the individual privacy of others, acknowledging individual boundaries, specific requests and needs, and respecting mutually agreed upon procedures regarding disclosure of discussion content.

7. On-line learner Rebecca Walker (North Carolina, USA) emphatically stated, "I wouldn't be able to learn all I have without the sense of community. Other learners motivate me and remind me that there are other perspectives besides my own. My peers have been wonderful resources for me" (personal communication, April 2001). Encourage each other to identify unique ways to meet group and individual learning needs, and use each other as resources for an ongoing exploration of subject matter. There are many tools a class can use to further communication, for example, synchronous strategies such as instant messaging, text-based or audioconferencing, or telephoning.
8. When responding to discussion questions and assignments, learners should cite course texts or other informational resources located through personal research. By combining informational sources with individual experiences, their responses will be unique and personal.
9. Enjoy the members of the community! On-line learner Phillip Marsh (New York, USA) reminded us, "Without peer support and comments, the learner will exist alone in cyberspace and probably will drop out of the class. Without a community, [we] are working in an 'isolation booth.' It would take strong motivation to encourage the learner to continue in such an environment.... I enjoyed reading all of the responses...made by the students.... I also learned more by reading more" (personal communication, April 2001).
10. Forgive mistakes. We all make them. If unclear about someone's intent, phraseology, purpose, or language, ask for clarification; this may prevent miscommunications that can escalate quickly in a text-based, asynchronous environment. Be patient as learning peers learn skills required for successful navigation in the virtual classroom.

Conclusion

.... With a sense of community...comes a sense of trust. When I get to know people and feel comfortable with them, I trust that they will not give me bad information. By trusting my fellow students, I read their posts with a different frame of mind. I am not reading to read and respond only. I am reading it for the "aha" moments I know will come!

*Mary Lou Ryding, On-Line Learner
Virginia, USA
(personal communication, April 2001)*

The virtual discussion is among the most powerful tools available to participants in a Web-based learning environment; as such, it is in the best interest of those individuals who learn and teach via this medium to not only acknowledge its increasing popularity

but also to actively understand those practices that make it a strong instructional method. In order that students and instructors are effective in this environment:

- Teachers and students must have access to ongoing training regarding changing e-learning applications and instructional methods.
- Technology systems and accompanying support must afford universal access and be flawlessly and seamlessly delivered.
- Administrative infrastructures must support continuous and varied programming for all segments of the user population through the use of continuously improving technology.
- Organizational structures must prioritize a virtual presence to promote ongoing institutional affiliation and engagement among remote students and instructors.

It is imperative to couple relevant and provocative virtual learning environments with technologically appropriate systemic components to facilitate cohesive virtual learning environments that foster universal access and the continuous participation of on-line students and instructors alike. In summary, on-line learner and faculty member Bill Akins reminds us, "Positive community building promotes retention in ongoing classes and encourages students to take [additional]...classes. If we make it a comfortable place to learn, they will succeed and return" (personal communication, April 2001).

References

- Clark, L. (1998). Let your online community grow. Retrieved May 13, 2001, from the World Wide Web: <http://www.mainetoday.com/communities/build/tipspop.shtm>.
- Collins, M., & Berge, Z. (1996). Facilitating interaction in computer-mediated instruction. Retrieved May 16, 2001, from the World Wide Web: <http://www.emoderators.com/moderators/flcc.html#integrate>.
- Collison, G., Elbaum, B., Haavind, S., & Tinker, R. (2000). Facilitating online learning: Effective strategies for moderators. Madison, WI: Atwood.
- Fredericksen, E., Pelz, W., Pickett, A., Shea, P., & Swan, K. (2001). Student satisfaction and perceived learning with on-line courses: Principles and examples from the SUNY Learning Network. Retrieved May 12, 2001, from the World Wide Web: <http://www.aln.org>.
- Harasim, L. (1994a). Trouble in paradise. Retrieved May 13, 2001, from the World Wide Web: <http://css.sfu.ca/update/vol6/6.3-trouble-in-paradise.html>.
- Harasim, L. (1994b). Why computer conferencing. Retrieved May 13, 2001, from the World Wide Web: <http://css.sfu.ca/update/vol6/6.3-Why-comp-conf.html>.
- Harasim, L., Hiltz, R. S., Teles, L., & Turoff, M. (1995). Learning networks. Cambridge, MA: MIT Press.
- Illinois Online Network. (2001). Conferencing strategies for teaching at a distance. Retrieved May 12, 2001, from the World Wide Web: <http://illinois.online.uillinois.edu/IONresources/confstrategies/index.html>.
- Kearsley, G. (1997). A guide to online education. Retrieved May 12, 2001, from the World Wide Web: <http://home.sprynet.com/~gkearsley/online.htm>.
- Kearsley, G. (2000). Online education: Learning and teaching in cyberspace. Albany, NY: Wadsworth.
- Palloff, R. M., & Pratt, K. (1999). Building learning communities in cyberspace: Effective strategies for the online classroom. San Francisco, CA: Jossey-Bass Pfeiffer.
- Palloff, R. M., & Pratt, K. (2001). Lessons from the virtual classroom. San Francisco, CA: Jossey-Bass Pfeiffer.
- Salmon, G. (2000). E-moderating: The key to teaching and learning. Sterling, VA: Stylus.

9. How to E.N.G.A.G.E. 'Em: Tips for Encouraging Continual Student Involvement

Mary I. Dereshiwsky, Ph.D.
Associate Professor Educational Leadership & Research
Center for Excellence in Education
Northern Arizona University
Email: StatCatMD@aol.com

Abstract

Keeping students actively engaged is arguably the biggest challenge facing any instructor. Nowhere is this challenge greater than in the emerging, leading-edge technologically mediated classroom. The customary student difficulties with the learning material are supplemented by, and sometimes even surpassed by, the problems of coping with a completely different classroom setup than students may be accustomed to. Difficulties in using the technology, coupled with the ubiquitous stereotypes of Web learning as cold and impersonal, can be daunting to even the most motivated students.

A number of barriers to student engagement in Web-based coursework have been identified by researchers. Baumgartner (2000) noted the general tendency to resist change and innovation. Bischoff (2000) attributed on-line attrition to student isolation, the accelerated pace of on-line courses, competing responsibilities faced by typical on-line students, and technical problems experienced by students. According to Palloff and Pratt (1999), barriers to student participation include information overload, anxiety related to the different nature of on-line communication, related concerns about privacy issues and exposure with regard to externally posted on-line communication, and technical difficulties.

With regard to the timing of communication in cyberspace, Badger (2000) noted that the asynchronous nature of message exchange can discourage student involvement due to its relative lack of immediacy. Sometimes, withdrawal occurs as a result of student misconceptions regarding the distance-mediated classroom and how it differs from traditional face-to-face instruction (Dereshiwsky, 1999).

This paper chronicles the strategies I have used to engage students throughout the duration of Web-based coursework. It is based on my 10 years of experience to date in curricular development and instruction of on-line graduate coursework. The specific

courses that I have developed and taught include a master's level introduction to research and statistics; required doctoral courses in research design, intermediate statistics, and dissertation seminar; doctoral elective qualitative research; and individual doctoral dissertation advisement using the Internet. These courses were initially developed as part of a pilot test within the Educational Leadership Department of the Center for Excellence in Education at Northern Arizona University (NAU). Starting in the fall of 1997, they were incorporated into the universitywide NAU Online Web-based instructional pilot test of Web-based courses (www.nau.edu/nauonline). At the present time, 200 courses are being offered to 10,000 NAU students via interactive television and the Web. These strategies are presented in the form of the acronym E.N.G.A.G.E. Each letter is defined and discussed briefly in this paper.

E is for E-mail

Sending and receiving e-mail is arguably the most basic and ubiquitous skill in technological communication. It is often the first and easiest skill that computer novices learn. As such, the Web-course instructor would do well to capitalize on the judicious use of e-mail as a confidence builder for new students and to set the interactive tone for the course.

Draves (1999) and others (Dereshiwsy & Moan, 2000; Simon, 2000) found that the best way to set the tone for a Web course and to get students actively involved from the outset is to require an activity at the very beginning of the course. This lets students “get their feet wet” in terms of how to communicate in the on-line classroom. It lets them know that they are connected to their instructor and puts them in the mind-set of readiness to start a new learning activity.

An e-mail exchange is an ideal way to get started in this manner. Each of my syllabi requires an initial e-mail contact from each of my students during the first week of the course. This enables me to have their Internet addresses on record. It also allows me to greet them with individual replies. Through such exchanges, students can essentially “road-test their connectivity” to me and to the course Web page. This exchange provides them with a prime opportunity to practice sending and receiving e-mail during the startup week of the course.

In addition, the successful transmission and receipt of my reply provides an immediate success for my students in terms of their ability to use the technology. Experiencing such a success at the outset hopefully boosts their motivation and initiative in moving on to master more challenging Internet skills such as accessing Web pages and posting in our asynchronous Virtual Conference Center (VCC) bulletin board area.

Students who experience such initial success in their ability to use the technology and in their reinforcement of individual communication with their instructor are more likely to persist in the Web-based course. First-time on-line students may have entered the Web-course environment filled with fear and trepidation due to the persistent stereotype of the technological classroom as “cold, impersonal, and only for techno-geeks to fathom.” If actions do indeed speak louder than words, this successful first impression will do much to debunk such worries and bolster their motivation to continue in the techno-classroom.

In the past, I have also experimented with asking my students to e-mail me a periodic progress report on specified due dates staggered throughout the duration of the course. This takes the form of an e-mail message with the following content:

1. What is working OK so far.
2. What is not so OK: any problems, concerns, or frustrations the students may be experiencing.

3. What specific ideas the students have for us, in positive partnership, to work together and improve any such problems identified in point 2.

The preceding periodic update serves several important functions:

1. It maintains that continual connection between the students and the instructor, akin to the obligations of students in the traditional live classroom to periodically attend and interact.
2. The listing of “What is OK” reminds the students not to lose sight of the many successes that they have attained in spite of any transitory problems that they may be experiencing.
3. The identification of “What is not OK” and especially “What can we, together, do about it?” serves to remind the students that most, if not all, problems can be improved or even eliminated, provided the students share their concerns with their instructor in a spirit of trust and willingness to work together to make things better.

The concomitant focus on sharing and solving problems acts as a powerful deterrent to simply giving up. Students are reminded that no one need ever suffer in silence. Rather, their instructor is always standing by, ready, willing, and most eager to work with them on any problems that may occur.

N is for Newsletter

No classroom would be complete without a relaxing time-out. In the traditional live classroom, this may take the form of a planned or impromptu break. Even during a serious lecture, a carefully planned joke or lighthearted comment may do much to relax and motivate the students.

The on-line classroom is no different in this regard. In fact, it may be in need of even more “depressors” due to its aforementioned stereotype of being cold and impersonal. Such “humanizing moments” are particularly critical in the Web-based classroom as indicators that there are indeed real live scholars behind each of those computer screens.

Draves (1999) commented that he does this very effectively in all his Web-based classes via the daily posting of a humorous cartoon called “CyberSnack.” This daily cartoon is a quick and fun way to take a break while studying, posting, or interacting on-line. Reading it quickly become a “pleasantly addictive” and eagerly anticipated habit while on-line. I have had similar success via a twice-weekly or so newsletter that I prepare for my on-line students. It is entitled “More Words to Lead By” in keeping with the educational leadership departmental affiliation of my on-line courses.

Students receive a “welcome aboard” newsletter during the first week of class. As suggested by Draves (1999), this is another avenue of immediate activity to get students and instructor connected from the outset of the course. Each of my newsletters contains a cluster of positive-thinking stories, poems, or quotes organized around a central theme. In addition, I do special themes for holidays during the semester.

