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PUBLISHER'S DECLARATION

This Journal was established to facilitate collaboration and communication among researchers, innovators, practitioners, and administrators of education and training programs involving technology and distance learning.

An academic institution, Duquesne University, was chosen for its commitment to academic excellence and exemplary programs in instructional technology and distance learning. Duquesne University is supporting the Journal through its graduate program in Instructional Technology and its Center for Technology Education Innovation and Research (TEIR Center). In addition to its educational programs, Duquesne University has major training contracts for industry and government.

The Journal is refereed, global, and focused on research and innovation in teaching and learning. Duquesne University and its partner, DonEl Learning Inc., are committed to publish significant writings of high academic stature.

Lawrence A. Tomei, EdD
Executive Director, Center TEIR

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Editorial

Donald G. Perrin, Executive Editor

In this issue the focus is online learning

Meyen and Yang present a study funded by the U.S. Department of Education to develop a delivery model for large scale online training for teachers.

Dabaj and Isman research communication barriers in text-based online learning at Eastern Mediterranean University in Turkey.

Russell from Monash University in Australia explores psychological and ethical issues related to the “distancing effect.”

Santally and Sentini from Mauritius explore a cognitive approach to exploring distance learning environments.

Ersbler discusses progress in gaining acceptance for distance learning in Law schools.

Muirhead offers advice to graduate students on planning their literature review

March issue focus is management and distribution

Next month the Journal focuses on issues and challenges related to management, creation, and distribution of distance learning programs. It features EduSource: Canada’s Learning Object Repository Network, and articles on design issues and course development using learning objects.

Planning and progress to date

The first month of publication attracted nearly 2,000 visitors and generated approximately 25,000 hits from over 40 countries.

The editors are designing databases and setting mailing lists in place so that readers can access new services as they are introduced. Routine functions are being automated so that administrative aspects of the Journal are not labor intensive. Resources will be focused on finding new ideas and authors to publish and build the quality and stature of the Journal.

Wish list

A free Journal and opportunities for dialog with authors and peers

Articles and readership from academia, business, industry, military, government, health care, international organizations, foundations, and . . .(please help us to define our readership)

A strong international representation of authors, readers, and sponsors

Interactive areas on the website for members, referees, authors, instructional designers, teachers, trainers, administrators, funding agencies, and newcomers to instructional technology and distance learning.

A presence at international meetings related to instructional technology and distance learning

An invited paper each month from a leader in instructional technology, distance learning, or related field.

Directories of organizations, publications, and articles to make this website a portal.

Opportunity to publish e-books and occasional printed books in soft and hard bindings.

Please email your wish list to editor@itdl.org

Editor's Note: Staff development promotes quality of teaching and learning in distance education. This study poses the question: What conditions are necessary a large-scale online staff development course to be effective. The paper is based on earlier research and two nationally convened focus groups. The data includes conditions that influence how online staff development might be delivered; requirements to be met by online delivery models, ways to engage teachers, sustain teacher involvement, and manage online staff development; and ideas for implementation of online staff development.

Parameters of Online Staff Development Study

Edward L. Meyen and Chien-Hui Yang

ACKNOWLEDGMENTS

Preparation of this article was supported in part by the Office of Special Education Programs in the U.S. Department of Education. Appreciation is expressed to several people who served on the National Advisory Board, participated in the focus groups, responded to the survey, and who contributed to the larger project of which this study was a part. Recognition is due to Cheryl Harrod, Meng Yew Tee and Dan Spurgin of the e-Learning Design Lab staff for their contributions. Appreciation is also expressed to the Center for Research on Learning and the Information & Telecommunication Technology Center whose collaboration created the e-Learning Design Lab.

Abstract

This study was conducted as part of the activities carried out by a project to develop guidelines for delivery models to implement large-scale online staff development programs. The host project was in follow up to the Online Academy (H029K73002), funded by the Office of Special Education Programs (OSEP), which produced 22 fully online asynchronous short courses. The purpose of this study was to identify the conditions/parameters of successful large-scale online staff development programs. Fifty-one educators, in several professional roles, from nine states participated in a series of focus groups to identify conditions essential to implementing online staff development for teachers. An instrument comprised 115 items, developed by the focus Groups, and was used to verify the importance of the identified conditions.

Parameters of Online Staff Development Study

Background

This study on parameters of online staff development evolved early in a project to develop online delivery models for implementing large-scale online staff development. As planning began it became apparent the planning would be better informed if an effort was made to first examine the conditions that surround the implementation of large scale online staff development projects. The planning activity was a follow-up initiative to the work of the Online Academy (Meyen, 2002). It took the form of supplemental project at the University of Kansas (Meyen, 2003). The Online Academy involved the development of 22 online modules for pre-service teacher education

programs. The modules were in the content areas of Reading, Positive Behavioral Support and Technology in Education. The Online Academy National Advisory Board subsequently determined that the instructional design of the modules was applicable to staff development. Consequently, a needs assessment study (Meyen, Ramp, Harrod, & Bui, in press) was conducted. This study identified 113 topics perceived as being important for staff development programs. Through a prioritization process to determine topics of national significance, five were selected for development as online staff development modules through a supplemental award from the Office of Special Education (OSEP) in the U.S. Department of Education. Those modules were subsequently developed, beta tested and released to states. (Meyen, 2003).

The supplemental project came about because many states lacked experience in implementing large scale online staff development programs. The e-Learning Design Lab, which the Online Academy was a part of, was engaged to conduct work with teams of educators to study conditions that would enhance the implementation of online staff development programs at the state, regional or national levels. Four strategies emerged as the foci of this project.

1. Engagement of planning participants in beta testing the online staff development modules to ensure a common understanding of one approach to online staff development.
2. The identification of the parameters or conditions that surround the development and/or delivery of online staff development on a large-scale basis.
3. The identification and validation of barriers likely to be encountered in implementing large scale online staff development programs for teachers.
4. The framing of recommendations on how best to approach the implementation of large-scale online staff development programs for teachers.

The results of the first three elements served to inform the planning process that led to recommendations on implementation. Early in the planning process six principles were framed. One principle was specific to the focus of this paper. That principle was described as follows:

It is important to understand the conditions that contribute to successful implementation of online staff development. To some extent these conditions represent the parameters of online instruction. They take the form of conditions that need to be met prior to implementation as well as technology requirements and strategies for engaging teachers in online staff development and sustaining their involvement (Meyen, 2003).

This study to identify the parameters of online staff development online staff development was carried out as an integral part of the overall planning process structured for the supplemental project. The information derived from this study was central to the ultimate decisions on recommendations for implementation. While the results of the Supplemental Project will not be presented in this paper a brief discussion on the structure of the project is important to the context of this paper.

The Supplemental Planning Project

The following organizational elements represent the structure of the supplemental project through which the barriers study was conducted.

Coordination: The project was based in the e-Learning Design Lab (eDL). Staffing of the project was achieved through the engagement of a national consultant and the part-time assignment of eDL staff to specific tasks carried out for the project.

External Leadership: The National Advisory Board for the project that produced the five online staff development modules also served as the Advisory Board for the supplemental project on

delivery models. The board was comprised of nine individuals representing State Education Agencies (SEAs), Regional Resource Centers (RRCs), Local Education Agencies (LEAs), Institutions of Higher Education (IHEs), and OSEP. The divisions of Research to Practice and Monitoring and State Improvement Planning in OSEP were both represented on the board.

State Teams: The state teams, represented the primary source of data and input to the planning process. Nine states selected by the National Advisory Board in conjunction with OSEP representatives included Alabama, Idaho, Kansas, North Carolina, Oklahoma, Michigan, Montana, New Jersey, and Utah. Each team was comprised of a representative of the respective SEA and an institution of higher education, along with a principal, a staff development specialist, and at least one teacher. In one case a Regional Resource Center representative served on a team (this person was also on the National Advisory Board), at least one teacher, and a principal. The SEA representative served as the team leader, coordinating all team activities.

Retreat Planning Sessions: Two two-day retreats involving the state teams and members of the Board represented the setting in which most discourse and decision-making took place. Planning sessions were held by the board prior to the planning retreats. During the planning sessions of the board the initial goals were framed, the planning process conceptualized, and the retreat model agreed to. OSEP awarded funds to each state to cover the costs for their team members to participate in the retreat sessions. Due to travel restrictions, two of the teams were not able to participate in the planning retreats. However, accommodations were made to obtain their input.

Project Web Site: The project web site served as the primary communications vehicle. For example, agendas and summaries of meetings were shared via the web site. Surveys were conducted electronically and the modules that were beta tested by the participants were accessed through the web site with data also being collected online. Further, participants communicated with their team members, the eDL staff, and their team leader via electronic communications. Some teams also met in person for planning.

Planning Process: The primary vehicle for engaging the state teams in the planning process were two-day retreats held in Alexandria, Virginia, and Park City, Utah, respectively. Extensive work prior to and following the retreats was done by both the participants and the eDL staff and the results shared via the project web site. Some state teams also met face-to-face to supplement their project work. This process maximized the effectiveness of teams and individual members in influencing the direction of the project.

Additionally, the work between retreats was facilitated by the intensity and nature of the work carried out during the retreat sessions. Specifically, a purposeful attempt was made to balance the agenda of the retreats across input sessions, focus groups, team sessions, and large-group interactions. Presentations were kept to a minimum, except for providing critical information and reporting the results of surveys conducted and the synthesis of focus groups. Agendas were shared in advance and open to modification as the retreats evolved.

The Final Report for the supplemental project, along with the five staff development modules, can be accessed on the eDL website at elearndesign.org.

Literature Review

As large scale online training programs are implemented by business (e.g., IBM, Ernst & Young, and Rockwell Collins) [Hall & LeCavalier, as cited in Strother, 2002]), and online staff development by school districts (e.g., Los Angeles Unified School District, Clark County Nevada School District) [Richardson, 2001; Treacy, Kleiman, & Peterson, 2002]), it becomes evident that a number of conditions or parameters can be identified that enhance this new mode of delivery.