Students are often pleasantly surprised at this lighthearted, creative, and fun touch. Research and statistics are admittedly associated with “tough stuff” and convey a serious tone. I have found, however, that the newsletter quickly tends to humanize and personalize me to my on-line students. It is not long before I start receiving impromptu e-mail messages from students telling me how much they enjoy the newsletters. Some of them even save the newsletters in a portfolio to share with students, family, and friends. It is not long before the newsletter becomes a much-anticipated on-line treat and motivator to keep the students regularly logging in.

G is for Group

A number of on-line curricular specialists have identified the value of group interaction in the Web classroom (Badger, 2000; Schweizer, 1999). They speak of the multiway communication benefits of having students interact not only with their instructor but also with their peers. This, in turn, further debunks the myths of on-line learning as just a correspondence school or a one-way exchange between remotely located students and instructor.

The group component and its potential for encouraging student engagement take two forms:

1. The introduction. In addition to having students send me an initial e-mail message during the first week of class, I also require them to post brief messages of self-introduction in a VCC folder entitled “Let’s Break the Ice.” For one thing, this exercise enables the student to similarly road test their access and posting capabilities in the VCC during the startup week of class. Another benefit lies in the surprise discoveries that students make about themselves in reading one another’s introductory posts. It is not unusual to find former classmates, colleagues from other courses taken on campus, students from the same town, or other students with shared interests. This further personalizes the techno-course for students, often encouraging them to connect to their newfound friends in the form of e-mail or requests for assignment to the same working group (see point 2 for more on the latter).
2. The interaction. Once our semester gets rolling, I assign the students to small groups of approximately 4 to 6 individuals. Students are encouraged to state their grouping preferences, if any. This is a prime opportunity for them to build on any acquaintanceships they may have discovered in reading one another’s

ice-breaker posts (see point 1). It also enables them to work with their peers from locally based cohorts such as the clusters of graduate student cohorts that NAU has throughout the state of Arizona. Finally, I suggest to the students that if they do not know anyone else in the class, they may want to form groups based on the same major or some other common interest, as identified from the ice-breaker posts. Many students are content to be randomly assigned to groups and make new friends by doing so: They let me know this, and it has worked out well.

After the groups are formed, I ask each group to develop a contract or code of group conduct. It is expected to include, but not necessarily be limited to, issues such as who will post the weekly assignment; who will act as group leader; what form(s) of intragroup communication the members will use (i.e., e-mail mailing list, instant message, posting updates for one another in their asynchronous working space group folder, etc.); what steps they will take to resolve any conflicts that may arise in the group and to consider me as the court of higher appeals if such initial resolution attempts fail.

According to numerous experts in on-line pedagogy (Bischoff, 2000; Dereshiwsky, 1999; Draves, 1999), such group interaction effectively repositions the on-line instructor from “sage on the stage” to “guide on the side.” This further empowers students to take responsibility for their own learning and facilitates their motivation for interaction with their fellow classmates. Both of these activities are related to student persistence and engagement.

A is for Applause

As mentioned under the e-mail discussion, it is painfully easy to focus all of one’s attention on what is not working when a problem crops up. Students who experience difficulties, particularly new Web-course students who do not have easy, direct face-to-face access to their instructor, the temptation to give up and drop out is correspondingly great. At the same time, it is easy to lose sight of the many, many things that are going very right: the technological, communication, and other skills that the same student may have rather seamlessly mastered and may almost have taken for granted.

I have always been a big believer in accentuating “the positive” as a life motivator. I also believe the same judicious refocus with students on their successes can help them ride the crest of any temporary problems and celebrate just how far they have already come. To this end, I consistently do all of the following:

1. I post general “Way to Go” congratulatory messages in our VCC Announcements and Updates folder following any milestones: completion of first VCC discussion topic, posting of first group assignment, and update at midsemester, to name but a few. In these short but sincere posts, done in a

casual and conversational style, I point out what they have been able to successfully accomplish to complete that activity.

2. In addition, I occasionally do the same with individual students via direct, private e-mail. For example, I commend a student who has reported a particular problem and has persisted long enough to successfully resolve it.
3. Finally, I post “Winners’ Circle” kudos to individual students on any milestones they choose to share with me, such as a new job or a new baby, in our VCC Announcements and Updates folder for all to see. This further tends to humanize the research-statistics professor and often results in “fan mail” of congratulations from other students in the course.

All of us crave someone noticing what we do right. Through activities such as the preceding, students are reminded to celebrate their many successes, just as their instructor and classmates do. Such acknowledged successes fuel the needed persistence to work through any subsequent problems that may arise.

G is for Gradual

This letter relates to the continuous, ongoing, and cumulative nature of required student engagement in *all* coursework, not just in the traditional face-to-face classroom but also on-line. Sadly, some novice Web students believe that on-line learning is easier and less work than its traditional classroom counterpart. In doing so, they may choose Web classes for the wrong reasons. Rather than carefully considering their individual learning styles and available time commitments to the course, they jump to the conclusion that the lack of required in-class meetings somehow implies a lesser commitment is needed for Web coursework.

These students soon painfully learn otherwise, of course. Virtually all of the empirical research to date suggests that if anything, Web-based learning requires even more of a time commitment than the traditional face-to-face classroom. This is coupled with the concomitant requirement of high levels of student initiative and motivation to keep up with due dates and other course expectations on one’s own. Failure to do so, as well as perhaps a tendency to procrastinate and let on-line coursework slide in favor of live commitments, can soon result in the students’ feeling overwhelmed. Many students in this position eventually give up.

When I first began teaching on the Internet, I decided not to have fixed due dates for assignments. After all, I reasoned, this flexibility corresponds to the relative freedom to self-pace that is characteristic of Web-based learning. To my horror, I soon discovered the aforementioned mentioned problems with procrastinators and the predictable e-mail messages to me with “HELP!!!” as the subject line during the final week of the course.

However, I also had a fair number of students choose to complete the assignments in rushed, Triple-A fashion. By this, I mean that they would work on the course assignments in rapid-fire spurts. I frankly dreaded the 3-day holiday weekends because I knew I would invariably face an avalanche of assignments—often weeks' or months' worth—from these students. One student actually completed the entire cluster of course assignments in a single weekend!

Such massive submissions of advance assignments made it difficult for me to respond quickly with substantial, detailed feedback on each individual assignment, as I like to do. In addition, this sporadic, rushed student involvement made it virtually impossible for such students to truly engage in the entire course experience. They could not get a sense of their classmates nor establish a real bond with me. This rush job was a particular problem in my doctoral level research course, where students are expected to share the sequential, evolving phases of their doctoral research proposal (i.e., the final paper for the course) with their classmates for feedback and brainstorming. Some on-time, producing students felt uncomfortable with their zoom-ahead peers due to the lack of opportunity to exchange and share ideas.

In response to these coordination problems, I now set fixed due dates for all on-line assignments. These are staggered throughout the duration of the course and are spaced at approximately weekly intervals. Furthermore, I inform students in the syllabus that:

1. Assignments that are submitted more than 24 hours in advance of the posted due date will be subject to a 5-point early submission penalty.
2. Assignments that are received one to 5 days after the posted due date and time in the syllabus, as per the external date and time stamp of the Internet service provider, will lose one point for each day late. Assignments submitted more than 5 days past the stated due date will not be accepted or graded and will receive an effective grade of zero.

Of course, I also take care to inform the students up front that we all know “life happens.” Planned and unplanned contingencies—an illness, a work-related trip booked in advance, a last-minute problem in getting on-line—can happen. I am always happy to consider *individual* and *isolated* exceptions to the due date policy. In my opinion, such individual exceptions are quite different from students who *consistently* work ahead or behind classmates. When explaining this policy, I also take care to stress the comparability to the live classroom, where students are similarly expected to show up periodically according to the fixed meeting days and times of the class.

Finally, I require students to log in at least every 2 days or, ideally, more often, to check our VCC Announcements and Updates and Questions and Answers folders. I inform them that in my role as a designated conference organizer, I can monitor who has logged into each VCC folder, when, and how many times.

The previously mentioned strategies have made a tremendous positive difference in promoting the desired continual student engagement for the duration of the course. The incidences of procrastination and zooming have sharply declined as a result.

E is for Extra

As with the newsletter, the little creative flourishes can make all the difference in motivating students. I like to include such activities as on-line scavenger hunts and crossword puzzles designed to test my students' mastery of learning concepts in a fun way.

I also like to provide some extra credit opportunities throughout the semester. One idea that has been quite popular is for me to post a message in our VCC Announcements and Updates folder during a routine midweek and somewhere around the midpoint of the semester. In this posting, I tell students that they can earn 5 bonus points added back to their point total before averaging for sending me an e-mail message with the subject line "Found It, Mary D!" within a given time frame, usually 48 hours. I have found this to be a fun and positive way to reinforce the requirement of logging in every 2 days to check for announcements and updates. Students, too, seem to get a kick out of this "carrot-versus-stick" approach to the 2-day login requirement. In addition, it acts as a "depressor," allowing those students who may have lost a few points on prior assignments to recoup those points via this fun and unexpected extra credit activity. Above all, it drives home the point to keep checking back, for you never know what further surprises and incentives may await!

The E.N.G.A.G.E. algorithm may be summarized and visually depicted as follows:

Table 1.
Overview of E.N.G.A.G.E. Algorithm

Initial	Significance
E	E-mail as: Initial contact with instructor. Road-test of one's ability to connect to the Web course.
N	Newsletter with positive-thinking stories, poems or quotes on a central theme.
G	Group influence as: Ice-breaker. Interaction on course assignments.
A	Applause: Reminding students of what's going very right.
G	Gradual nature of skills acquisition and related need to periodically engage in course for cumulative learning.
E	Extra activities and extra credit assignments for fun and creative touches.

Concluding Comments

Anything new and different is bound to be scary. The Web classroom, with its special technological challenges, in addition to the subject matter itself, is a classic case in point. Problems are bound to occur, particularly at startup and particularly for novice Web learners. Students can choose how to respond to such problems: They can either give up and withdraw in frustration, or they can see such problems as challenges to be mastered with effort and positive partnership with their instructor. In turn, the choices we make as instructional pioneers can greatly influence our students' decisions to persist and thrive in the Web classroom.

References

Badger, A. (2000). Keeping it fun and relevant: Using active online learning. In K. W. White & B. H. Weight (Eds.), The online teaching guide: A handbook of attitudes, strategies and techniques for the virtual classroom (pp. 124-141). Needham Heights, MA: Allyn and Bacon.

Baumgartner, G. (2000). Strategies for effective online education. New York: Forbes Custom Publishing.

Bischoff, A. (2000). The elements of effective online teaching: Overcoming the barriers to success. In K. W. White & B. H. Weight (Eds.), The online teaching guide: A handbook of attitudes, strategies and techniques for the virtual classroom (pp. 57-72). Needham Heights, MA: Allyn and Bacon.

Dereshiwsky, M. I. (1999, April). Believe it...or not? Some student misperceptions regarding online learning and how to overcome them. Paper presented at the second annual Teaching in the Community Colleges Online Conference, Hilo, HI.

Dereshiwsky, M. I., & Moan, E. R. (2000). Good connections: Strategies to maximize student engagement. Retrieved January 15, 2000, from the World Wide Web: http://www.usdla.org/ED_magazine/illuminactive/NOV00_Issue/story04.htm.

Draves, W. A. (1999). Teaching online. River Falls, WI: Learning Resources Network.

Palloff, R. M., & Pratt, K. (1999). Building learning communities in cyberspace: Effective strategies for the online classroom. San Francisco: Jossey-Bass Pfeiffer.

Schweizer, H. (1999). Designing and teaching an online course: Spinning your web classroom. Needham Heights, MA: Allyn and Bacon.

Simon, M. (2000). Managing time: Developing effective online organization. In K. W. White & B. H. Weight (Eds.), The online teaching guide: A handbook of attitudes, strategies and techniques for the virtual classroom (pp. 73-82). Needham Heights, MA: Allyn and Bacon.

10. Setting Students Up for Success: The Instructor's Role in Creating a Positive, Asynchronous, Distance Education Experience

Gloria T. Sciuto
Adjunct Faculty, Northeastern University
Consultant, Writers Express
Email: writersxprs@worldnet.att.net

Abstract

It is no accident that some learners excel in a distance education (DE) environment and some fail. With reported dropout rates as high as 50% (Carr, 2000), institutions are rethinking the push to put courses on-line. The purpose of this paper is to examine the following instructional activities that lead to a successful, Web-based, asynchronous, DE experience:

- Encourage ongoing, interpersonal dialogue.
- Provide prompt feedback.
- Offer an on-line orientation.
- Establish clear instructions and learning objectives.

Because the computer and Internet access media may be unfamiliar to many learners, the role of technical support is also discussed. The discussion starts with a short description of DE and a survey of today's DE learner. Before discussing the instructor's role in the Distance Education (DE) experience, I define the term *distance education* and describe the attributes of an asynchronous DE environment. Because DE learners may be as unfamiliar to the reader as the DE environment itself, I summarize the attributes of a typical, asynchronous, DE learner.

What is Distance Education?

In his book, *The Internet University*, Corrigan (1996) captured the essence of DE today:

Distance is a state of mind.... The education process is being altered forever, since people are now able to earn their degree at home according to their own timetables.... In the virtual classroom, the effect of closeness and participation between participants can be as real and engaging as with traditional class structures. Some participants even report an improved performance because the asynchronous nature of the discussion allows for a more studied and reflective analysis of the course materials. Whether by email or paper mail, the students of the virtual classroom enter a cooperative conceptual event — they create a 'classroom' that is all their own. With email and a class mailing list, students 'attend' by logging on, downloading the day's correspondence and uploading responses they have written in response to yesterday's mail. This interplay of statements, moderated by the instructor, creates a rich academic experience. (pp.4-7)

Although Corrigan described DE in terms of *freedom of time and place*, DE, in its purest sense, occurs when learners are separated from the instructor—period. There are many instances of DE when students meet with their instructor at an appointed time and in an appointed place. In his article, "Distance Learning Technology," Stewart described microwave broadcasts of audio and video, where "there is normally a single camera in the room, concentrating on the instructor...or the blackboard where notes are being written" (as cited in Rossman & Rossman, 1995, p. 11). Microwave or satellite communication is a common application of synchronous DE that many traditional universities use to make classes available throughout a multi-campus system.

Because this type of DE takes place in a campus classroom during normal day or evening school hours, one can expect that the individuals who choose these courses are traditional learners who physically attend a traditional university and are enrolled in a number of traditional, on-site classes. Even though this is DE, as evidenced by the fact that the learners are physically separated from the instructor, both the learners and the instructor are still bound by a mutual meeting time and, often, a mutual meeting location.

Asynchronous DE – Any Time, Any Place

Asynchronous DE frees learners from the constraints of meeting at specific times and places, and it opens the educational experience to a worldwide audience. O'Donnell reflected this sentiment when commenting in *The Worlds of Late Antiquity* that "the diversity of the participants [in his class] made for a far richer course than I could ever teach myself" (as cited in Corrigan, 1996, p. 113).

Even though some academics, students, and instructors fear that traditional colleges and universities may disappear because of the overwhelming success of Web-based DE, it is unlikely to happen in the near future. According to Dr. Helmut Schweger, “Distance education and open learning fill a void in the postsecondary education infrastructure by serving the unmet needs of new student populations. Distance education complements rather than diminishes the importance of colleges and universities” (as cited in Rossman & Rossman, 1995, pp. 9-10).

Who Are These “New Student Populations”?

The unconventional nature of DE attracts an unconventional student population. As the number of distance-based educational institutions and delivery modes becomes more sophisticated and varied, the student population may become even more diversified. The following figure summarizes the traits of today’s DE learner.

Figure 1. Characteristics of Today's DE Learner

- Older than traditional undergraduate.
 - Works either part- or full-time.
 - Requires on-line accessibility due to physical limitations, job responsibilities, personal commitments, or physical location.
 - Motivated to complete the course or program.
 - Able to manage time and work independently.
-

Stephen Shank, President and CEO of Capella University, a completely on-line, for-profit institution, described the average Capella University learner as “age 40 to 44 and has significant work experience.... They are going back to school to gain practical and relevant skill sets to implement tomorrow” (as cited in Griffith, 1999). Paula Spier of Antioch University concurred by describing a successful DE student as an “autonomous, highly motivated adult with a clear sense of educational goals and their implementation” (as cited in Duffy, 1997, p. 25).

In her book, *Virtual College*, Pam Dixon (1996) described the “5 million distance learners” as follows:

- Student ages [range] from 13 to 70, with the average age varying dramatically depending on the program.
- Students often work part- or full-time.
- Programs frequently report slightly more women than men.
- Convenience is often cited as the number one factor for choosing the virtual option.
- Distance learners are highly motivated to succeed. (p. 12)

Sam Atieh (1998) expanded the list of prospective DE learners to those who cannot attend a traditional class for a variety of reasons:

- Contemporary professionals whose jobs require frequent travel within the company or abroad.
- Single parents who must work to support their children.
- Physically challenged individuals who are not comfortable in classroom settings.
- Educators who are responsible for educating others.
- International professionals who want or need specialized training or who simply enjoy cosmopolitan boundary-crossing.
- Military personnel who are often stationed in isolated or remote areas. (pp. 23-25)

Based on these and other resources, some common themes have emerged among industry experts as to typical DE learners. For example, when he was Director of Independent and Correspondence Study at Oklahoma State University, Charles E. Feasley (as cited in *Peterson's Guides*, 1993) identified students who enroll in DE as:

...over 25 years old and employed...more than half are female...students are highly motivated. Their course completion rate exceeds that of students enrolled in traditional, on-campus courses. Successful distance learners are self-motivators who do not require regular reminders from the instructor or their classmates in order to meet deadlines. They have the discipline to establish a regular study schedule and set aside time daily or on specific days during the week for course work. (p. viii)

In my own technical writing class for Northeastern University Online (NUOL), I have found that the majority of my students are mid-career professionals who want either to hone existing skills or to switch careers. Many of them already have an undergraduate degree and are working toward a certificate in technical communications. The most successful students are those who are motivated to succeed, who can manage their time, who have basic typing and computer skills, and who aggressively ask questions when they need help. No matter how success-oriented learners are, the instructor still sets the tone for the course and, therefore, can influence the outcome of the educational experience.

How Instructors Can Facilitate Asynchronous Distance Education

When Ray Steele, former president of the U.S. Distance Learning Association, was asked if there are any subjects or disciplines that cannot be taught through DE, he replied, "There are probably some. But I think the right faculty member, sensitive to the audience needs, more than likely can find the right mix of technologies to each almost anything through distance learning" (2000, p. A50).

As with traditional learning, Steele's reply placed the responsibility for audience identification, course content, and delivery mode squarely in the instructor's lap. There is much discussion on the power shift of student to *self-directed learner* and of the teacher to *facilitator*. When we add the distance factor, both emerging roles become even more significant. Laying the groundwork and steering the class to success requires that a DE instructor initially take a strong and active role. Clay and Grover (1995) echoed this opinion in their article, "Throw Me a Rope: A Distance Learning Faculty Guide":

The phrase 'moving from being the sage on the stage toward being the guide on the side' was used during a distance learning conference presentation. This concept accurately conveys the transition a teacher makes as s/he moves from the traditional classroom to the distance learning classroom. In some ways, the distance-learning instructor applies his professional skill during the preparation stage of the distance learning course and his socialization and facilitation skills during the execution stage of the course.... Distance learning may be considered a depersonalized way to teach. Certainly, if traditional classroom methods are used at a distance, the chances of student alienation and separation are increased. Therefore, a special effort must be made to personalize the relationships between the instructor and the students.

The following activities enable DE instructors to set their learners up for success:

- Encourage ongoing, interpersonal dialogue.
- Provide prompt feedback.
- Offer an on-line orientation.
- Establish clear instructions and learning objectives.

Encourage Ongoing, Interpersonal Dialogue

According to Dixon (1996):

If distance teachers had to pick one quality that differentiates successful distance learners from those who are unsuccessful, it would be 'communication with the teacher.' Over and over, distance teachers told me that the students who communicate right away with the teacher do the best in their classes. (p. 103)

In a recent study that asked students to rate on-line classes, Carnevale (2000) noted that "they look for some of the same things found in traditional courses—like a knowledgeable professor who interacts with the students—plus additional features that help to create a sense of community among those taking the course" (p. A59). Linda Cooper (2000) agreed. In her Web-based article, "Online Courses – Tips for Making Them Work," Cooper, a professor at Macon State College, explained how she maintains ongoing communication with and among her undergraduate DE students:

- Instructor to Learner: Distributing a Friday afternoon message that previews the activities of the coming week, explains the assignment(s), and reminds learners of upcoming tests.
- Learner to Instructor: Learners, in turn, are required either to send Dr. Cooper a message at least every other week or to contact her by telephone.
- Learner to Learner: Lastly, to encourage learner-to-learner communications, Dr. Cooper requires that learners participate by posting to the threaded discussion and responding to other learners' comments and questions.

Although Cooper's involvement might seem excessive, her learners are undergraduates. The Friday afternoon reminders are probably a good idea; however, Friday afternoon marks the end of the school "work" week and the beginning of the weekend. Perhaps, a Sunday evening message might be more effective.

At Northeastern, I encourage lively, ongoing discussions by requiring that learners post responses to the weekly topics and that they react to the opinions of others. The discussion topics, which have no right or wrong answers, are meant to evoke reflection, discussion, and camaraderie among learners. I also distribute grades weekly with a personal note to each student, which, according to Kim Astrid Reid (1995) of Indiana University, "plays an important in student attitudes about distance learning. Attention to teacher-student interaction is important, since distance learners exhibit a strong bias toward personal contact with the instructor."

Provide Prompt Feedback

Nothing is more frustrating to a learner than having a question and not being able to get a prompt and clear answer. In their study on students' frustration with Web-based learning, Hara and Kling (1999) stated, "The lack of prompt feedback from the instructor was certainly a major source of frustration for students because they were concerned about their performance."

According to Fister (2000a), independent consultant Peter Blair suggested, "To give learners a sense that there really is a person behind the training, make yourself accessible to end users" (p. 42). Fister commented that Blair uses his name and photograph in his Web-based courses and issues an open invitation to send him feedback and questions by e-mail. Fister also cited Blair's comment that "by connecting with your learners, you make it more difficult for them to quit" (p. 42).

Gary Miller, Associate Vice President for Distance Education at Penn State University, noted:

There are three stages at which people need human contact. The first is before they even decide to take a course.... The second is when the learner begins the course.... This [happens] when students usually have the most questions, as they find themselves overwhelmed with technology and the unfamiliar learning

system. Finally, students need access to a live person as they go through the course, so they know where to turn for help if something goes wrong... This can come in the form of an e-mail link or phone number on the navigation bar. (as cited in Fister, 2000b, p. 34)

In the class syllabus, I let learners know that I read mail and reply to mail several times per day, except for Sundays. I also state that for most questions, students can expect a 24-to-48-hour turnaround. Most learners are comfortable with this turnaround, with the exception of those learners who lack the self-confidence or initiative to take a risk on an assignment and those who have limited computer skills.

Offer an On-Line Orientation

More and more studies are finding that an on-line orientation is a win-win situation for learners and for instructors because the orientation can prepare DE learners for success and can reduce the dropout rate. Bergmann and Raleigh (1998) noted:

Any student beginning any class wants information on class procedures, especially how to contact the instructor and how absences will be handled. In the distance education classroom, these items take on added dimension. While the orientation team can provide a general reduction in anxiety, the instructor, by addressing these class specific issues, increases the overall comfort level for the students. (p. 63)

Kiki Mulliner, a business-training consultant, commented, "It's a good idea to offer an orientation that explains what the training is all about. A precourse tutorial should set some ground rules...include some tips for time management...provide tips for technical troubleshooting...and instruction for how to use help" (as cited in Fister, 2000b, p. 33).