For example, just as there are standards for quality face-to-face instruction there should be standards for online staff development (Hirsh, 2001). The National Staff Development Council (NSDC) and National Institute for Community Innovations (NICI) (2001) established standards for staff development, including content standards and process standards. Killion (2002) states “NSDC’s *Standards for Staff Development, Revised Edition* is the foundation upon which to make decisions about technology-mediated staff development. Because staff development through electronic resources serves the same function as face to face staff development, the context necessary to support adult learning, the processes by which they learn, and the content they need to increase student achievement are the same (p.12).”

The National Staff Development Council also proposes that successful staff development should be job-embedded and results-driven (Hirsh, 2001). Hirsh argues that staff development has to be embedded in every teacher’s daily work schedule and daily teaching experiences so that the school community can be a learning environment that fosters constant improvements. Many researchers agree that the content of staff development should be emphasized more than the technology infrastructure (Killion, 2000; Reilly, 2002; Wolinsky, 1999). Guskey (2003) analyzed 13 different lists of the characteristics of effective professional development, which can apply to online staff development. According to Guskey’s analyses, the most significant characteristics include enhancement of teacher’s content and pedagogical knowledge, the provision of sufficient time and resources, the promotion of collegiality and collaborative exchange, inclusion of evaluation procedures, and the importance of using analyses of student learning data to guide professional development activities. Treacy et al. (2002) identified nine elements for successful online staff development. They include (1) assessment of local professional development needs and the development of an online professional development plan based on those needs; (2) connection of online staff development with other ongoing, face to face professional development activities; (3) carefully select and train online staff development specialist team members; (4) build a strong local team; (5) develop incentives; (6) publicize the online staff development program and involve local stakeholders; (7) provide readily available and reliable access to technology and support; (8) foster a rich, interactive online learning community; and (9) integrate online workshops with face to face meetings.

The challenge in creating the ultimate conditions for online staff development is that some of the conditions to be met are the responsibility of those who develop the content and the technical design while other responsibilities fall to those who adopt and implement the online programs. Most of the literature builds from experiences associated with effective face-to-face staff development. The paucity of research studies reported on the effectiveness of specific features online training or staff development is influenced by the relatively recent emergence of the Internet and the WWW that has created the capacity to deliver staff development online. None of the studies reviewed utilized methodologies that combined the use of focus groups and survey techniques to verify conditions essential to successful implementation of large-scale online staff development employed in this study.

Methodology

The primary method for developing the inventory of conditions involved the use of Focus Groups. They were conducted during two retreats held about four months apart. The purpose of the focus groups was to identify the conditions that need to be in place if large scale online staff development programs are to be successfully implemented.

Procedures for identifying and validating barriers included the following:

- Two sets of Focus Groups were conducted during the first retreat. The first focus groups were organized around the individual roles represented on the state planning teams. These roles included SEA staff members, professors, classroom teachers, principals, staff development specialists, and a group comprised of members of the educators from other roles. Members of the National Advisory Board were invited to participate by selecting a role group similar to their professional role. See Table 1 for the distribution of participants among the focus groups by role.

**TABLE 1:
Focus Group Participants**

Profession	<u>n</u>
State Education agency staff	10
Professors	6
Principals	6
Teachers	14
OSEP	3
Professional Development Specialists	8
Regional Resource Center staff, and others	7
Total	54

- Each group received the same instructions i.e., to identify the conditions essential to successful implementation of large scale online staff development programs. They were asked to select a facilitator and a recorder. Prior to the large group reporting sessions each group was alerted to the amount of time remaining prior to reporting. They were also asked to edit their flip chart notes before reporting. Reports were made verbally to the group with time allowed for questioning to ensure clarification of statements. Two eDL staff members took notes during the discussions. The flip chart reports were collected as archival data and the recorder agreed to be available following the retreat to respond to questions from the staff to ensure accuracy in compiling the notes. The same process was repeated with the focus groups being reconfigured by state teams in contrast to the organization by roles in the first focus group process.
- Reporting sessions were held following each set of focus groups. The reporting sessions were facilitated by an eDL staff member. These were extensive sessions with the goal being to ensure that each suggested condition was clearly communicated and that there was consensus that the condition should be retained in the inventory.
- Agreement was reached on the items in the inventory of conditions they were reviewed to identify categories in which they appeared to cluster. The results of the reporting sessions at the conclusion of the two focus groups sessions during the first retreat was an inventory of statements describing conditions important to successful implantation of online staff development that were grouped by categories.
- Within a week following the retreat the notes from the two focus group sessions were edited as statements describing the conditions identified by the Focus Groups. Each item was edited to achieve some consistency in format and structure of the wording.

- The intent of the statements was not changed nor were additional ones added. Redundancies were eliminated and the sorting by categories was reviewed to assure reasonable independence of each category.
- The inventory of statements, clustered by the original categories, was posted on the Supplemental Project web site. Participants from the Focus Groups were asked to review the items and categories. They were also allowed to add items. Submit forms for responses were included on the web site.
 - The final instrument consisted of 115 items divided into six categories. Following is a list of six categories.
 1. Conditions that influence how online staff development might be delivered.
 2. Requirements to be met by online delivery models.
 3. Way to engage teachers.
 4. Ways to sustain teachers' involvement.
 5. Ways to manage online staff development.
 6. Ideas for implementation of online staff development
 - While the category topics overlapped, it was decided that they were sufficiently independent to serve as a framework. Besides, it was important to ensure comprehensive coverage of the individual conditions that the group judged to be important.
 - A submit form was developed and placed on the web site, and participants were notified by email that they were invited to respond to the instrument. The instrument was preceded by a brief review of the discussions at the first retreat. Respondents were asked to provide demographic information and to rank each item on a 5-point scale of importance, ranging from responses from Not Important to Very High Importance.
 - The results of the responses were summarized and presented at the second planning retreat. The focus of this discussion was on how the preliminary results of the responses to the instrument informed the process of framing recommendations for the overall project recommendations on delivery models for the implementation of large scale staff development projects. (Meyen, 2003) A decision was made to do a follow-up to allow participants who had not responded to respond to the instrument. A second copy of the survey instrument was posted and those who had not responded the first time were asked to respond.

Results

Demographics of Participants

Focus groups followed by a total-group discussion session took place at both retreats. However, the first retreat was most productive in generating statements. In the second session the pilot results were reviewed and minor changes were made in items within the six categories. The composition of the two groups was almost identical since the membership of the teams did not change, but some participants were unable to attend the second session. Besides, some participants in the second session were new to the process. Fifty-four participated in the first session and thirty-four in the second session.

Results of the Ranking Process

The most significant results of the study were derived from the focus groups that generated the items. The ranking process served to confirm the importance of the statements and to rank them in relative importance. While respondents differentiated among statements of high importance and low importance, no item received a mean score of less than 3.52. Table 2 provides a comparison of the mean scores based on rankings of 4.5 and higher as 4.0 and higher across the six categories. The overall mean score across the 113 items was 4.22. Only 20 items received mean scores below 4.0.

Table 2
Comparison of Mean Scores Distributed Across Categories

Category	# of Items	Mean Scores 4.5+	Mean Scores 4.0+	Range
1.1 Conditions	32	9	27	4.76-3.71
1.2 Requirements	12	3	10	4.76-3.71
1.3 Teacher Engagement	25	0	19	4.48-3.52
1.4 Sustaining Involvement	14	1	11	4.52-3.67
1.5 Module Management	10	1	7	4.86-3.67
1.6 Implementation	22	4	21	4.86-4.00
TOTAL	115	18	95	

Define Categories

Table 3 contains the mean scores and ranking of each item within the six categories. The number in the left column identifies the number of each item as it appeared in the instrument. Items with the same mean score have been assigned the same ranking; thus there are duplicate rankings in each category.

Lessons Learned

The lessons learned were directly influenced by the intense participation of the state team members in the focus and large-group sessions as described earlier. Their vested interest in the process derived from the high probability that each of them would ultimately have some responsibility for implementing online staff development through their professional roles.

1. Involving individuals with different professional responsibilities in discussions of online staff development creates an environment that is productive in identifying realistic conditions for effective implementation.
2. Engaging planning participants in the beta testing of online instruction results in more substantive contributions to planning for subsequent implementation of online staff development.
3. Once the conditions are described that influence online instruction, educational representatives with different professional roles can reach consensus on the relative importance of each of the specific factors that influence successful implementation of online staff development.

4. Online staff development, because of easy access and convenience for practicing professional as well as its unique capacity to maintain currency of content, is perceived as an important option in the delivery of staff development.

Table 3
Mean Scores and Ranking within Categories

Item	Items Category	Mean	Rank
1.1	Conditions that influence how online staff development might be delivered		
1.1.1	Need to access connectivity.	4.67	3
1.1.2	Incentives appropriate to the demands on teachers should be available.	4.33	8
1.1.3	Administrative support essential.	4.62	4
1.1.4	Commitment from the staff development leadership.	4.29	9
1.1.5	Teachers should be given option in selecting the programs they complete.	4.43	7
1.1.6	CEUs and college credit important.	4.29	9
1.1.7	Easy access to technical assistance.	4.76	1
1.1.8	Clear communication on the instruction to be offered and expected outcomes.	4.57	5
1.1.9	System for reporting and managing records of participating teachers.	4.19	10
1.1.10	Effective program of marketing the staff development to teachers.	4.33	8
1.1.11	Established system of cohorts or study groups to support teacher participation.	3.76	15
1.1.12	Minimize the technical skills required to participate in the online staff development.	4.10	11
1.1.13	Reinforcement for an online culture of staff development.	3.76	15
1.1.14	Alternative modes, e.g. online and CD formats.	3.95	13
1.1.15	If fees are passed on to teachers, fees need to be very affordable.	4.62	4
1.1.16	If a licensing fee is employed, it needs to take into consideration the current decline in fiscal support for education.	4.71	2
1.1.17	System in place to provide immediate feedback to teachers.	4.52	6
1.1.18	Feedback on assessment should be immediate and instructional.	4.62	4
1.1.19	Give high visibility to the program in an attempt to establish acceptance of the approach.	4.29	9
1.1.19	Give high visibility to the program in an attempt to establish acceptance of the approach.	4.29	9
1.1.20	Appropriate support at the local, regional, and state levels	4.57	5
1.1.21	Establish relationships with institutions of higher education to facilitate the integration of staff development with institutional offerings.	4.43	7
1.1.22	Resources related to the staff development topics should be accessible.	4.10	11
1.1.23	Licensing requirements should be comprehensive and clearly stated.	4.05	12
1.1.24	Staff development on how to participate in online staff development should be available.	4.05	12
1.1.25	Staff development should be tied to application and ongoing systems of support, e.g. peer coaching, mentoring, etc.	4.33	8
1.1.26	An evaluation system to evaluate the program needs to be in place.	4.33	8
1.1.27	Teachers need to participate in selection of online staff development offerings.	4.29	9
1.1.28	There should be a relationship to certification.	4.10	11
1.1.29	Relate to salary increments.	3.71	16
1.1.30	Engagement of staff development leadership locally.	4.10	11
1.1.31	There should be a capacity in place to maintain currency of offerings and to expand offerings.	4.05	12
1.1.32	The infrastructure should not only be stable but should be perceived as a permanent arrangement.	3.90	14