At New Jersey City University: Distance education learners are encouraged to take the school's CyberPrimer—a self-paced, Web-based tutorial designed to help students develop some of the skills they need to learn on-line. The CyberPrimer consists of the following learning modules:

- Email and Netiquette
- Web Browsers
- Search Engines
- Downloading Software
- Using the Class Listserv
- Using WebBoard 3.0 (the course conferencing software)

"This, for us, resolves the dilemma of determining who is and is not computer-savvy," says Marie Fosello, Director of Special Programs in the Continuing Education Department at New Jersey City University (as cited in Fister, 2000b, p. 36).

In the case of NUOL and many other programs that attract learners worldwide, a face-to-face session is not practical. Major and Levenburg (1999) suggested that “this orientation can take the form of a live session held in an interactive television environment, a videocassette prepared by the instructor and mailed to learners, or an introductory online [sic] session.”

One orientation session that has received national attention is Dr. Donald Winiecki's (1999) “Distance Education Boot Camp” at Boise State University. The 1-week boot camp, which is delivered completely by distance media, addresses the following areas:

- Helps learners to build support groups.
- Enables learners to become familiar with the learning environment.
- Provides tips for overcoming technical difficulties. (p. 433)

Establish Clear Instructions and Learning Objectives

Because instructors and learners are not face-to-face, it is imperative that instructors take as much time as necessary to ensure that the instructions for meeting the learning objectives are clear. Major and Levenburg (1999) suggested, “Clarify expected course outcomes, which should specifically identify the behaviors the successful learner will be able to perform upon completion of the learning experience.”

Hara and Kling (1999) described the frustration of students when an instructor is not clear when they commented, “Though I understand each sentence and word in the e-mail that the instructor sends us, I don't know how to use the instructions to compose the programming.” It was later found that the instructor tended to give learners flexibility, but learners saw this as a disadvantage. Hara and Kling continued, “When I asked her what was the most frustrating thing, Sheryl answered, 'Lack of teacher's support and teacher's clarification of her instruction. Usually I e-mail her if I have any questions and her answer is very ambiguous, too. So, I won't ask the second time.' ”

As a new and very nervous master's degree learner, I recall my own first experiences with on-line classes. I found it very confusing that the instructions for course completion were so open-ended. In some cases, the instructions were contradictory. In all cases, I had to ask questions to clarify, in concrete, measurable terms, what I needed to do to meet the class requirements and to exceed the class requirements.

As a result of my own frustrating experiences, I ensure that my students can see their course deliverables summarized, by date, in one table and listed individually in the weekly lessons. The course introduction also clearly states the ground rules for posting responses and feedback and how grades are determined.

Assisting With Technical Problems – The Institution's Commitment

Although some DE experts advocate that the instructor should lend assistance when technical problems arise, it is rarely possible. The instructor should be an expert in a particular field of expertise, which is probably not the field of computer technology. Diagnosing computer- or telephony-related problems, especially remotely, requires a set of specialized skills that most folks, including DE instructors, just do not have.

As part of an institution's commitment to a DE program, there should be a 24-hour, 7-day-per-week (24 x 7) help desk of technical support folks who are well versed in the technology and who are available to help learners with their technical difficulties. As part of the learners' orientation, however, it is important to point out that even these technical folks may not be able to solve every learner's technical problem(s). For example, if a learner is not using a recommended configuration, no technical person can or should be expected to troubleshoot the equipment.

Final Thoughts

The most important role for instructors is to impart their expertise in a way that contributes to the success of each learner, individually, as well to the class, as a whole. Moore and Kearsley (1996) stated that "interactive teaching is really a 'mental set' that requires teachers to think about inducing knowledge rather than instilling it, to asking questions rather than giving answers, to focusing on student participation rather than the teacher's presentation of information" (p. 133).

Finally, as Atieh (1998) so eloquently stated:

The Internet has the capacity to be the largest educational enterprise ever undertaken.... It can even be said that since such a large cross-section of life is represented online (or will be soon), the Net is an education in and unto itself. While much of what we have learned has come from formal educational situations in traditional schools, every individual person is capable of learning to learn, so to speak, on the Internet. You are no longer restricted to the limited experience of one individual and the learning environment of a few classmates. *The world is your classroom.* (pp. 20-21)

References

Atieh, S. (1998). How to get a college degree via the Internet: The complete guide to getting your undergraduate or graduate degree from the comfort of your home. Rocklin, CA: Pima Publishing.

Bergmann, M., & Raleigh, D. (1998). Student orientation in the distance education classroom. Proceedings of the 14th Annual Conference on Distance Teaching and Learning, 61-66.

Carnevale, D. (2000). Study assesses what participants look for in high-quality online courses. Chronicle of Higher Education, 47, A46.

Carr, S. (2000). As distance education comes of age, the challenge is keeping the students. Retrieved July 1, 2001, from the World Wide Web: <http://www.chronicle.com/free/v46/i23/23a00101.htm>.

Clay, M., & Grover, R. (1995). Throw me a rope: A distance learning faculty guide. Retrieved July 1, 2001, from the World Wide Web: http://www.coe.uh.edu/insite/elec_pub/html1995/1614.htm.

Cooper, L. (2000). Online courses – Tips for making them work. Retrieved July 1, 2001, from the World Wide Web: <http://www.thejournal.com/magazine/vault/A2729.cfm>.

Corrigan, D. (1996). The Internet university. Harwich, MA: Cape Software Press.

Dixon, P. (1996). Virtual college: A quick guide to all you need to know how to get the degree you want with computer, TV, video, audio, and other distance learning tools. Princeton, NJ: Peterson's Guides.

Duffy, J. (1997). College online: How to take college courses without leaving home. New York: John Wiley & Sons.

Fister, S. (2000a). 10 ways to motivate online learners. Inside Technology Training, 4(2), 40-42.

Fister, S. (2000b). Getting a good start. Inside Technology Training, 4(3), 32-36.

Griffith, J. (1999). Capella puts Internet education on the syllabus. Retrieved July 1, 2001, from the World Wide Web: http://www.capellaeducation.com/pressroom/press_release/interneted/internet.html.

Hara, N., & Kling, R. (1999). Students' frustrations with a Web-based distance education course. Retrieved July 1, 2001, from the World Wide Web: <http://www.slis.indiana.edu/CSI/wp00-01.html>.

Major, H., & Levenburg, N. (1999). Learner success in distance education environments: A shared responsibility. Retrieved July 1, 2001, from the World Wide Web: <http://www.horizon.unc.edu/TS/commentary/1999-01.asp>.

Moore, M., & Kearsley, G. (1996). Distance education: A systems view. Belmont, CA: Wadsworth Publishing.

Peterson's Guides. (Ed.). (1993). The electronic university: A guide to distance learning programs. Princeton, NJ: Author.

Reid, K. A. (1995). Student attitudes toward distance learning. Retrieved July 1, 2001, from the World Wide Web: <http://www.tcom.ohiou.edu/ouln/Stdtatt.htm>.

Rossman, M., & Rossman, M. (1995). Facilitating distance education. San Francisco, CA: Jossey-Bass.

Steele, R. (2000). A distance education advocate calls for better financing for such programs. Chronicle of Higher Education, 47, A50.

Winiiecki, D. (1999). Preparing students for asynchronous, computer-mediated coursework: Design & delivery of a "Distance education boot camp." Proceedings of the 15th Annual Conference on Distance Teaching and Learning, 433-438.

11. Good Practice and Motivation in Online Courses

*Carla R. Payne, Ph.D.
Professor of Graduate Studies
Chair, Graduate Program Online Option
Norwich University
Email: cpayne@together.net*

Abstract

The introduction of information technology presents us with the choice between following the best and most effective practices or the path of merely external incentive and reinforcement. The technology itself is neutral, a tool that can be turned to whatever ends we select. Its great genius is that it facilitates the application of the best of what we know to more learners than was previously possible. Current research on learning indicates that *action*, *interaction* and *reflection* are conditions of optimal cognitive development in various learning environments. My recent experience in teaching "traditional" undergraduate philosophy and ethics courses online shows that when part of the learning design, they are also *motivational factors*, which help students to persevere, participate at increasingly higher levels and take responsibility for their own learning. In this paper I will first take a close look at the theoretical aspects of these three conditions, and then provide a sketch of an online applied ethics course in which I attempted to implement them. While the course was part of a "traditional" college degree program, I had the opportunity to shape the syllabus and specific course objectives, as well as the ways in which we used a particular courseware system. The focus of this discussion will be the writing assignments for the course, how they were designed to foster action, interaction and reflection and thus to motivate students to persist and to achieve course goals.

Theoretical Considerations

Progressive educators since John Dewey have believed that the mastery of "content" or information is only one aspect of significant learning, and that the overriding goal of education must be *human development* in the broadest sense. This comprehends "transformation" in ways of thinking, in the making of meaning for ourselves, and in the recognition of complexity and the evolution of more complex and nuanced responses. Such growth is intrinsically rewarding for the student, and we can specify some of the conditions and circumstances that foster qualitative changes in thinking. These are trade secrets which good teachers have always known, no matter what the context of their work--the "traditional" classroom, a tutorial or a mentoring relationship-- but which others have ignored in favor of more easily standardized approaches or measurable outcomes. One pillar of recent learning theory is that the learner must be *active*, transforming information into knowledge by decoding it and constructing their own meaning from it, in terms of what they already know. (Winn, 1997)

In the "Seven Principles of Good Practice in Undergraduate Education" (1987), Chickering and Gamson also stress that students "must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves." Opportunities for activity and self-direction on the part of students are often very limited in the conventional classroom, if not by the purposes of the instructor, then by the constraints of schedule and location. What control do they have over the learning situation? To what extent can they shape it to fit their individual understandings? If Piaget and the constructivists who have developed his ideas are right, then desired conceptual change will happen only as interactions between existing cognitive structures and new experience mesh. Such interactions require that what each learner brings to learning be an important part of an educational situation, implying that it must be expressed and then taken into account in the design of that environment, and this is difficult to achieve within the traditional setting (Kanuka and Anderson, 1999). John Dewey made this very point in 1938: "The trouble with traditional education was that (educators) did not consider . . .the powers and purposes of those taught." (p. 45)

This knowledge construction is contextual, and the social dimension is an important aspect of the context. The teacher-student *interaction* is a significant element of the social dimension of learning, complementing peer-to-peer interactions. Following Vygotsky, Winn (1997) describes the ideal relationship, not the traditional asymmetry of lecturing expert and passive novice:

. . . the interaction between the teacher and the student is such that the teacher acts beyond what the student already knows but within a 'zone' demarcating the knowledge the student is capable of constructing. . . .the teacher provides information and guidance about how to build knowledge from it that will certainly alter mental models but not break them.

In "Implementing The Seven Principles: Technology As Lever," (1996) which extends the original "Seven Principles for Good Practice in Undergraduate Education," Chickering and Ehrmann make this same point:

Traditionally, time-delayed communication took place in education through the exchange of homework, either in class or by mail (for more distant learners). Such time-delayed exchange was often a rather impoverished form of conversation, typically limited to three conversational turns: 1. The instructor poses a question (a task); 2 The student responds (with homework); 3. The instructor responds some time later with comments and a grade. The conversation often ends there; by the time the grade or comment is received, the course and student are off on new topics.

Chickering and Ehrmann are optimistic that information technology does offer the possibility of sensitive individualized exchanges:

Now, however, electronic mail, computer conferencing, and the World Wide Web increase opportunities for students and faculty to converse and exchange work much more speedily than before, and more thoughtfully and "safely" than when confronting each other in a classroom or faculty office. Total communication increases and, for many students, the result seems more intimate, protected, and convenient than the more intimidating demands of face-to-face communication with faculty.