Item	Items Category	Mean	Rank
1.2	Requirements online delivery models should meet		
1.2.1	A system of quality control needs to be in place to ensure all programs are of high quality.	4.76	1
1.2.2	A strong accountability system to monitor all aspects of the program and to convene the value placed on participation.	4.48	3
1.2.3	When feasible, instructors should participate in the online staff development.	4.05	6
1.2.4	The technical infrastructure should be stable resulting in a minimum of special requirements for participation.	4.29	5
1.2.5	The online staff development program should be compatible with available resources for chats, threaded discussions, FAQs, forums, etc.	4.05	6
1.2.6	The fiscal commitment should be in place prior to implementation to minimize having to curtail offerings once operational.	4.43	4
1.2.7	There should be a vision as to how the program may evolve in the future.	4.29	5
1.2.8	Policies governing the roles of teachers need to take into consideration the flexibility online staff development offers teachers, e.g., if they complete online staff development they should be excused from the scheduled staff development assignments.	3.90	8
1.2.9	A plan should be in place as to how offerings will be expanded.	4.00	7
1.2.10	Establish a practice of ensuring that all offerings will be expanded.	4.76	1
1.2.11	The offerings should be available 24/7/365.	4.62	2
1.2.12	When appropriate content should apply to all teachers.	3.76	9

Item	Items Category	Mean	Rank
1.3	Models for engaging teachers		
1.3.1	Tie offerings to national standards such as the CEC standards.	4.48	1
1.3.2	Broaden focus to attract the interest of teachers in general education.	4.43	2
1.3.3	Offer in-depth offerings not just introductory topics.	4.29	5
1.3.4	Create a career ladder that allows a teacher to gain recognition for completing offerings that enhance their expertise, e.g., a certificate might be awarded for completing a series of offerings on a topic that includes advanced knowledge.	4.10	9
1.3.5	Employment of cohort or study groups as a way of building community around topics of mutual interest.	3.95	11
1.3.6	Create a mechanism that facilitates teachers in deciding which offering or part of an offering will add to their knowledge and skill base.	4.05	10
1.3.7	Involvement of principal in a leadership role that clearly conveys value placed on participation.	4.38	3
1.3.8	Obtain endorsement of professional associations for the online offerings and where appropriate related the topics to the agenda of association.	3.95	11
1.3.9	Provide resources that enhance their applying what they learn.	4.33	4
1.3.10	Relate incentives to successful completion of online offerings.	4.33	4
1.3.11	Create opportunities for teachers to contribute to the development of online staff development offerings.	4.24	6
1.3.12	Establish a portfolio system that allows teachers to manage a dossier of what they have learned via the online staff development offerings.	3.76	13
1.3.13	Establish relationships with IHEs that results in consideration of credit for the work done by teachers.	4.33	4
1.3.14	Coordinate offerings where appropriate with National Board Certification.	4.29	5
1.3.15	Build a comprehensive set of offerings to maximize the probabilities of all teachers being able to match offerings with personal needs.	4.24	6

1.3.16	Provide strategies for teachers to focus on specific instruction for remediation without having to complete an entire course.	4.33	4
1.3.17	Provide released time for teachers in groups to construct their own staff development program from the online resources made available.	3.71	14
1.3.18	Teachers should have opportunities to influence the availability of topics.	4.10	9
1.3.19	Principals should fulfill a leadership role in promoting online staff development and in ensuring the flexible features are exercised.	4.05	10
1.3.20	Engage faculty from nearby IHEs in the staff development.	4.14	8
1.3.21	Include pre and post test assessments.	4.19	7
1.3.22	Maximize flexibility features.	4.29	5
1.3.23	Participation in the program should result in training roles for teachers.	3.52	15
1.3.24	The role of the principal should be central to implementation and maintenance of the program.	3.86	12
1.3.25	Offerings should relate to the priorities of the SIG.	4.05	10

Item	Items Category	Mean	Rank
1.4	Models for sustaining teacher involvement		
1.4.1	Released timed for mentors.	4.14	6
1.4.2	Mechanisms for teacher to manage their progress.	4.14	6
1.4.3	Incentives tied to completion.	4.33	3
1.4.4	Professional culture that values online staff development.	4.19	5
1.4.5	Public acknowledgement of continued professional development.	4.10	7
1.4.6	Opportunities to pursue "elective" opportunities.	4.14	6
1.4.7	Recognition for becoming expert in a staff development topic.	3.95	8
1.4.8	Indicators for relating professional growth to student outcomes.	4.38	2
1.4.9	Opportunities to develop online staff development.	3.67	10
1.4.10	Clear evidence that offerings will be expanded and system sustained.	3.90	9
1.4.11	Application of successful staff development to degrees/ certification/salary increments.	4.52	1
1.4.12	Link to other sources of information important to teachers.	4.10	7
1.4.13	Relate to school improvement plans.	4.38	2
1.4.14	Participation of teachers in planning and refining the online staff development program.	4.29	4

Item	Items Category	Mean	Rank
1.5	Models for managing online staff development		
1.5.1	Establish policies governing the management on online staff development to enhance continuity and to communicate value.	4.05	4
1.5.2	Engage broad participation in designing a management system that tracks the progress of all teachers.	3.90	7
1.5.3	Integrate the communication of teacher progress to appropriate administrators and policy makers into the management system.	3.95	6
1.5.4	Coordinate the features of the management system with others that may be available at the local, regional or state levels.	4.00	5
1.5.5	Tie the management system to individualized portfolios or professional development plans that may be operational at the local or state levels.	4.00	5
1.5.6	Centralize responsibility for the maintenance of the management system.	3.67	8
1.5.7	Teachers should have access to the management system to monitor the accuracy of the system in recording their progress.	4.24	3

1.5.8	The entry of data into the system should be user friendly and when possible automatic as a result of completing an offering.	4.33	2
1.5.9	The management system should be in place as part of the infrastructure prior to implementation.	4.33	2
1.5.10	The system should be affordable in terms of fiscal costs and labor requirements to ensure its sustainability.	4.86	1

Item	Items Category	Mean	Rank
1.6	Ideas for implementation of online staff development		
1.6.1	Open participation to all teachers.	4.86	1
1.6.2	Initiate a communications (public relations) process targeted attracting the interests of teachers.	4.48	4
1.6.3	Phase in the offerings with topics that have the highest probability of being successful.	4.38	6
1.6.4	Present the program as being of high priority to the district and the state.	4.29	8
1.6.5	Obtain endorsement and affiliation is desirable with related professional associations.	4.43	5
1.6.6	Do not start until infrastructure is in place.	4.29	8
1.6.7	Establish communities of practice for those completing offerings.	4.19	10
1.6.8	Have incentives in place along with credit options.	4.52	3
1.6.9	Integrate with professional development or school improvement plans that the SEA or LEA may have in place.	4.33	7
1.6.10	Operate a very visible feedback system to retrieve information from users on how to improve the offerings.	4.33	7
1.6.11	If part of a statewide or regional system a monitoring process needs to be in place to ensure accountability and quality control.	4.19	10
1.6.12	Create options for online teaching that provide immediate feedback to teachers.	4.05	11
1.6.13	Create and value cohort approaches to participating in staff development.	4.00	12
1.6.14	Provide options such a chats, threaded discussions and forums for those enrolled in similar offerings.	4.00	12
1.6.15	Establish a user friendly enrollment process.	4.57	2
1.6.16	Ensure that a management system is operational that maintains records of teacher progress and communicates that progress to appropriate administrators and policymakers.	4.24	9
1.6.17	Ensure that a management system is operational that allows teachers to manage their own progress and build a portfolio that can be integrated with other professional achievements.	4.52	3
1.6.18	Establish policies that allow teachers to meet their staff development obligations online without having to also participate in scheduled activities.	3.95	13
1.6.19	Conduct a marketing strategy that engages a variety of spokespersons that are supportive of online staff development.	4.19	10
1.6.20	Generalize the same value placed on other forms of staff development to online staff development.	4.19	10
1.6.21	Establish partnerships with IHEs.	4.33	7
1.6.22	Involve Regional Resource Centers.	4.24	9

Summary

This study was part of a planning project to develop guidelines for the implementation of large scale online staff development programs. Fifty-four educators from nine states participated in the planning process. The study was designed to help inform the planning decisions. Two additional studies were conducted for the same purpose, but not reported in this paper. They addressed the beta testing of online staff development modules and the identification of barriers to the implementation of large scale online staff development programs. The conditions/parameters study was conducted prior to the development of implementation recommendations by the planning group. The focus of this study was to identify conditions essential to successful implementation of large scale online staff development programs. Focus groups were utilized to develop statements describing conditions and circumstances that need to be in place to enhance successful implementation of online staff development. Once consensus was reached on the statements they were placed in categories and embedded in an instrument and a ranking process employed to determine their relative importance.

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Editor's Note: Introduction of a new technology has both positive and negative results. Research provides data to optimize implementation, to build on strengths, and compensate for weaknesses. Change itself becomes an issue because at first we use the new tools in the old way.

This study provides an abundance of data that confirms the need for educational providers, teachers and students to adapt the teaching-learning process to make optimum use of distance learning technologies. It also emphasizes the importance of interaction and Internet to enhance learning. Fahme Dabaj and Aytekin İşman of Eastern Mediterranean University in Turkey present data that parallels studies conducted elsewhere, tempered by added variables of language and culture.