Reflection is frequently mentioned in the literature as an important element in learning, but a precise definition of the term is often lacking. Kanuka and Anderson (1999) give an indication of what they mean:

After the learners have done something, time to reflect is required. Reflection 'can be seen as an essential human capacity for thinking about oneself, events, or circumstances with a view to interpreting and understanding those things.' . . . Time facilitates learner reflection about new experiences, how those experiences compare to their current understandings, and how different understandings might provide learners with improved understandings.

When "content" and its mastery are not the sole objectives, but this sort of cognitive development and the acquisition by the learner of metacognitive knowledge and skills are also valued goals, the close and continued interchange between teacher and learner is indispensable. This interchange can be facilitated and enhanced by information technology. There is an entire literature now about the extension of the Vygotskian concept of *scaffolding* "the effective intervention by a peer, adult or competent person in the learning of another person" into electronically mediated education. McLoughlin, Winnips and Oliver (2000), for example, find that asynchronous environments allow us to move beyond "teacher initiated forms of intervention" to "an active, participatory role for students, as initiators and co-participants in (a) self-regulating learning process."

Theory into Practice

In designing online courses, I make an effort to operationalize these concepts in the written assignments, by encouraging students to be active, to interact with each other and with me, and to reflect on their learning. These measures appear to be intrinsically motivating, in that they help students to persist through the significant difficulties of becoming accustomed to the new levels of abstract thought and expression typical of a philosophy course. There are definite limitations associated with the structure of a traditional course--prescribed texts, a fixed calendar, a grading policy--but it proves to be possible to implement at least some measures that are conducive to these behaviors.

Students in my recent course in Moral Decisionmaking (applied ethics) were working with BlackBoard, but the practices I describe are not dependent on any particular courseware or delivery system. They do rely on email and a file transfer utility. The general framework is one I have used several times for philosophy courses. This particular 3- credit course was offered in an 8-week format, making it especially intensive with regard to weekly student workload.

The following information was accessible to students in our course area on BlackBoard a week or more prior to the first day of the term:

1. Course description and overview.
2. Goals of the course: Develop a critical perspective toward moral decisions; Improve questioning skills.
3. Key themes.
4. Text and resources.
5. Grading policy, including relative weight of written assignments, midterm, course final and participation in class forum.
6. Weekly responsibilities, including participation in asynchronous forum.
7. Complete syllabus, including all reading and writing assignments, midterm assignment and course final.

Empowerment of students is a necessary condition of promoting the development of their independent thinking, and giving up the power of surprise e.g., in making assignments is one important way of giving them some control over the situation. Knowing beforehand what work will be required also shifts the burden of responsibility for meeting those requirements to the student, whether this involves time management or early clarification of specific expectations. This is a general strategy for encouraging active learning. And having the whole picture of the course at the start also helps students to make a commitment to see it through.

I regard writing as key to learning, and I emphasize it by making many short assignments, rather than fewer long ones. This gives the student the chance to do enough writing to gain both in facility and confidence, to have more chances to "get it right," and it also creates more opportunities for faculty coaching. Submitting two short essays per week, and receiving comment on each within a day or so, students quickly come to regard the exchange as a conversation, rather than as a process of

continuously being judged. They can be *active* in responding to the assignment questions, which are designed to focus attention on the major themes of the course while inviting the expression of an individual point of view. Some of the questions require students to make choices of topic and approach. Students are *interacting* with a mentor, asking questions of clarification about the content and about the faculty response to their work. They are asked to *reflect* on their own experiences and to reconsider them in light of the readings and the class conversations.

The individual work with faculty complements the group discussions in the asynchronous conferences. I find that a simple grading scheme for assignments a scale of 0-4 facilitates concentration on the material, just because it has no obvious relationship to the standard system of grades. (A conventional letter grade system is used for the final course assessment.)

There were two written assignments for most weeks, one due on Wednesday and the other on Saturday. (The total of 15 assignments for the course included a midterm and a final, each requiring more extended writing, and also designed to foster active and critical thought.) For 13 of the assignments, students were asked to write 1-page answers to questions drawn from the text or devised to highlight particular concepts. The assignments were designed to elicit student *activity* by presentation of open choices in interpretation of questions, application of concepts and resources to consult; invitations to *interaction* included the opportunity to ask questions of the faculty mentor by email and to respond to critique of written assignments; encouragement to *reflection* included the use of questions to turn the student's attention to her/his own positions and invite comparison with those in the readings. Some examples:

1. Questions posing "open" choices:

- A. Assignment: Using resources at Hinman's website, make your own 1-page argument for or against the death penalty as morally justifiable punishment. (L. Hinman is the author of the required course text.)
- B. Assignment: Choose one of the online articles at <http://ethics.acusd.edu/poverty.html>. Summarize the article in a 1-page essay, and relate it to at least one of the theoretical issues outlined in the Hinman chapter.

2. Invitation to interaction:

From the Weekly Responsibilities section of Course Information: "Students are expected to take responsibility for their own learning processes, and for requesting clarification or explanations when they are needed. . . . If you have questions about assignments, please contact me by email."

3. Encouragement to reflection:

- A. Assignment: Fill out the self-quiz in Hinman, pp. 14-17. Then answer the following question (from Hinman's website at <http://ethics.acusd.edu/intro.html>) in a 1-page essay: What are your own deepest moral values? What moral qualities

do you look for in other people as well as in yourself? Are these values that you think everyone shares, or are some of your values ones that you feel are not always observed by our culture as a whole? How have your values changed, if at all? What influenced their development?

In this particular course the core work was to help students learn to distinguish between moral issues and factual issues, and to articulate the concept of *values*. The higher order reasoning necessary to draw this distinction was not always in evidence at the start of the course. Substantial coaching was required to keep students on task and to help them to understand why anecdotes or broad generalizations are not *in themselves* adequate critical or analytical responses to questions such as "What makes (this issue) a moral issue rather than a factual one?" A graded assignment without directive commentary would be a negative motivation, because it would tend to discourage further effort by requiring the student guess, "what I want." Various features of word processors make very specific comments relatively easy and readily accessible to a student reviewing her work. (I returned graded and annotated assignments via the BlackBoard file drop box.)

The asynchronous format allows more time to think than the typical classroom discussion, but the fact that comments are fixed in writing to be scrutinized by the student on her own, dictates that we take exceptional care in wording them, in the individual exchanges or in the class forum. They should further the interaction, rather than cut it off, and must, in my experience, be balanced between supportiveness and challenge to actively consider and reconsider the issues, to reflect on the meaning of what the student has read and what the student has written.

Frequent opportunities for instructor feedback are also opportunities for sensitive mentoring around "self-efficacy" helping students to form an accurate picture of their ability to learn in a specific course. Winn (1997) points out that "Our success in knowledge construction is significantly influenced by our beliefs in our own ability to learn it;" overconfidence and lack of confidence both can affect the quality of learning and whether it is an enjoyable experience."

How do students respond? Typically, students begin by trying to establish if there is a recipe or formula for the written assignments that would satisfy me and earn them good grades. As they become convinced that I am really trying to elicit their own efforts at understanding the ideas, most attempt to grapple seriously with the subject matter. Moving students from an atheoretical position to a more abstract level of cognition must be one of the major objectives of an introductory philosophy course, and this transition proves to be very difficult for some of them. They tend to cling to summaries of the individual readings, and resist focusing on embedded concepts. Instead, they often supply personal anecdotes or unsupported opinions in answer to the assigned questions. With a limited number of students in a class, it is possible to provide the individualized coaching they need to begin to construct more sophisticated understandings. Effective mentoring depends upon the ability of the instructor to respond quickly and this, of course, is possible only when class sizes are limited. Such

mentoring is motivational in many important ways, helping student to persevere and to discover the rewards and pleasures of learning. Information technology increases our ability to do more and better mentoring, to make the learning experience more truly learner-centered and more successful.

References

Chickering, Arthur W. & Ehrmann, Stephen. (1996). Implementing The Seven Principles: Technology As Lever. Retrieved February 3, 2001, from the World Wide Web: <http://www.tltgroup.org/programs/seven.html>.

Chickering, Arthur W. & Gamson, Zelda. (1987). Seven Principles of Good Practice in Undergraduate Education. Retrieved February 10, 2001, from the World Wide Web: <http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/7princip.htm>

Dewey, John. (1938). Experience and Education. New York: MacMillan, p. 45.

Hinman, L. (2000). Contemporary Moral Issues: Diversity and Consensus, 2nd ed.. Upper Saddle River, NJ: Prentice Hall.

Kanuka, Heather & Anderson, Terry (1999). Using Constructivism in Technology-Mediated Learning: Constructing Order out of the Chaos in the Literature. Radical Pedagogy: 1(2).

McLoughlin, C., & Winnips, J. C., & R Oliver (2000). Supporting constructivist learning through learner support on-line. Retrieved February 3, 2001, from the World Wide Web: <http://users.edte.utwente.nl/winnips/papers/support.html>.

Winn, William. (1997). Learning in Hyperspace. Retrieved November 6, 2000, from the World Wide Web: <http://www.umuc.edu/ide/potentialweb97/winn.html>.

12. Processes for Motivating Online Learners from Recruitment Through Degree Completion

Heather S. Gibbons, Ph.D.
Director of Online Education
Assistant Professor of Business Administration
Brenau University
Email: hgibbons@lib.brenau.edu

George P. Wentworth, M.P.A., C.P.A.
Assistant Professor of Accounting
Former Director of Distance Learning
Brenau University
Email: gwentworth@lib.brenau.edu

Abstract

It is essential to recruitment and long-term retention goals that students' motivation and satisfaction be maintained. Online learners, as a class, are typically non-traditional learners possessing a variety of motivations for seeking post-secondary degrees. This notwithstanding, the decision to become a degree-seeking student is a difficult one. Promotional materials for online programs should address issues of concern, which include attendance, performance, and the use of an online delivery method. While online learners are motivated to pursue higher education, many will require additional motivation and encouragement to apply to and remain in an institution. Online admissions staff should be trained in dealing with nontraditional students and understand the motivations affecting their decision process. A well-trained faculty, schooled in andragogical¹ learning theory, will sustain student motivation by facilitating classes employing tools and techniques specific to nontraditional students' learning styles.

¹Andragogy describes the approach based on self-directed learning theory. Malcolm Knowles, a recognized leader in the field of adult education, coined the term andragogy from the Greek words *aner*, meaning adult, and *argogus*, meaning guide or learner, to describe the art and science of helping adults learn (Knowles, 1992).

Recruitment

“Typical distance learners are those who don’t have access to programs, employees who work during scheduled class hours, homebound individuals, self-motivated individuals who want to take courses for self-knowledge or advancement, or those who are unable or unwilling to attend class” (Charp, 2000, p. 10). The online education market is attracting an increasing number of these students, seeking nontraditional methods to further their formal education while beginning and advancing in their careers. This new class of nontraditional students comes to the online education marketplace with a motivation to learn which stems from their life experiences, needs and expectations.

There are many theories about what motivates individuals. In higher education, the motivation is primarily intrinsic. Students typically seek a higher level of education because they are motivated to do so, not for the sake of education, but to enhance their personal and/or work lives. Online education is primarily directed to nontraditional learners. Self-motivation of the nontraditional learner is frequently stated as one of the most significant factors influencing academic achievement (Kuh & Cracraft, 1986; Wolfgang & Dowling, 1981). However, in the online paradigm, it is essential to the success of the student and the program that the student’s initial self-motivation to learn be nurtured. When examining an institution’s ability to motivate online learners, the two goals of recruitment and retention emerge, each requiring its own motivational approach.

With increased awareness of the availability of online education programs, an untapped global market has been created. Only 17% of today’s college students are traditional, with the majority comprised of students who are older, part-time, women, and/or working (Webber, Stokes, & Yanosky, 2001). The number of traditional-age students entering the online education environment is also increasing. Most expect quality degree programs, reasonable tuition and convenient student services.