Communication Barriers in Distance Education: “Text-Based Internet-Enabled Online Courses”

Fahme Dabaj and Aytekin İşman

Abstract

With the rapid technological changes and the diverse people demands and conditions, traditional educational systems and institutions are forced to provide additional educational opportunities. A number of educational establishments are contributing to these conditions and demands by developing and offering distance education programs.

Distance education is a delivery system of teaching and learning, when the teacher and the student are separated by physical distance and time, using alternative media resources when students and instructors have difficulties of establishing face-to-face communication.

In distance education, instruction delivery between tutors and students is done using different delivery systems such as computer mediated communication systems, video tapes, printed material, cassettes, instructional television (Berge, 1998). With development of the Internet and the global network system, universities immediately took the advantage of the World Wide Web to deliver the instruction to almost any node in the world, regardless of physical distance and time.

The initial questions to be resolved by institutions offering distance education relate to how effective is the program taught by distance learning, and is it a sufficient replacement for traditional face-to-face education. The effectiveness of online instruction is measured by the level of interaction, how well it satisfies the students' needs, and how it eliminates communication barriers between the involved participants.

Communication barriers exist in any communication process. They are greater in distance education due to physical distance between members, insufficient technology skills, difficulties using media, need for more human interaction, time constraints and restrictions, and lack of experience with distance education. These problems make it hard to establish the distance education process and develop effective communication between members. The degree of these barriers differ from institution to institution, from one program to another, and for different systems used for delivery.

Introduction

Many universities offer online distance education courses with asynchronous, text-based, Internet-enabled instruction. This delivery system is asynchronous communication, based mainly on course materials on a website accessed by students through the Internet. This technique is

widely used for high student enrollments rather than synchronous techniques. It is among the easiest and the cheapest methods for delivering instruction at a distance. Synchronous web-based methods of computer mediated education include online video conferencing. This is relatively expensive and needs advanced and well developed infrastructure to transfer huge amount of data, audio, and video streams simultaneously to students at a distance.

Text-based Internet-enabled instruction method involves many types of barriers as well as communication barriers preventing the process of information exchange between instructors and students, and students with the other students enrolled in the distance education program.

Because it is most frequently used form of distance education, this study will concentrate on communication barriers involved in text-based Internet-enabled online instruction. It will explore the nature of communication barriers affecting online courses and whether these barriers are related to students' demographics and background.

Importance of the Research

Text-based Internet-enabled instruction in a distance education can be efficient if the website is developed and designed to meet course needs and requirements, satisfy student needs, and make it more interactive. These factors are important to overcome barriers raised by an asynchronous text-based Internet-enabled method of instruction. These barriers result in frustration, feelings of isolation and not belonging, and fear of technology. (Hara, 1998) These feelings impede student communication with the others in the same program.

Interactivity of the online course program is directly related to the amount of contact the student has with the instructor, with his peers, and with the course material Sherry (1996). This interactivity and with the role changing of the students and instructors to change the course from the traditional instructor-centered to learner-centered process, encourages the student to seek for his answers and build his own knowledge from his own experience. Interactivity and student involvement reduce communication barriers, frustration, and fear of technology faced in an online distance education environment.

Review of Related Research

There are frequent references in the literature to barriers in distance education related to faculty, organization, structure, etc. We should realize that some barriers directly affect and some indirectly affect the communication process between the members involved in the distance education program.

Galusha (1999) wrote that distance education gives people (students) the greatest possible control over time, place and pace in education; however, it is not without problems in such asynchronous delivery system. These problems are categorized as "barriers" into three main groups, student barriers, faculty barriers, and organizational barriers. Problems and barriers encountered by students are; costs and motivators, feedback and teacher contact, student support and services, alienation and isolation, lack of experience, and training. Barriers encountered by faculty are; lack of staff training, lack of support systems designed for distance learning, and inadequate methods for faculty selection and training. Barriers encountered at the organization level include infrastructure and technology problems, training, and management.

According to Berge (1998), impediments to online teaching and learning can be situational, epistemological, philosophical, psychological, pedagogical, technical, social, and/or cultural and include; faceless teaching, fear of the replacement of faculty by computers, diffusion of value

traditionally placed on getting a degree, faculty culture, lack of an adequate time-frame to implement online courses, the more technologically advanced the learning system, the more to go wrong, resistance to change, and lack of technological assistance. The most critical barriers, as Berge found in his survey, appear related to, person's resistance to or fear of the many changes that must occur at the individual and organizational level, lack support for the changing role of students and teachers, and barriers arise over difficulties in assessment.

Muilenburg and Berge (2001) in their exploratory factor-analysis research determined the underlying constructs that comprise barriers to distance education regarding faculty, staff and administrators. The ten factors found were administrative structure, organizational change, technical expertise, social interaction and quality, faculty compensation and time, threat of technology, legal issues, evaluation/effectiveness, access, and student support services. To construct these ten factors, they made a survey with sixty four different barrier items to 2054 members, and concluded that some barriers overlap one or more different factors.

Truman (1995) concluded in her study that the delivery system in distance education may not be so important, but the methods and techniques to accomplish learning will be most important, especially those that eliminate communication barriers for nontraditional learners and students. The important barriers discussed in her work regarding distance education were money, staff equipment, time, student perceptions to information, and their understanding how the technology itself shapes the information it carries to distinguish junk information from facts.

Pajo (2001) mentioned that the different roles of personal and attitudinal barriers to the prediction of current use and future intentions to adopt web-based technology, is an interesting finding in his study. Current use of the technology is most closely associated with personal barriers, those who feel that they lack the skills of using web-based delivery in their distance education. These personal barriers may prevent the individual from translating his/her intentions into behavior.

Leach and Walker (2000) argue that the instructor's feedback is essential to students in distance education for their self-evaluation, task orientation, instructor support, and flexibility. Also they indicated that the degree level of student's experience with technology is directly correlates to whether or not the technology used in distance education is a barrier. For a successful online education, technology concerns must be minimized, and programs used must be designed accordingly.

Cucek (2001) in the research study done on students who were enrolled in distance education at Boise State University, were asked questions to measure their satisfaction with their distance education classes, perceived access to support services, and differences in their "classroom" behaviors in distance education and traditional face-to-face classes. The students' answers concentrated upon main problems (barriers) to the successful completion of their distance education courses. Almost all responses were related to course issues, time issues, personal issues, administrative, and technical issues. Course related barriers were: lack of interaction, poorly structured courses, and difficulty in accessing resources. Time related barriers were: lack of time, competing personal commitments, and course work that requires an excessive amount of time. Personal issues concentrated on motivation and self discipline. Technical problems were related with the lack of expertise. Finally, administrative problems were cost, course availability, obtaining course materials, and administrative support.

As may be concluded from the literature review, there are barriers in establishing and maintaining distance education programs and communication barriers in using them. We may categorize the barriers of an online distance education into two categories; problems related with the program creation and implementation as general barriers, while the problems related with the program usage as communication barriers.

To create and run an effective distance education program, it is important to be sure that the program supports the needs of learners in the best and efficient way. In part, this requires finding and adopting methods to reduce or eliminate communication barriers.

Research Methodology

The place where the research took place

The research focused on the students enrolled in the text-based Internet-enabled distance education online courses at Eastern Mediterranean University, Turkish Republic of Northern Cyprus. Students were selected randomly and they were asked to fill in an online questionnaire. Its aim was to evaluate student perceptions and attitudes toward distance education, and to find the nature and the degree of communication barriers involved in the online program.

Data of the Research

The data used in this research were obtained after the participants filled in the online questionnaire. It was given to 104 students enrolled in the online courses in the academic year 2002-2003.

The online questionnaire took into consideration these *independent* variables:

- Student's gender,
- Student's academic term,
- Whether the student has a computer and Internet access at home,
- The frequency of student Internet usage,
- Student's having Internet education,
- The period of studying in English language, and
- Whether the student had a distance education course before.

Dependent variables were:

- I have difficulty to access Internet in order to get resources.
- I have capability to use Internet but I have language problems to understand navigations.
- While I am writing e-mail, I believe that I can reflect my expressions easily.
- I need quick responding from my Instructors.
- I believe that communicating non-verbally is better than verbally.
- I can easily adapt the technical sides of distance education.
- One way communication is much quick according to two way communication in distance education.
- In order to get effective understanding, I need to realize the reactions, gestures of sender.
- I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.
- I can easily access all facilities on web pages about e-learning.

- I could not find time and opportunity to catch the courses about the distance education.
- Mostly, I face difficulty with the technical applications of e-learning.
- There should be a team organization for technical support at the faculty.
- I need meetings sequentially in order to express my opinions because of both language and technical problems.
- It is easy to use software programs on distance education.
- I live the sense of responsibility and self-development through distance education.
- Communication or connection frequently is blocked by physical factors with instructors.
- Frequently, I could not understand the questions that instructor send us.
- In the team work studies, I get difficulty to design homework because of different interpretations in distance education.
- Like classical learning process, it is normal to face barriers in distance education.
- Even though there are more barriers in distance education, it creates more effective learning from classical one.
- Self-esteem and self-development are easily created through distance education than intra-personal communication.
- I feel my self alone and isolated because of being student in distance education.
- I could not get adequate feedback and sharing in distance education.
- I become motivated in distance education program.
- There is no sense of culture and consciousness in faculty about distance education.
- I think that I can easily manage all obstacles in distance education.
- All barriers can be overcome through technical group organization.
- I feel that I can control all activities at learning with my needs, expectations and interests.
- I prefer to study on distance education because of immediate communication and self-learning.

Statistical Method for this Research

Frequencies, percentages, cross tabulations were found, and t-test and One-Way ANOVA were applied to find the significance differences between the variables using the statistical program (SPSS).

The Demography of the participating students

The research revealed the demographic structure of the participants.

The gender of the students filling in the questionnaire was 64.4% male and 35.6% female. The class level of the respondents were 5.8% were freshmen, 32.7% sophomore, 20.2% junior, and the remaining 41.3% were senior.

75.0% of the students had computer at home, and 25.0% answered no to this question. 42.3% of these students who have computers at home have Internet connection and 57.7% had no Internet connection.

Answers to the question of the frequent usage of the Internet indicated that 69.2% of the respondents use the Internet everyday, 26.9% use the Internet once a week, and 3.8% of them use the Internet once a month.