The efforts essential to recruiting students for online programs are necessarily different from those for recruiting students for campus-based programs. Institutions should employ a focused guidance process that begins when students form their first impressions of the institution and its online programs. When feasible, institutions should designate one or more online admissions representatives to serve as personal contacts, dedicated to online student concerns and problem resolution. Program-specific advisors for online students are also helpful. This advisor serves as a mentor for online students throughout their degree program. Online students are then able to contact only one or two individuals at the institution for assistance and advice in any area.

This guidance process is most successful when it begins with full disclosure of processes and institutional expectations relating to all areas of online learning. Beginning at the recruiting phase and continuing through degree completion, this process should utilize a variety of informational and instructional tools tailored to online

delivery. The implementation of these tools is essential and is accomplished by thorough training of all necessary staff and faculty.

Primary recruiting considerations are marketing efforts; reasonable tuition; and selling the institution, its academic programs, and the availability of crucial student support services.

Recruiting efforts begin with a marketing program specific to nontraditional students, a population that is the most accepting of online education. A national average online class size of 12-15 students has created a demand for online “seats” that far exceeds availability. The availability of quality degree programs is the primary criteria for online students, as their options are not geographically limited. These students, Internet savvy consumers, seek an education provider offering the online tools to which they are accustomed in today’s e-commerce society. Attracting these students requires targeted advertising with a focus on the institution’s academic program quality and its ability to provide valued essential services.

Admissions personnel typically handle the next step in the recruitment process, selling the student on the institution and its online programs. Online learners, the products of a fast moving society, value time, productivity and measurable results. They demand only that which is necessary to the learning process and shun traditional student life distractions. Unlike traditional students, online students are not looking for the time-honored institutional strengths: beautiful campus, local cultural events, athletics, and a variety of student life opportunities.

An institution’s strengths in the eyes of potential online students are: quality programs, reasonable tuition, small classes, and readily accessible student services. These strengths, as well as an academically qualified faculty, trained in online methods, are distinguishing trademarks of a quality online program. Promotional materials and communications with potential online students should emphasize these strengths because it is at this early stage that students form their strongest impression of the institution. Nontraditional students will typically search for an online education provider using the Internet, which underscores the importance of a professional online presence.

Tuition for online classes should not be prohibitive. Online students view educational programs as just another consumer product and service. Students perceive little differentiation among online education providers except in the cases of accreditation and the reputations of a few high-profile “branded” institutions. This perception subjects online offerings to the traditional supply and demand pricing model. Most online students seek nothing more than a retail relationship with their education providers as perceptions of value in education change. Therefore, tuition can reach a point of market resistance, resulting in prospective online students extending their searches.

Today’s higher education consumer is following the trend towards an e-commerce market model. Online students have a different orientation focused on convenience. They are accustomed to transacting business via the Internet in a leisurely, secure, and

supportive environment. Recruitment of online students is made much easier if the institution's critical administrative and academic support services are available online. These services should include, but not be limited to, online application, admissions, financial aid, advisement, registration, and tuition payment processes. Online students also require access to Internet-based resources, including library materials, related website links, and online course materials from textbook publishers.

Other student support services, especially technical support and academic information, must be available. Providing a trained, professional, and courteous help desk staff on a 24x7 basis is an invaluable service to online students. Internet accessible assessment and grade reporting should also be made available online.

Retention

The solution for retaining online students is the same for on-ground students: keep them happy. To satisfy the typical online student, institutions must utilize competent, trained instructors and offer online classes on a fast-paced schedule. Most online students wish to pursue an entire degree online, not participate in one or two isolated courses.

Untrained instructors who attempt to bring traditional on-ground techniques to the online classroom can be detrimental to the motivation of online learners, condemning the whole process to failure. Properly trained instructors, supported by reliable technology, will engage students, maintaining their interest and motivation to meet the rigorous challenges of the fast-paced virtual classroom. Online instructor training provides insight into the differences between the traditional learner, who values the time honored didactic objectivist² approach, and non-traditional learner who values the experiential applications-based constructivist³ approach.

Assisting students with proven time management techniques is another essential motivational tool. Online students must learn early in their initial online experience to balance the demands of the virtual classroom, family, work place and personal lives to be successful. Online learners cannot always meet strict time demands. It is essential that faculty maintain a caring, understanding attitude and provide a flexible learning environment that stresses outcomes over processes. Online education providers must make effective use of the online platform to design, construct and deliver meaningful online courses that address the motivations, needs, learning styles and constraints of nontraditional learners.

²The objectivist approach casts the teacher in the role of all-knowing lecturer, responsible for delivering content to passive students (DeNigris & Witchel, 2000)

³"The constructivist approach to learning acknowledges that both teacher and student bring prior knowledge to the learning experience. Over time and through interactions with others in the learning environment, the student co-constructs new meaning as a knowledge-building process piece by piece, new knowledge is built onto former knowledge...the most widely accepted model of learning in education today." (Morphew, 2000, p. 1).

The open and collaborative sharing of student experiences, within the context of the course material, serves to enrich the learning process for themselves and their peers. This process increases their level of satisfaction and, therefore, their motivation to continue and succeed. Online facilitators are taught to encourage a continual stream of application-based dialogue concerning the subject matter in a constructivist atmosphere “where meaning is created in relation to students’ prior experience and knowledge” (Truman-Davis, Futch, Thompson, & Yonekura, 2000, p.50). This is best accomplished utilizing a collaborative experiential learning process that is learner-centered rather than instructor-centered, dialogue-based rather than lecture-based.⁴

Those new to online learning might believe that an online program will be less difficult than its on-ground equivalent. However, online classes are necessarily rigorous and fast-paced. Students must become quickly acclimated to the dynamic pace of the virtual classroom. To maintain their motivation, there should be little or no “downtime” during or between classes. If allowed to get out of the habit of daily participation, students may become disinterested and leave the program for other pursuits. Students are generally expected to be present in the virtual classroom five of any seven days, the basic rule that applies to instructors as well.

It is essential to involve students early, not allowing them to “lurk” in the virtual classroom. Once enrolled, student motivation is sustained when instructors employ strategies that address their needs to learn. These strategies include frequent contact, interesting and informative content, consistent support and meaningful assignments that allow them to apply what they know or have experienced.

Online instructors are responsible for monitoring the level of participation among class members and encouraging those who are not contributing. Initially, online instructors actively elicit student participation. Then, as students become comfortable with the collaborative process and increase their participation, the instructor shifts roles. This shift from motivator/instructor to guide and facilitator should be transparent to the students who begin to serve as the primary sources for learning in an open and collaborative environment. Although instructor participation decreases over time, visibility should remain high during the entire course. An ongoing virtual presence indicates interest and sustains students’ motivation to succeed (see figure below).

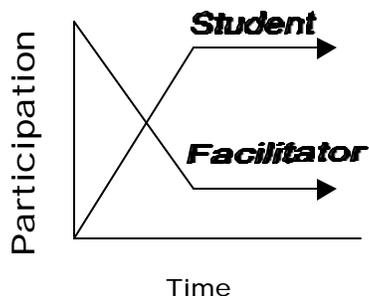


Figure 1.

⁴Any “lecture” materials presented online should be short and concise.

Dialogue is the methodological heart of the online learning paradigm. “Learning a subject well requires [the ability to provide] intensive discourse in that field, whether it be math (Mokros, Russel, & Economopoulos, 1995), science (Gallas, 1995), social studies (Lindquist, 1995), literature (Brady & Jacobs, 1994), or any other discipline” (Coulter, Konold, & Feldman, 2000). “The learners’ ... need for individual dialogue” contributes as much to the teaching and learning structure as the teacher offers in the way of course content or design (Saba, 2000, p. 4).

The most effective tools for generating dialogue are discussion questions, case analysis, and other critical thinking- applications-based materials that put theory into practice. These tools, combined with group and team activities integral to the learning model, allow learners to synthesize theory with their own experiences to best demonstrate learning outcomes. “Discussions are characterized by students articulating their own understandings, raising questions, and examining others’ assertions. In the process, the students go beyond hands-on activities to interpret and reflect on their experiences and develop new understandings of phenomena” (Coulter, et al., p. 45).

Students enthusiastically embrace these activities because they are motivated by their intrinsic pursuit of personal growth and achievement. Classes structured to provide an adequate number of these activities in support of the nontraditional learners’ motivated need to learn are essential to online student retention.

Students will likely be more attracted to, and remain enrolled in, institutions offering classes that ultimately lead to a degree or certificate (end product). Rarely will new students enroll in individual classes that are not part of an online degree program. If attracting new students is a primary consideration, offering purely online degree programs will result in the incremental enrollments desired.

Institutions attempting to attract and keep online students must offer a technology infrastructure capable of supporting the student-facilitator interaction necessary for successful online class delivery. Technological advances have created an educational environment where student and professor are no longer tied to synchronous learning activities nor to physical meeting locations. Although a reliable and stable delivery platform, easy to master and versatile in functionality is an important part of the online delivery equation, it is simply a tool used to affect the transfer of knowledge.

Although the intuitiveness and ease of the new course platforms places this technology behind the elements of instructor and curriculum in importance, it is critical that students be adequately trained in the use of the online delivery platform. The inability to operate efficiently and effectively within the framework of the delivery platform will create frustration and destroy online students’ motivation. Depending on the platform used, and the time available, two primary methodologies serve to provide students with the necessary skills to navigate the virtual classroom.

A 3- to 5-day instructor-led course, introducing the various tools and components of the platform can be very effective. This short training course should begin with an overview

of the platform and lead into hands-on use of each feature. Designing simple tasks that allow students to use and become comfortable with each component reinforces the skills needed to navigate successfully through the construct of the platform. This training class should be conducted online for all new online students. Another benefit of this approach is that students will establish initial relationships and begin to interact with each other in a low stress, non-critical learning environment.

In the absence of time and/or instructor resources, students may instead be permitted early access to their first virtual classroom. In this case, a self-paced tutorial should be provided for completion by a certain date beyond which students will be expected to have mastered the essential technical skills. Many of today's better-designed platforms provide this type of built-in tutorial. Regardless of method used, it is essential that students enter the academic virtual classroom operationally proficient and ready to proceed with coursework.

Conclusion

Institutions have two goals concerning all students: recruitment and retention. To be successful in recruiting and retaining online students, the nontraditional student's needs must be understood. Their criteria for selecting an education provider do not include many of the time-honored institutional strengths, but instead focus on the quality of degree programs, relative cost, and the availability of critical student-centered online support services. Distance precludes most online students from accessing tangible campus-based resources available to traditional students. Therefore, they are motivated to choose an institution for other reasons.

These students are categorically different from traditional students as a result of their life and work experiences, which affects their educational motivation. These students are educated "e-consumers" requiring an alternative framework within which to learn. To attract and retain students to online programs, institutions must remain mindful of these differences. Online students are responsive to marketing efforts addressing their incentives to learn. They will be attracted to institutions they perceive to be in tune with their motivations. Targeted (population specific) marketing efforts, therefore, are necessary to reach these students. Attempts to attract them with historical traditions and conventional institutional culture will prove unsuccessful.

Online learners should be recognized for who they are and where they stand in achieving their educational goals. Therefore, retention of online students is also achieved by supporting their motivations to learn. This is best accomplished in a fast-paced virtual environment utilizing activities that focus on their experiences. Once enrolled, online students interact most frequently with faculty. Trained faculty, therefore, are a significant influential factor in retaining students. Their motivational skills are crucial. Poor instructors can quickly lead to attrition.

High quality support services and a reliable technology infrastructure are essential for online student satisfaction. Students will tolerate the occasional poor instructional experience as they recognize it as a short-lived problem. However, technology problems resulting in lost or poor connections and other unexplained malfunctions might be perceived as long-term systemic problems. This perception will destroy motivation and result in attrition. Reliable technology, quality technical support, and sufficient training of students in the delivery platform operation are essential to support motivation to learn.