The answers to the question of having education on Internet showed that, 43.3% of the students had an Internet education, and 56.7% did not have an Internet education.

How long have you been learning in English question, had answers of 22.1% of the students have been learning from one to three years, 34.6% between 4 to seven years, and 43.3% having English learning between eight to 11 years.

And finally, 30.8% of the students responded yes to the question "Have you ever educated on distance education?" while 69.2% did not have a distance education course before.

Result of the research

The results received at the end of this research depended on the questions answered in the questionnaire and on the statistics done to get the percentages. The questions (dependent variables) had five alternative answers:

- Strongly Disagree
- Disagree
- Undecided
- Agree
- Strongly Agree

The frequencies and percentages obtained from the answers are shown in table (9).

Statistical Analysis

After the questionnaire was completed and the percentages were taken, it was important to see if the results showed any significant variations due to the asked independent variables. Therefore, t-test and one-way ANOVA were applied to find the differences. While doing so, the value of alpha (α) was accepted as 0.05. All comparative analysis was made according to this value.

Frequency Analysis

The frequency analysis (Table 9), showed important results regarding to student-to-student communication. 31.7% of students felt the isolation in the distance education program and 46.2% said it is important to see the gestures and reactions of the other communicated person.

Other results related to student-to-instructor communication were: 32.7% of students said that in online courses there is no adequate feedback and sharing, 46.2% said it is important to see gestures and reactions of the other communicated person, 31.7% said that verbal communication is better than non-verbal communication, and 41.3% asked for a quick response from their instructors.

Student-to-content barriers were 42.3% said that in online courses they need help in language and 36.5% need help in technical applications of e-learning.

While the problems related with the web site of the online course itself were 42.3% said that they need help in technical problems, 39.4% of the students said that there should be a team organization for technical support at the faculty, and 43.3 said that all barriers can overcome with the help of technical group organization.

t-test analysis and their Results

Some of the questions analyzed (Table 10) showed results greater than that of alpha. In such questions, there were no notable differences due to gender, computer at home, Internet connection at home, having Internet education, and having distance education course before.

Besides these questions, there were those which showed values less than that of alpha, revealing that there is a notable difference between the questions and the tested independent variables. These questions and the related independent variables are as follows:

The questions and their results related to gender were as follows:

- I cannot be relaxed, spontaneous, and willing while I am engaging the distance education course - calculated value 0.015
- I could not find time and opportunity to catch the courses about the distance education - calculated value 0.011
- Like classical learning process, it is normal to face barriers in distance education – calculated value 0.046
- From the cross tabulation analysis between the questions and gender difference, it was clearly shown that, the male are more comfortable with online education courses, they have more control over the time in distance education courses, and they less face the barriers in distance education than the female students who are enrolled in text-based Internet-enabled online courses.

The questions and their results related to Internet availability at home were as follows:

- Mostly, I face difficulty with the technical applications of e-learning – calculated value 0.038

From the cross tabulation analysis between the questions and Internet availability at home, it was clearly shown that Internet availability at home helps students who are enrolled in text-based Internet-enabled online courses to be familiar with the technology more than the students who do not have Internet at home.

The questions and their results related to having Internet education before starting online courses were as follows:

- I can easily adapt the technical sides of distance education – calculated value 0.038
- I live the sense of responsibility and self-development through distance education – calculated value 0.041
- Self-esteem and self-development are easily created through distance education than intra-personal communication – calculated value 0.010
- All barriers can be overcome through technical group organization – calculated value 0.009

From the cross tabulation analysis between the questions and having Internet education before starting their distance education, it was clearly shown that students who had no Internet education before starting their online distance education courses; can adapt to the technical sides of the distance education course easier, can access the web page facilities easier, can sense responsibility and self-development in distance education more, can create self-esteem or self-development in distance education easier, and believe that the barriers can be overcome by a technical group organization, rather than the students, enrolled in a text-based Internet-enabled online courses, who had Internet education before.

The questions and their results related to having distance education courses before were as follows:

- While I am writing e-mail, I believe that I can reflect my expressions easily – calculated value 0.034
- It is easy to use software programs on distance education – calculated value 0.002

From the cross tabulation analysis between the questions and having distance education courses before, it was clearly shown that, having text-based Internet-enabled online courses before did not help the students to reflect their expressions more easily while they write e-mails, and did not give them enough experience of using programs in distance education.

One-Way-ANOVA Analysis and Results

Some of the questions analyzed (table 11) showed results greater than that of alpha. In such questions, there were no notable differences due to student's academic term, daily Internet Usage, and the period of learning in English.

Besides these questions, there were those which showed values less than that of alpha, revealing that there is a notable difference between the questions and the tested independent variables. These questions and the related independent variables are as follows:

Questions and their results related to student's academic term were:

- I can easily adapt the technical sides of distance education – calculated value 0.043
- Self-esteem and self-development are easily created through distance education than intra-personal communication – calculated value 0.001
- I could not get adequate feedback and sharing in distance education – calculated value 0.002

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, freshman and sophomore students enrolled in text-based Internet-enabled online courses have more difficulty to access Internet in order to get resources than the students of higher classes. Freshman level students have more difficulties in, adaptation to technical sides of the text-based Internet-enabled online courses, creation self-esteem and self-development. High level class students expressed concern that they were not getting adequate feedback and sharing in text-based Internet-enabled online courses.

Questions and their results related to student's Internet usage frequency were:

- I have capability to use Internet but I have language problems to understand navigations – calculated value 0.034
- Communication or connection frequently is blocked by physical factors with instructors – calculated value 0.037

- I feel myself alone and isolated because of being student in distance education – calculated value 0.002
- I could not get adequate feedback and sharing in distance education – calculated value 0.036

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, students who are using the Internet once a week or once a month complain from having; language problems to understand navigations, connection block with instructors, feel themselves alone and isolated, and not having an adequate feedback and sharing in their text-based Internet-enabled online courses.

The questions and their results related to student's period of learning in English were as follows:

- I have capability to use Internet but I have language problems to understand navigations – calculated value 0.000

From the cross tabulation analysis between the questions and student's academic term, it was clearly shown that, students who are learning in English more than seven years can express themselves better while writing e-mails.

Conclusion and Recommendations

As observed from the analysis, text-based Internet-enabled distance education program is not a sufficient method to use and does not provide the students with any training with its usage.

Text-based Internet enabled distance education programs can be easily modified to support students' use and to give the students more chance of communication with the other parts of the process.

Students, who are engaged in distance education through Internet for the first time carry the feeling of fear from this new concept and lack of experience, which decreases the communication process between the participants. To encourage the students and make them more comfortable with the new environment, the institution could start by organizing a term beginning orientation designed in a very simple way to give the students a brief explanation of distance education concept, description of the website structure, methods on how the student can organize his work, the course timetable and assessment criteria. Once the student feels more relaxed with the website and feels more confident with the new environment, the student is positively motivated to proceed with the course.

The students' feeling of isolation can be reduced by creating a group mail address, where all students and the instructor can share their opinions, questions, and knowledge, and make the students feel that they belong to a group and that they are not alone in this program. It may be appropriate if the instructor can divide the students of the course to sub-groups with different mail addresses for each, which gives students a sense of group identity and motivation to produce better work.

Another way student-to-student connections can be utilized is to periodically arrange chat groups for students to communicate online, which gives students a sense of closeness and friendship.

The relations of student-to-content in this type of distance education programs can be maximized by enrolling the student in the teaching and learning process, and give them the ability to access to the instructional resources, which encourages the students to visit the course site more frequently and make the students feel that they have a share in their knowledge's building.

In conclusion, text-based Internet-enabled distance education is more effective if communication barriers are minimized. This is achieved by improved access to the internet, training and experience with the communication system, and greater interactivity to stimulate student-to-student, student-to-instructor, and student-to-content interactions.

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STATISTICAL DATA TABLES

Frequencies (*f*) and Percentage (%) of the independent variables:

Table (1) Gender

Gender	<i>f</i>	%
Male	67	64,4
Female	37	35.6
Total	104	100.0

Table (2) Student's academic term

Which academic term are you following?	<i>f</i>	%
Freshman	6	5.8
Sophomore	34	32.7
Jonior	21	20.2
Senior	43	41.3
Total	104	100.0

Table (3) Availability of Compter at home

Do you have a computer at home?	<i>f</i>	%
Yes	78	75.0
No	26	25.0
Total	104	100.0

Table (4) Availability of Internet at home

Do you have Internet Access at your home?	<i>f</i>	%
Yes	44	42.3
No	60	57.7
Total	104	100.0

Table (5) Frequency of using the Internet

How often do you use Internet?	<i>f</i>	%
Everyday	72	69.2
Once a week	28	26.9
Once a Month	4	3.8
Total	104	100.0

Table (6) Whether the Student had Internet Education

Have you ever get Internet education?	<i>f</i>	%
Yes	45	43.3
No	59	56.7
Total	104	100.0

Table (7) Time period of learning in English

How long have you been learning in English?	<i>f</i>	%
1 - 3 Years	23	22.1
4 - 7 Years	36	34.6
8 - 11 Years	45	43.3
Total	104	100.0

Table (8) Whether the student had online courses before

Did you have online courses before?	<i>f</i>	%
Yes	32	30.8
No	72	69.2
Total	104	100.0

Frequencies (*f*) and Percentage (%) of the dependent variables:

Table (9) Frequencies & percentages of the dependent variables

	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I have difficulty to access Internet in order to get resources.	25	24.0	44	42.3	7	6.7	22	21.2	6	5.8
I have capability to use Internet but I have language problems to understand navigations.	30	28.8	43	41.3	11	10.6	18	17.3	2	1.9
While I am writing e-mail, I believe that I can reflect my expressions easily.	11	10.6	18	17.3	16	15.4	50	48.1	9	8.7
I need quick responding from my Instructors.	11	10.6	20	19.2	16	15.4	43	41.3	14	13.5
I believe that communicating non-verbally is better than verbally.	19	18.3	33	31.7	23	22.1	27	26.0	2	1.9
I can easily adapt the technical sides of distance education.	12	11.5	19	18.3	13	12.5	42	40.4	18	17.3
One way communication is much quick according to two way communication in distance education.	13	12.5	28	26.9	17	16.3	40	38.5	6	5.8
In order to get effective understanding, I need to realize the reactions, gestures of sender.	9	8.7	23	22.1	16	15.4	48	46.2	8	7.7
I cannot be relax, spontaneous and	16	15.4	37	35.6	15	14.4	29	27.9	7	6.7

willingness while I am engaging the distance education courses.										
I can easily access all facilities on web pages about e-learning.	10	9.6	19	18.3	18	17.3	47	45.2	10	9.6
I could not find time and opportunity to catch the courses about the distance education.	14	13.5	33	31.7	21	20.2	33	31.7	3	2.9
Mostly, I face difficulty with the technical applications of e-learning.	13	12.5	26	25.0	24	23.1	38	36.5	3	2.9
There should be a team organization for technical support at the faculty.	12	11.5	16	15.4	15	14.4	41	39.4	20	19.2
I need meetings sequentially in order to express my opinions because of both language and technical problems.	12	11.5	21	20.2	17	16.3	44	42.3	10	9.6
It is easy to use software programs on distance education.	9	8.7	17	16.3	20	19.2	44	42.3	14	13.5
I live the sense of responsibility and self-development through distance education.	9	8.7	19	18.3	18	17.3	47	45.2	11	10.6
Communication or connection frequently is blocked by physical factors with instructors.	10	9.6	27	26.0	26	25.0	41	39.4	0	0.0
Frequently, I could not understand the questions that instructor send us.	16	15.4	39	37.5	15	14.4	28	26.9	6	5.8
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	10	9.6	24	23.1	24	23.1	38	36.5	8	7.7
Like classical learning process, it is normal to face barriers in distance education.	7	6.7	18	17.3	21	20.2	51	49.0	7	6.7
Even though there are more barriers in distance education, it creates more effective learning from classical one.	10	9.6	31	29.8	22	21.2	35	33.7	6	5.8
Self-esteem and self-development are easily created through distance education than intra-personal communication.	11	10.6	20	19.2	30	28.8	40	38.5	3	2.9
I feel my self alone and isolated because of being student in distance education.	14	13.5	32	30.8	18	17.3	33	31.7	7	6.7
I could not get adequate feedback and sharing in distance education.	8	7.7	22	21.2	29	27.9	34	32.7	11	10.6
I become motivated in distance education program.	14	13.5	25	24.0	21	20.2	37	35.6	7	6.7
There is no sense of culture and consciousness in faculty about distance education.	9	8.7	18	17.3	28	26.9	42	40.4	7	6.7
I think that I can easily manage all obstacles in distance education.	7	6.7	30	28.8	23	22.1	41	39.4	3	2.9
All barriers can be overcome through technical group organization.	9	8.7	18	17.3	26	25.0	45	43.3	6	5.8
I feel that I can control all activities at learning with my needs, expectations and interests.	7	6.7	30	28.8	22	21.2	36	34.6	9	8.7
I prefer to study on distance education because of immediate communication and self-learning.	12	11.5	22	21.2	20	19.2	43	41.3	7	6.7

t-test analysis & the significant values:**Table (10)**

Independent Samples Test (t-test)	Significance				
	Gender	Computer at Home?	Internet at Home?	Internet Education?	Had online courses before?
I have difficulty to access Internet in order to get resources.	0.579	0.359	0.060	0.427	0.552
I have capability to use Internet but I have language problems to understand navigations.	0.881	0.879	0.229	0.209	0.714
While I am writing e-mail, I believe that I can reflect my expressions easily.	0.219	0.052	0.094	0.059	0.034
I need quick responding from my Instructors.	0.345	0.153	0.182	0.089	0.123
I believe that communicating non-verbally is better than verbally.	0.685	0.420	0.472	0.316	0.954
I can easily adapt the technical sides of distance education.	0.806	0.070	0.666	0.002	0.199
One way communication is much quick according to two way communication in distance education.	0.247	0.634	0.599	0.850	0.336
In order to get effective understanding, I need to realize the reactions, gestures of sender.	0.222	0.961	0.460	0.393	0.347
I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.	0.015	0.781	0.329	0.777	0.862
I can easily access all facilities on web pages about e-learning.	0.295	0.119	0.063	0.038	0.115
I could not find time and opportunity to catch the courses about the distance education.	0.011	0.616	0.903	0.541	0.425
Mostly, I face difficulty with the technical applications of e-learning.	0.149	0.223	0.038	0.531	0.770
There should be a team organization for technical support at the faculty.	0.822	0.122	0.958	0.674	0.111
I need meetings sequentially in order to express my opinions because of both language and technical problems.	0.421	0.375	0.739	0.491	0.882
It is easy to use software programs on distance education.	0.231	0.089	0.571	0.236	0.002
I live the sense of responsibility and self-development through distance education.	0.775	0.239	0.100	0.041	0.373
Communication or connection frequently is blocked by physical factors with instructors.	0.103	0.151	0.291	0.068	0.138
Frequently, I could not understand the questions that instructor send us.	0.084	0.671	0.853	0.946	0.924
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	0.538	0.921	0.631	0.525	0.721
Like classical learning process, it is normal to face barriers in distance education.	0.046	0.709	0.450	0.121	0.528
Even though there are more barriers in distance education, it creates more effective learning from classical one.	0.661	1.000	0.957	0.355	0.965
Self-esteem and self-development are easily created through distance education than intra-personal communication.	0.762	0.054	0.151	0.010	0.657

I feel my self alone and isolated because of being student in distance education.	0.431	0.742	0.680	0.790	0.480
I could not get adequate feedback and sharing in distance education.	0.165	0.054	0.776	0.400	0.931
I become motivated in distance education program.	0.770	0.777	0.422	0.605	0.189
There is no sense of culture and consciousness in faculty about distance education.	0.357	0.143	0.415	0.077	0.822
I think that I can easily manage all obstacles in distance education.	0.989	0.174	0.417	0.315	0.227
All barriers can be overcome through technical group organization.	0.299	0.958	0.279	0.009	0.774
I feel that I can control all activities at learning with my needs, expectations and interests.	0.118	0.268	0.356	0.099	0.338
I prefer to study on distance education because of immediate communication and self-learning.	0.738	0.885	0.653	0.526	0.802

One-Way-ANOVA analysis & the significant values:

Table (11)

Independent Samples Test (One-Way-ANOVA)	Significance		
	Academic term?	Internet Usage?	Learning in English?
I have difficulty to access Internet in order to get resources.	0.029	0.130	0.663
I have capability to use Internet but I have language problems to understand navigations.	0.284	0.034	0.000
While I am writing e-mail, I believe that I can reflect my expressions easily.	0.176	0.897	0.083
I need quick responding from my Instructors.	0.185	0.349	0.885
I believe that communicating non-verbally is better than verbally.	0.839	0.493	0.310
I can easily adapt the technical sides of distance education.	0.043	0.967	0.846
One way communication is much quick according to two way communication in distance education.	0.099	0.958	0.124
In order to get effective understanding, I need to realize the reactions, gestures of sender.	0.074	0.730	0.381
I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.	0.439	0.132	0.683
I can easily access all facilities on web pages about e-learning.	0.200	0.874	0.204
I could not find time and opportunity to catch the courses about the distance education.	0.118	0.480	0.324
Mostly, I face difficulty with the technical applications of e-learning.	0.177	0.169	0.504
There should be a team organization for technical support at the faculty.	0.186	0.749	0.844
I need meetings sequentially in order to express my opinions because of both language and technical problems.	0.083	0.449	0.088
It is easy to use software programs on distance education.	0.427	0.915	0.795
I live the sense of responsibility and self-development through distance education.	0.185	0.744	0.679
Communication or connection frequently is blocked by physical factors with instructors.	0.310	0.037	0.457
Frequently, I could not understand the questions that instructor send us.	0.992	0.244	0.146
In the team work studies, I get difficulty to design homework because of different interpretations in distance education.	0.372	0.273	0.543
Like classical learning process, it is normal to face barriers in distance education.	0.306	0.532	0.108

Even though there are more barriers in distance education, it creates more effective learning from classical one.	0.449	0.600	0.254
Self-esteem and self-development are easily created through distance education than intra-personal communication.	0.033	0.649	0.235
I feel my self alone and isolated because of being student in distance education.	0.061	0.002	0.424
I could not get adequate feedback and sharing in distance education.	0.001	0.036	0.669
I become motivated in distance education program.	0.123	0.631	0.155
There is no sense of culture and consciousness in faculty about distance education.	0.530	0.831	0.497
I think that I can easily manage all obstacles in distance education.	0.909	0.969	0.563
All barriers can be overcome through technical group organization.	0.601	0.852	0.852
I feel that I can control all activities at learning with my needs, expectations and interests.	0.112	0.807	0.438
I prefer to study on distance education because of immediate communication and self-learning.	0.207	0.551	0.467

Cross Tabulation:

Table (12)

		I cannot be relax, spontaneous and willingness while I am engaging the distance education courses.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	13	25	12	14	3	67
	Female	3	12	3	15	4	37
Total		16	37	15	29	7	104

Table (13)

		I could not find time and opportunity to catch the courses about the distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	11	24	16	14	2	67
	Female	3	9	5	19	1	37
Total		14	33	21	33	3	104

Table (14)

		Like classical learning process, it is normal to face barriers in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Gender	Male	7	13	14	28	5	67
	Female	0	5	7	23	2	37
Total		7	18	21	51	7	104

Table (15)

		Mostly, I face difficulty with the technical applications of e-learning.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Do you have Internet Access at your home?	Yes	7	15	8	14	0	44
	No	6	11	16	24	3	60
Total		13	26	24	38	3	104

Table (16)

		I can easily adapt the technical sides of distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	10	11	4	14	6	45
	No	2	8	9	28	12	59
Total		12	19	13	42	18	104

Table (17)

		I can easily access all facilities on web pages about e-learning.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	9	8	6	18	4	45
	No	1	11	12	29	6	59
Total		10	19	18	47	10	104

Table (18)

		I live the sense of responsibility and self-development through distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	7	10	7	16	5	45
	No	2	9	11	31	6	59
Total		9	19	18	47	11	104

Table (19)

		Self-esteem and self-development are easily created through distance education than intra-personal communication.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	9	10	10	16	0	45
	No	2	10	20	24	3	59
Total		11	20	30	40	3	104

Table (20)

		All barriers can be overcome through technical group organization.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Have you ever get Internet education?	Yes	8	11	6	18	2	45
	No	1	7	20	27	4	59
Total		9	18	26	45	6	104

Table (21)

		While I am writing e-mail, I believe that I can reflect my expressions easily.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Did you have online courses before?	Yes	4	11	4	10	3	32
	No	7	7	12	40	6	72
Total		11	18	16	50	9	104

Table (22)

		It is easy to use software programs on distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Did you have online courses before?	Yes	5	8	6	13	0	32
	No	4	9	14	31	14	72
Total		9	17	20	44	14	104

Table (23)

		I have difficulty to access Internet in order to get resources.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	1	0	1	6
	Sophomore	12	16	3	2	1	34
	Junior	2	10	1	8	0	21
	Senior	8	17	2	12	4	43
Total		25	44	7	22	6	104

Table (24)

		I can easily adapt the technical sides of distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	0	2	0	6
	Sophomore	3	6	3	14	8	34
	Junior	4	5	2	7	3	21
	Senior	2	7	8	19	7	43
Total		12	19	13	42	18	104

Table (25)

		Self-esteem and self-development are easily created through distance education than intra-personal communication.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	3	1	2	0	0	6
	Sophomore	3	9	7	13	2	34
	Junior	2	3	8	8	0	21
	Senior	3	7	13	19	1	43
Total		11	20	30	40	3	104

Table (26)

		I could not get adequate feedback and sharing in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Which academic term are you following?	Freshman	2	2	2	0	0	6
	Sophomore	2	10	10	10	2	34
	Junior	0	1	5	10	5	21
	Senior	4	9	12	14	4	43
Total		8	22	29	34	11	104

Table (27)

		I have capability to use Internet but I have language problems to understand navigations.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	26	29	7	8	2	72
	Once a week	4	12	4	8	0	28
	Once a Month	0	2	0	2	0	4
Total		30	43	11	18	2	104

Table (28)

		Communication or connection frequently is blocked by physical factors with instructors.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	9	21	19	23	0	72
	Once a week	1	5	5	17	0	28
	Once a Month	0	1	2	1	0	4
Total		10	27	26	41	0	104

Table (29)

		I feel my self alone and isolated because of being student in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	13	27	11	17	4	72
	Once a week	1	4	5	15	3	28
	Once a Month	0	1	2	1	0	4
Total		14	32	18	33	7	104

Table (30)

		I could not get adequate feedback and sharing in distance education.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How often do you use Internet?	Everyday	7	19	21	18	7	72
	Once a week	1	3	6	14	4	28
	Once a Month	0	0	2	2	0	4
Total		8	22	29	34	11	104

Table (31)

		While I am writing e-mail, I believe that I can reflect my expressions easily.					Total
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
How long have you been learning in English?	1 - 3 Years	2	7	1	12	1	23
	4 - 7 Years	5	7	8	15	1	36
	8 - 11 Years	4	4	7	23	7	45
Total		11	18	16	50	9	104

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Editor's Note: Glenn Russell examines psychological aspects of teaching and learning at a distance. He senses an ethical dilemma of which we need to be aware and concerned. If we are aware of potential hazards – like the “distancing effect” – we can be proactive in countering them. In studies of distance learning, lack of “face-to-face” communication is a major concern. Interactive technologies do not adequately compensate for timely in-person communication.

In an attempt to compensate for the distancing effect, well designed courses combine dialog and peer learning with individual and group activities through conferences, study groups, threaded discussion, chat, netmeeting, and email. For many students, distance learning is their only access to higher education or specialized training. Others choose distance learning for flexibility in schedule, reduced travel, and ability to fit education into their everyday lives with minimal disruption to personal and professional responsibilities. Glenn Russell provides a detailed analysis and discusses ways instructional design, teachers, and students can minimize the “distancing effect” in online learning.

The Distancing Dilemma in Distance Education

Glenn Russell

Abstract

The continued movement from face-to-face teaching modes to online education constitutes a dilemma for educators. Indications from communications research and philosophy suggest the existence of a *distancing effect*, whereby students who are separated in time and place by mediating technologies may have reduced empathy for the well-being of others. Distancing effects have an ethical dimension, because they are associated with a choice between teaching alternatives, and their consequent benefits or disadvantages for students. This paper argues that there is an ethical problem facing educators that is not always recognized. However, awareness of these concerns will enable distancing effects to be reduced, and suggestions are offered to assist in this process.

The existence of a distancing effect

Distancing can be understood as a separation in time or space that reduces the empathy that a person may have for the suffering of others. It is a concept that has been discussed in philosophy and literature as well as in more recent communications research, and the earliest discussions of it predate computers. Ginsberg (1994) cites examples from Aristotle and Diderot. In *The Rhetoric*, Aristotle observes that

...it is when suffering seems near to them that men pity; as for disasters that are ten thousand years off in the past or the future, men cannot anticipate them, and either feel no pity at all for them, or at all events feel it in no comparable measure (Cooper, p. 122, Book 2, section 2.8)

It was a concern that also attracted the attention of Diderot (1993) in the Eighteenth Century. In *Conversation of a Father with His Children*, he writes:

We agreed that perhaps distance in space or time weakened all feelings and all sorts of guilty conscience, even of crime. The assassin, removed to the shores of China, can no longer see the corpse which he left bleeding on the banks of the Seine (p. 143).

Similarly, Graham Greene's (1974) novel *The Third Man*, (which also became a classic film), shows the protagonist Harry Lime as amoral when he considers the lives of the people who appear in a "toy landscape" (p.120) at the bottom of the Ferris Wheel in Vienna.

Arguably, when computers or other forms of electronic media mediate human experiences, a similar process operates because the immediacy or richness of the communication is reduced by the technology. In the research literature, there are several related theories to support an argument for the existence of technology-related distancing, including moral distancing, psychological distancing, media richness, and psychological propinquity.

Rubin (1996) argues that technology increases the propensity for unethical conduct by creating a moral distance between an act and the moral responsibility for it. This position, known as the *Moral Distancing Hypothesis*, draws on earlier pre-Internet theories such as Wellens's (1986) *Psychological Distancing Model*. For Wellens, immediacy was related to the number of information channels, in that the reduction of telecommunication bandwidth leads to a progressive decrease in sensory modalities as one moves from face to face to videophone, telephone, and written forms of communication. The implications of this theory is that the movement from face-to-face teaching to online applications risks both a reduction in "sensory modalities" and the inability of teachers to appreciate how their students' behaviour will be affected by computer-mediated alternatives.

Media or information richness theory argues that learning is constrained by the characteristics of the communications channel, and, as Dede (1991) suggests, the wider the bandwidth of a communications medium, the more immediate and rich a learning experience can be. For Walther, (1992) bandwidth and the number of available cues is related to whether an available channel can be considered lean or rich. Hence, for Walther, CMC (Computer-mediated communication) is seen as a lean channel while videoconferencing is seen as moderately rich. Daft and Lengel (1984, 1986) had earlier posited a hierarchy of information richness based on the potential information-carrying capacity of the data, and they classified information mediums available at that time in order from highest to lowest. These were seen as face-to-face, telephone, written personal (letters, memos), written formal (bulletins, documents), and numeric format (computer output). Face-to-face communication was seen as the richest form of information processing because it provides immediate feedback. The presence of multiple cues was also seen as important.

Much of the media richness theory predates the ready availability of some contemporary communication modes that are now in common use. In particular, learners often have the use of subjects that are delivered or supported by the World Wide Web. Increasingly, these contain elements such as sound, animation, and movies, in addition to text. Other web-based technologies, including video conferencing and electronic whiteboards have also been used. A revised hierarchy of media richness for online education is suggested in Figure 1.

Number	Media type
1	Web page text + graphics + sound + motion
2	Web page text + graphics + sound
3	Web page text + graphics
4	Web page text or text-only email

Figure 1: A hierarchy of media richness for online education

This hierarchy progressively adds sensory modalities to the students' experiences, commencing from text-based materials at the bottom of the figure. Although it is likely that distancing effects are reduced as information richness increases, the converse is also true. Progression through the

levels from the top to the bottom may be accompanied by experiential impoverishment as the available information, feedback and cues diminish.

The significance of the hierarchy in Figure 1 is that the richest online learning experiences (in terms of bandwidth) are unlikely to match those provided by traditional face-to-face teaching. As Palmer (1995) observes, face-to-face contact between people is seen as the ideal.

Face-to-face communication would appear to remain the idealized form of interpersonal communication, embodying all the features that humans developed to facilitate the rapid, explicit, and implicit negotiation of relational information (p. 286)

Korzenny and Bauer (1981) provide a useful perspective on this phenomenon. This interpretation of communication theory has been referred to as psychological or electronic propinquity and it refers to the degree to which members of an organisation experience communication satisfaction. Factors including bandwidth, complexity of information, feedback, level of communication skills, and level of communication rules as the main contributors contributed to propinquity. Bandwidth was defined as "the information transmission capacity of the available sensory channels (visual, auditory, tactile, gustatory, and olfactory) for vocal and nonvocal, and verbal and non-verbal communication" (p. 481). Thus, face-to face conferences have all five channels available for communication and were defined as having a wide bandwidth; video conferences have only two channels (visual and auditory) available and were defined as having medium bandwidth, while audio only conferences have only one channel available and were defined as having a narrow bandwidth

Thus, it is possible that online education can disadvantage students, in comparison with traditional face-to-face teaching. The use of narrow bandwidth learning modes can cause problems unless an allowance is made. As Korzenny and Bauer argue,

almost all of us would agree that a blind person is handicapped in his/her ability to receive certain types of information, although in time the person may learn to compensate for the loss of the visual channel (1981, p. 493).

Social and relational cues and distancing

Research that is more recent has concentrated on the ways in which online settings tend to filter out social and relational cues. Parks (1996) maintains that those cues emanating from the physical setting are missing in online contexts, as are nonverbal cues regarding vocal qualities, bodily movement, facial expressions, and physical appearance. The reduction in contextual, visual, and aural cues should cause communication in on-line settings to be more impersonal and non-conforming than their face-to-face counterparts. This lack of cues associated with virtual environments is seen by Sheehy and Gallagher (1996) as "an impoverished communications medium"(p. 160), and for Wegerif (1998), the lack of instant feedback can be isolating and unsupportive.