Online students, greatly motivated by what is important to them, seek out institutions that understand and appeal to their motivations. Addressing the differences between traditional and nontraditional students at all levels of the student/institution relationship will ensure high levels of student enrollment and retention. Refusing to acknowledge these differences, clinging to traditional recruiting and retention strategies, will be ineffective and result in the eventual failure of an institution's online efforts.

References

Webber, S., Stokes, P., & Yanosky, R. (2001). Facts, figures and trends: An analyst's view of the industry. Washington, DC: Blackboard Summit Conference.

Charp, S. (2000). Distance education. THE Journal, 27(9), pp. 10-12.

Coulter, B., Konold, C., & Feldman, A. (2000). Promoting reflective discussions: Making the most of online resources in your classroom. ISTE Learning & Leading with Technology, 28(2), 44-49, 61.

DeNigris, J., & Witchel, A. (2000). How to teach and train online. Needham Heights, MA: Pearson.

Knowles, M. (1992). Applying principles of adult learning in conference presentations. Adult Learning, 4(1), 11-14.

Kuh, G., & Cracraft, L. (1986). Predicting adult learners' success in higher education. In J. A. Lucas (Ed.), The Adult Learner: Four Aspects, AIR File 27. Tallahassee, FL: Florida State University, Association for Institutional Research.

Morphew, V. N. (2000). Web-based learning and instruction: A constructivist approach. In Linda Lau (Ed.), Distance Learning Technologies: Issues, Trends and Opportunities, pp. 1-15.

Saba, F. (Ed.). (2000). Shifting the focus from teaching to learning. Distance Education Report, 4(13), p. 4.

Truman-Davis, B., Futch, L., Thompson, K., & Yonekura, F. (2000). Support for online teaching and learning. Educause Quarterly, 23(2), 44-51.

Wolfgang, M., & Dowling, W. (1981). Differences in motivation of adult and younger undergraduates. Journal of Higher Education, 52(6), 640-648.

13. Non-Traditional Pharmacy Doctorate Degree Upgrade Program at the University of Kansas Edwards Campus

Sheri Perry
Associate Director Instructional Development
KU Edwards Campus
Email: sperry@ukans.edu

Ronald E. Ragan
Director of Non-Traditional Pharmacy Education
KU Edwards Campus

Abstract

One of the myths of web-based education is that it compromises the integrity of the course or program. If designed, developed, and administered properly, a web-based course can achieve equivalent or superior educational outcomes when compared with traditional courses. In some cases a web-based course can be a more fulfilling educational experience for the students as well as the instructor. In the Spring of 1999 the University of Kansas Edwards Campus began the Non-Traditional Pharmacy Doctorate program (NTPD). This program is designed to upgrade the education of practicing pharmacists to the Pharmacy Doctorate level, and is completely online, and asynchronous. The program is rigorous yet the academic goals are attainable. Since its inception the program has had a 92-94% retention rate, has grown approximately 40-50 students a year, and stands near a 300% enrollment increase. This paper outlines the flexible pedagogical style, academic issues, and technical support features that have contributed to program growth and retention.

Introduction

The University of Kansas is an academic institution of approximately 26,000 students. The KU Edwards campus is an integral part of the university and is located in Overland Park, Kansas approximately 40 miles from the Lawrence campus. The goal of the campus is to offer high quality academic programs to the Greater Kansas City community and beyond. The Edwards Campus teaches over 50% of the graduate credit hours offered by the University of Kansas. The focus of this campus is primarily to address the academic needs of working adults. An important part of our mission at the KU Edwards Campus is to provide post-baccalaureate educational opportunities to working adults. These opportunities are provided in a way that encourages a continued productive professional career. The typical Edwards Campus graduate student balances 40 hours or more of work a week, a busy family life and community obligations while completing an average of five-credit hours a semester.

In the Spring of 1999 the Edwards Campus began the Non-Traditional Pharmacy Doctorate program (NTPD). This program is designed to upgrade the skills and education of practicing pharmacists to the Pharmacy Doctorate level and is completely online, and asynchronous. The program is rigorous yet the academic goals are attainable. Since its inception the program has had a 92-94% retention rate, has grown approximately 40-50 students a year, and stands near a 300% enrollment increase. The continued growth of this program is attributable to the flexible pedagogical style, academic content quality, and technical support combined with the motivated student body.

About the Students

The students in this program are working professionals, most with rigorous patient care responsibilities. They require quality in every aspect of the program and expect both a sound academic and applied perspective to the issues facing clinical pharmacists today. Adult professional students seek programs with educational value since they are sacrificing their personal time and financial resources to enhance their skills. They also demand a program that accommodates their busy schedule without diminishing the quality of the educational experience. To address those needs we have designed the NTPD program as a web-based interactive curriculum. The asynchronous style provides maximal time independence and flexibility yet maintains the rich faculty-student interactions necessary to engage students in active learning. A portion of the success of the program must be attributed to the adult students in the program that are highly motivated to succeed and take responsibility for their education.

In the Spring of 2001, two and one-half years after enrolling with the first class of students, the Edwards Campus and The School of Pharmacy are proud to acknowledge that the first student has completed the didactic and experiential requirements of the program and graduated. The first graduate of the NTPD program at KU is a prime example of who distance education is designed for. This clinician is instrumental in

providing health care services in a rural Kansas community twenty-four hours a day and did not have the luxury of relocating to campus to participate in traditional courses. She is a prime example of how patient care and family responsibilities necessitate a continued presence in the community, which limit the options for academic and professional advancement. In this time of pharmacist shortage it is not feasible to require practitioners to withdraw from the workplace even for short periods, yet it is imperative that new skills be taught. This is the picture of the students of the future in online professional programs.

The steady growth of the program (Table 1) is evidence of students continued interest in educational pathways that facilitate the skill and career development of working adults. The program has grown from 28 students taking 159 hours in Spring 1999 to 100 students taking 670 hours in Spring 2001. It is important to continue to design courses that provide the skills necessary for these students in a format that fosters active learning and provides the academic rigor that they require.

Table 1. KU NTPD Program Growth

Term	Enrollments	Hours
Spring 1999	28	159
Fall 1999	46	264
Spring 2000	69	408
Fall 2000	84	480
Spring 2001	100	670

Faculty

The faculty that design and facilitate modules in the NTPD program at KU are all actively engaged in not only this program, but also in the education of our traditional style, in-residence students. A wide variety of educational backgrounds converge here. Not unlike most schools of Pharmacy across the United States where faculty members ranging from BS level clinicians to Ph.D., trained researchers contribute to the education process.

The faculty that aggressively participated in the design of modules and both made suggestions and considered input has consistently received the highest student evaluations from adult students who tend to be very direct in their communications.

The faculty has been challenged using delivery methods new to many of them. We have had all ranks of professors participate in the program from Assistant and Associate Professor to full professors, including the Dean of Pharmacy. The feedback received from the students is consistently positive and encouraging to all ranks of faculty. This program is evidence that highly successful, skilled educators are able to teach using many different mediums.

Technical Support

The faculty serves as the content experts and thus are not expected to create the web-based presentation materials independently. In fact, the procedure used at KU Edwards Campus is to have the faculty member deliver the educational content to the Manager of Instructional Support. Technical input is provided by the support staff in conjunction with the faculty. The reasoning behind this arrangement is that there are some complex aspects in the course design, such as audio streaming with synchronized PowerPoint slides, which require specialized knowledge. Since technology may not fall within the realm of the faculty member's expertise our technical staff is trained and committed to assist them in their effort.

At the start of each semester a face-to-face orientation session is held for the distributive learning students in the program. This may be the only time students physically return to campus. The orientation is voluntary and the students are provided an array of information, from a curriculum overview to login and plug-in download information. We strongly recommend attending the orientation session because it allows the students an opportunity to meet the support and administrative staff as well as answer frequently asked questions and sample a course before the semester actually begins.

Technical support does not end once the course is "live". There is one technical support person designated for each course. The Information Technology department at the Edwards Campus coordinates this effort. The email address of the tech support team member is listed with the staff information within each course site and a response to each inquiry is typically delivered within 48 hours.

Curriculum and Course Design

The online program consists of forty-four credit hours of professional education. Twenty-four of these hours are didactic courses taught by the regular faculty of the University of Kansas School of Pharmacy (the same faculty that teach traditional in-residence courses). Twenty are experiential rotations co-precepted by a distance-based preceptor and a KU-based clinical faculty member. The didactic courses are designed for asynchronous completion and include one-on-one faculty-student interactions. Activities include "jot box" type short answer questions, discussion boards, and e-mail response questions.

Each didactic course offered in the NTPD program is divided into modules. A module represents coverage of a subject and not a measure of time. The effectiveness of modules in the curriculum is logarithmically increased with careful planning of content and activities suitable for online delivery. We have found that literally any subject can be taught online with adequate preparation.

Each 3-hour course typically has seven to twelve modules and each module has five “critical areas”. These areas are the online lecture, notes, readings, activities, and quiz.

The **lecture** is designed as a synchronized multimedia offering. Translated into terms students immediately understand this is a narrated slide show. We have selected the narrated slide format over video talking head format to engage the students visually while listening to the audio lecture, as well as to preserve bandwidth. We have found that there is a “critical mass” of streamed data bit information that should not be exceeded to efficiently teach over the Internet. Generally the lecture for each module is an hour in length. Rather than have the student sit and listen for an hour continuously, which has proven to be less engaging and less instructional, we have chosen to break up the lecture into 20-minute segments. Each segment introduces an activity at the end. We plan the courses with the end user, the student, in mind. Does the student have access to a high-speed connection or are they using a dial-up modem? Regardless of their hardware capabilities we want the students to have seamless access to the multimedia lecture.

The **notes** section of each module reflects the textual content of the online presentation. This gives the student the opportunity to print or download the text of the slide presentation and make written or electronic notes as the lecture proceeds.

The **readings** section of the modules includes references or links to pertinent readings the faculty member has identified. This is a critical portion of the educational process, especially for a professional degree upgrade program. The goal of this program is to obtain permission and link in a “point-and-click” style all of the critical readings. We have found this to be a challenge but feel it is important enough that we continue to provide this service for our faculty and students at all levels of the program.

The **activity** section is a link to each of the activities in the module. Sometimes the activity requires a student to read an article or refer to an outside reference, sometimes it is simply an exercise related to the lecture materials designed to stimulate their thought on the subject and keep them engaged in the learning experience. The key to a successful online course and program is interaction, interaction, and interaction. Active learning strategies are a must. This is accomplished by strategically including interactive activities in the form of submit boxes, discussion boards, or chat activities. The students have the option to postpone all activities until the entire lecture portion of the module is complete or to do portions of the modules at different times and in different places (i.e. before and after a flight) and not be penalized time-wise.

The **quiz** link provides access to the quizzes, regardless of their format, for the module in a convenient fashion. Secure multiple-choice question examination with limited time access. All exams of this type are developed as “open-book” and are intended to test comprehension and mastery of the material and not memorization skills. Exams also may include short answer or fill-in-the blank questions and typically are a combination of multiple types of questions. The way the examinations are ideally designed a student

must not only know the correct answer but be able to communicate their understanding of it in a clear, concise fashion, a skill that seems to be vanishing from the post-secondary education level in the current times of class sizes in the hundreds and class rooms filled shoulder-to-shoulder with students of all skill levels and interests.

Each of the five critical areas of the modules are linked together with the other modules on what is called the course map. This gives the student the opportunity to link to the part of the course they are prepared to work on with a minimal number of unnecessary clicks – a small consideration that takes on much larger importance when considering the volume of work contained in each module and course.

Many feel that under some educational circumstances the online model of pedagogy is not merely equal in quality but is actually superior to in-residence educational models. The authors of this article concur with this belief and feel that a well-designed asynchronous online program may actually improve educational outcomes and better prepare adult students for their next challenge.

Conclusion

The program success has exceeded both the faculty and administration's expectations. It is a fiscally viable program, less than three years after its inception, due to the collaborative efforts of content experts (faculty), technology experts (Edwards Campus), and the administration.

In retrospect it is obvious to the authors that the team approach was the ideal model and encouraged the success of this program. A tremendous amount of effort has been invested in providing a web-based program that meets the varied demands of students, and most importantly does not compromise academic standards. We believe we have succeeded at the University of Kansas Edwards Campus in that effort in our initial offering and would encourage others to consider this exciting pedagogic method. We firmly believe that the program must continue to evolve technically and pedagogically to meet the ever-changing educational marketplace and are excited as we look to the future.

Maximal Interaction in the Virtual Classroom: Establishing Connections with Adult Online Learners

Walter P. Rankin, Ph. D.
Assistant Dean, College of Arts & Sciences Student Academic Affairs
English Instructor
George Mason University
Email: wrankin1@gmu.edu

Author's Note: *This article is based, in part, upon my practical experiences teaching an upper-level business writing class at George Mason University. I extend my appreciation to Joel Foreman, Associate Professor of English, for his guidance and support. Correspondence concerning this article should be addressed to Walter P. Rankin at George Mason University, MS 5B1, Enterprise Hall; Fairfax, VA 22030-4444.*

Abstract

The flexibility and freedom associated with online learning require increased vigilance on the part of online learners and educators. Online learners must understand the increased personal responsibilities that come with the flexibility of a virtual environment, while online educators must differentiate between academic rigor and an unyielding rigidity that would conflict with the benefits associated with taking a course through the Internet. Online educators must design courses that offer a quality educational experience to a diverse student population. Ultimately, the success of any online course will be determined by effective, consistent, and personal interaction between the educator and the students.

Options and Issues in Online Education

Online education has greatly increased the educational options available to busy professionals who might be unable to pursue their academic goals in a traditional academic setting. The key factor that distinguishes online education from traditional classroom teaching is its inherent flexibility—no commuting, no searching for a parking spot, no timed tests, and no rushing home after class. This apparent “bonus time” is perhaps the greatest selling point of online education. For example, Pastore (2000) reports that a recent survey of working adults conducted by Opinion Research Corp. for Capella University found that 32% of respondents would prefer to complete courses online rather than in the traditional classroom environment. According to the same survey, 53% of the respondents considered working at home to be the most substantial advantage of an online education, while 19% considered time saved by avoiding commutes as its greatest benefit.

Ironically, the very aspects of adult learners' lives that make online education so attractive in theory can make the retention of those learners so precarious in practice. The additional flexibility and assumed freedom allowed through online learning require increased responsibility on the part of the adult learner to meet deadlines and stay on top of assignments without face-to-face interaction. Further, while education is clearly a priority, it is not likely to be the top priority of these students over the needs of work and family. When forced to make a choice between an important project just assigned by the boss and a long-planned research paper for an instructor, the online learner will most likely have little choice but to fulfill work obligations first. Perhaps the biggest mistake an online educator can make is to maintain rigidity that conflicts with the benefits associated with taking a course through the Internet.

As Carr (2000) points out, “[A]necdotal evidence and studies by individual institutions suggest that course-completion and program-retention rates are generally lower in distance-education courses than in their face-to-face counterparts.” Carr suggests that the obligations of online learners tend to be greater than those of their often younger counterparts, and argues that “successful distance-education professors e-mail their students frequently and respond to e-mail messages promptly, hold regular office hours—whether online or in person—and develop personal touches to make contact with their students, such as posting photographs of themselves on course Web pages.” My practical experience as the instructor of an online business writing class supports Carr's assertions: The more personal a course and its instructor feel, the more motivated students are to work with the instructor and each other to complete course requirements.

Creating Personal (Cyber)Space

As with traditional, in-class learning, online learners will more likely be retained if they feel genuinely connected to the class. Without having that initial face-to-face interaction, however, the online instructor must devise these connections through more creative means. From the outset, one of the primary goals of online educators must be to find ways to use the Internet to make personal connections happen, not merely among the students, but between themselves and their students as well.

Online instruction is dependent upon active learning and participation, and it encourages synchronous as well as asynchronous communication (Feyton & Nutta, 1999, p. xv). Metaphorically and practically, the World Wide Web (WWW) distinguishes itself from the distance education practiced just a decade ago in several ways, most significantly in the possibilities of interaction. In years past, students would mail typed papers to their instructors and wait for corrections to be returned in red ink, or more recently, they might watch instructors via one-way satellite television or videotape. As its name implies, the WWW encourages global connections, discussions, and interactions. Distance education is no longer limited to an instructor-centered response system, nor should it be. As Kellner (2000) declares, "This is a time of challenge and a time for experiment" in the world of online education (p. 259). The following section centers on the challenges that online instructors will face from the creation of their course through its implementation, and it offers exercises that can create a personal arena where instructors can forge genuine interactions.

Challenges in Online Teaching

Organization – Online instructors should keep in mind that their students are especially dependent upon the organization of the class website and its online materials to help them succeed. A poorly designed (or poorly written) site will cause unnecessary frustration. Well before offering an online course, the instructor should consult a website style-guide (such as Grassian, 2000 or Maddux & Johnson, 1997). The finished site should present an organized vision, showing a natural progression of coursework and activities from beginning to end. If students know what to expect right from the start, they can organize their own time better to complete necessary tasks. Therefore, online classes should not include "surprise" exercises and last-minute assignments. When the instructor believes the class is ready to be offered online, s/he should actually take the class as a means of trouble-shooting. Even better, a colleague or friend with little knowledge of the course content should go through it and answer these questions: Is the course website organized? Do all of the links work? Do students have to "click" through a number of pages to arrive at needed information? Are the instructions and due dates for assignments clearly stated? Are diverse opportunities for interaction provided?

Practical Goals – Courses offered online must strive to be service-oriented without sacrificing academic integrity. I believe that students who take online classes view

themselves more as “customers” than traditional students, in part because they are typically more mature, and they may have selected this one class to take while working full-time or taking care of family needs. These students need to see practical reasons for continuing with the class. The instructor should state the benefits of the class and what the students can expect as a positive outcome for completing the course. Will the course be offered for credit that can be applied to a degree? Will the course teach real-world subject matter that will help students with their careers? Will the course help students improve their business knowledge, writing skills, or research abilities?

Honesty – Online instructors need to be honest with students about all aspects of the course so that students can make sound academic decisions. Instructors should be direct about the time students will need to devote to the course and assignments; about the technological skills students will need to succeed (it is unfair to tell students that they will “pick up” needed skills if the class is content-based and not designed as a technology course); and about the technology and equipment they will need (is a 28K modem adequate – some students still have them).

Flexibility and Humor – Even after a course has been tested and re-tested with a colleague, online instructors need to prepare for every contingency at all times. Links that functioned yesterday will not work today, servers will go down, and computers will freeze. Non-technological problems may also arise when a student’s child becomes ill or a boss requires last minute travel. The ability to handle these situations quickly and with a sense of humor will help both the instructor and the students feel less stress.

Exercises in Interaction

Knowing about the other students in the class will help both the students and the instructor establish a sense of camaraderie. Some students will likely have their own personal websites already, but others might not have had the skills to do so. If one of the goals of the course does not involve developing website design skills, then the instructor should create a simple webpage on which some basic information can be shared. This information can also be shared via an email list or through a class chatroom. What types of information should be included? Certainly practical information (name, occupation, background) and technical information (who has ISDN, who has 28K modem, who knows how to put up a webpage, and who already has one up) are helpful. To establish stronger connections, however, personal information on hobbies and outside interests should also be included. Students should note their strengths and weaknesses in the course content area and with technology so that they can be ready to assist each other. It will be important for the instructor to share information as well, including credentials, publications, presentations, as well as a brief biographical sketch.

Online Journal – By maintaining and regularly updating an online journal of thoughts, frustrations, and good experiences with the course, students can share concerns with the instructor and each other. Likewise, the instructor can pinpoint areas that need to be addressed and, by keeping his/her own online journal, demonstrate a continuous level

of concern for the course and students. This type of journal can be maintained through a class email list, on a class bulletin board, or on the class website (Rankin, 1997).

Participation – Whenever possible, the instructor should actively participate in assignments and class chatroom discussions. In a business writing class, for example, the instructor may require students to format a resume, research appropriate jobs, and write a letter of application. If the instructor goes through these steps as well, the students will know that the instructor truly understands their situation and the importance of the assignment.

Group Work – The instructor should assign students to groups regardless of whether group assignments will be required. If students feel that others are depending upon them in some way, then they are likely to be more motivated personally. The members should also be encouraged to determine specialties within the group: Who is best with grammar and spelling? Best with summaries and research? Best editor? Most technologically savvy? Sometimes students have difficulty identifying who truly excels in these areas, however, and the instructor should be prepared to point out who excels in what field.

Accolades – The instructor should always include a page on the course website to share the personal, professional, and academic accomplishments of the class and make every effort to find something to include for each student. While it might not always be possible to highlight a course-related achievement for every student, the instructor can encourage students to share other achievements as well.

The Webliography – Students should be encouraged to conduct productive Internet research on related course content and share it on what I term a Webliography, a bibliography consisting of a critical analysis of appropriate website. Students can submit websites of the week to share with the class, and they can discuss what gives some websites credibility and makes other websites unreliable sources of information.

Contact Hours – Online instructors need to offer a variety of ways for students to contact them. Some students prefer the asynchronous flexibility of email and bulletin board postings, while others enjoy synchronous discussions in class chatrooms (and even via webcam). If possible, instructors should try to offer both options to meet the needs and diverse time commitments of their students. Finally, instructors should also still employ the phone to contact students who appear to have encountered difficulties or who have stopped participating regularly. Showing genuine concern can go a long way in retaining students who have may had other events arise that have hindered their progress.

Conclusion

In discussing the current state of virtual education and its future goals, Cox (2000) asserts, “We will not succeed by attempting to create virtual imitations of existing

institutions. Educating people online is different from educating them on campus. We do not yet fully understand how to provide effective education online or on a large scale, but there are enough promising signs to believe that it can be done with quality and integrity” (p. 18). Online instructors often find themselves in the difficult position of having to justify the academic rigor and integrity of their courses to traditional classroom instructors, who may also be concerned about perceived competition for students. We must therefore show that, foremost, our courses offer a quality educational experience, while we emphasize that online courses do not compete with traditional courses for students; rather, they create another avenue to include more students who would be otherwise unable to participate. The success of any course is dependent upon determined, effective interaction between the instructor and the students. Ultimately, an online course should not be considered as necessarily better (or worse) pedagogically, but rather as an opportunity to recognize and respect the distinct differences and advantages of all learning environments.

References

Carr, S. (2000). As distance education comes of age, the challenge is keeping the students. Retrieved in Spring 2001 from the World Wide Web: <http://www.chronicle.com/free/v46/i23/23a00101.htm>.

Cox, G. (2000). Why I left a university to join an Internet education company. Change: The Magazine of Higher Learning, 32 (6), 12-18.

Feyton, C. & Nutta, J. (Eds.). (1999). Virtual Instruction: Issues and Insights from an International Perspective. Englewood, CO: Libraries Unlimited, Inc.

Grassian, E. (2000). Thinking critically about World Wide Web resources. Retrieved March 1, 2001 from the World Wide Web: <http://www.library.ucla.edu/libraries/college/help/critical/index.htm>.

Kellner, D. (2000). New technologies/new literacies: Reconstructing education for the new millennium. Teaching Education, 11 (3), 245-265.

Maddux, C. & Johnson, D. (1997). The World Wide Web: History, cultural context, and a manual for developers of educational information-based Web sites. Educational Technology, 37(5), 5-12.

Pastore, M. (2000. July 26). Working adults like online education. Cyberatlas. Retrieved March 1, 2001 from the World Wide Web: http://cyberatlas.internet.com/markets/education/print/0,,5951_423331,00.html

Rankin, W. (1997). The cyberjournal: Developing writing, researching, and editing skills through email and the World Wide Web. Educational Technology, 37(4), 29-31.