The lack of cues is likely to be most acute when text-only email or web pages are used, as the hierarchy in Figure 1 suggested earlier. Cues relating to social differences such as age, beauty, race, gender, and status are not readily apparent in many emails unless they are specifically referred to. This does not mean that emotion cannot be expressed through email. As with the nuances of printed text through the ages, email is able to use the full range of the written language to express meaning and attitudes. However, as Nie (2001) explains, expected affective behaviour between people relies on means other than words on a computer screen:

Face-to-face and even telephone communication among colleagues, friends, and families are often about matters of affect. It is not that empathy, tenderness, reassurance,

flirtation, sadness, or happiness cannot be written into email. Rather, eye contact, body language, facial expressions, vocalization, hugs, pats on the back cries, embraces, kisses and giggles are the fundamentals of our evolutionary socio-emotional well-being (p. 432)

Email limitations are important when considering the question of distancing in online education because, as Cummings and Sayers (1995) note, it is asynchronous. It does not occur in "real time", and can be valuable to students because it allows for flexible access and time for reflection. It shares a number of the attributes of CMC. As Zellholler, Collins, and Berge (1998) suggest, these include a lack of geographic, temporal, and time-related barriers. It is likely, then, that email will continue to be both popular with educators and students, and associated with the effects of distancing. In contrast, Schneider, Kerwin, Frechtling and Vivari (2002), suggest that video conferencing tends to convey the immediacy of face-to-face conversation. Rich media of this type may come closest to making people feel as though they are in each other's company, but although video conferencing has greater bandwidth, it is less flexible. The synchronous nature of video conferencing means that in many cases, individual or small-group conferencing sessions would have to be replicated several times for a group of learners to obtain the same information, and there is, in addition, a need to schedule sessions at agreed times. Consequently, synchronous communication modes are unlikely to be as popular as asynchronous, and distancing effects are likely to remain a serious problem.

Measuring the Distance Effect

If the use of online technologies were widely believed to contribute to learners' lack of empathy, a strong research trend would be expected involving the identification of its nature and extent, and comparisons between online and face-to-face learning would be able to describe the results. However, there is little research in this area, because there is a focus on areas such as the achievement of cognitive objectives and learner satisfaction. Inglis (2001) argues that while online teaching is suitable for transmitting knowledge, it struggles to address the Affective Domain. Evidence for this view can be found in the choice of subject matter reported in comparative studies. For example, Johnson, Aragon, Shaik and Palma-Rivas (2000), observed that online and face-to-face projects were not seen as significantly different in quality when marked, while Sumner and Hostetler (2002) compared computer conferencing and face-to-face communications, and concluded that evaluative tasks were more effective in computer conferencing. Baker, Hale, and Gifford (1997) summarise existing CMI research, and report that CMI is characterised by improved learner effectiveness, learner efficiency, greater learner engagement, and enhanced learner interest.

Two explanations can be suggested to explain why there have been few attempts to measure distancing effects in online learning. First, although it would be possible to administer tests involving scales of empathy and tolerance to both online and face-to-face groups, it would be difficult to control for the variables that would inevitably arise outside controlled clinical groups. Scales for measuring attitudes already exist. Bogardus (1936) described methods of measuring opinions and attitudes many years before online computing emerged. However, if a user's attitude is measured after completing an online module, conclusions from the resulting data are unlikely to discriminate between competing influences such as family, peers, friends, organizations, and other electronic media. It is not surprising that Rice (1993) should observe, "there is still very little empirical validation of the media richness construct" (p. 481)

Second, distance education can be offered by institutions because of profit rather than pedagogy. Increased market share rather than teaching quality can drive decisions. This is not an approach that has recently emerged, or is restricted to online education. Marcuse (1998), commented that technology was an instrument for control and domination, and cited Lewis Mumford, who wrote

as early as 1936 in *Technics and Civilization* that the aim of many of the primary inventions was not technical efficiency, but business, or power over other men.

Ethical Problems and Distancing.

Educators are constantly faced with ethical choices. With distance education, there is a need to weigh alternatives in the teaching practices used, to ensure that the choices made will be of most benefit to students, and that harm is minimized. The responsibility for these choices is accompanied by the responsibility for their consequences. Implementing an online pedagogy can cause harm by reducing the empathy that one person should feel for another in a civilized community. Ethical decisions are however rarely uncomplicated, and the disadvantage caused by distancing must be balanced against the benefits or disadvantages to the student, who might be unable to complete the relevant course of study if it were not offered in an online mode.

There are examples outside education where employees have not acted responsibly, and this has resulted in very serious consequences. These have included defective vehicles (De George, 1991), surgeons who violate the aseptic conditions of operating room (Muskins, 1991), and radiation machines that deliver fatal doses of radiation (Collins and Miller, 1994). In these cases, the cause and effect is empirically verifiable, and it is reasonable to hold the employees involved accountable for their actions. However, in comparison, it is difficult or even impossible to identify or measure the distancing effect that might arise from the use of online education. One of the commonly held principles of accountability is that a person must know that their actions or negligence can cause harm (Weckert and Adeney, 1997). Without the knowledge or belief that a distancing effect exists and is likely to result in harm, it would be unreasonable to blame educators for the consequences.

Reducing Distancing Problems in Online Education.

It is likely that distancing effects in online education do exist, although their measurement is likely to remain problematic. If this is the case, it would be prudent for educators to reduce these effects. The steps that might be taken to accomplish this include:

1. Increasing the amount of face-to face interaction. This may be with the teacher, or may involve others such as family, peers, or community support groups.
2. A preference for high bandwidth solutions. The use of desktop video conferencing and streaming video would be a useful supplement to an online course that relied heavily on email
3. The design and implementation of procedures to reduce isolation and enhance interaction. This could include personal contact with staff, easy administration, the provision of counseling, or availability of resources.
4. The identification of any affective objectives or community norms that the institution supports. The emphasis on easily measured cognitive objectives may be at the expense of values, attitudes, and beliefs.
5. Consideration of the most appropriate form of online education for each student. Factors such as the ability to work independently, or readiness to interact with technology should be taken into account
6. Recognition that all decisions to use one technology or pedagogy rather than another are ethical decisions. There is a continuing responsibility for students' welfare, to the extent that the teacher is under an obligation not to knowingly implement any practice that will

cause harm

Conclusion

The possibility that online education will result in a distancing effect, in which students becoming less sensitive to the needs of others, raises important questions about ethical problems confronting educators. The consequences of choosing between different pedagogical alternatives include not only a consideration of how effectively objectives may be achieved, but also a balancing of the resulting good or harm

Pedagogical choices in distance education can result in unanticipated and even unwelcome consequences. This observation is also true of other technologies, and it is illustrated by an historical anecdote. In the early twentieth century, steel axes replaced stone axes in two traditional societies. The consequences for this introduction on the Yir Yiront, a group of Australian aborigines, are related by Sharp (1952), while Connolly and Anderson (1987) describe the effect on the native men and women of the New Guinea Highlands. Artifacts that were introduced for trade or utility caused serious disruption to customary beliefs and practices in each case

Online education is a very different technology from that of steel axes. Nevertheless, it is still appropriate to observe that in both cases, ethical dilemmas can arise that require further study. Proposals to identify or measure distancing effects, the identification of hierarchies of information richness, and suggestions to reduce the extent of ethical dilemmas arising from distance education may be the start of this process.

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Definitions:

Affective domain – The study of values

Asynchronous communication – Communication that is not in real time

Community norms – Community expectations of behavior

Distancing effect – A reduction in empathy for the well-being of others through online technologies

Ethical dilemmas – Choices facing educators involving a balancing of good or harm

Face-to-face teaching – An experiential teaching mode involving the physical presence of teachers and learners

Information richness – A theory or hierarchy of information richness based on the potential information carrying capacity of the data

Media richness – The characteristics of the communication channel for constraining or enhancing learning

Moral distancing – The tendency for technology to increase the propensity for unethical conduct by creating a moral distance between an act and the moral distance for it

Psychological distancing – The reduction in telecommunication bandwidth leading to decreased sensory modalities

Psychological propinquity – The degree to which members of an organization experience communication satisfaction

Social and relational cues – Cues characteristic of face-to-face and online environments

About the Author



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Editor's Note: This study is based on an online course at the University of Mauritius. It evaluates web-based learning environments from a cognitive, as compared to constructivist, point of view. The authors relate the content to learning styles, interactions, role of the teacher, ways in which learners' process their experiences, and techniques used to measure learning. In the process, they discover that behaviourism plays a dominant role in design and implementation of educational programs.

A Cognitive Approach to Evaluating Web-based Distance Learning Environments

Mohammad Issack Santally and Alain Senteni

Abstract

Distance education has always capitalized on the development of new communication methods and researchers have often laid emphasis on the needs for new approaches to the educational process in such a setting. In this article, our focus is based on the pedagogical evaluation of web-based learning environments from a cognitive point of view. We develop an evaluation grid based on the underlying cognitive principles and analyse how the environment fits in the profile of learners in a learning context. We briefly elaborate the guiding principles behind the design of our evaluation grid and apply it to a module that is currently being delivered in online distance education mode at the University of Mauritius. We find that although the learning environment contains essential tools and facilities to support cognitivist as well as constructivist learning, the engineering of the module content is still done in a behaviourist way. Student perceptions of these environments are also important since the term "learner-centred approach" is often associated with such environments. Finally, there is a need to bring a fundamental change in test traditions to reflect the new approaches towards teaching and learning.

Web-Based Distance Education: New Insights

Distance education has always capitalized on the development of new communication methods. In the past, institutions promoting distance education used the postal delivery as preferred means for communication. In fact, nowadays information and communication technologies (ICT) via the Internet is set to play a very important role in distance education. The Internet linked information networks that have been set up provide an efficient infrastructure for interaction and communication with the resource persons and tutors. The flexibility and data transfer speeds of modern information networks helps in the implementation of new pedagogies such as giving support to the interaction process between the lecturer and his students and also among students themselves. Although we stress on distance education as promoting independence and autonomy of the student in the learning experience, some authors (Shale, 1991; Garison & Shale, 1990) insist on the importance of recreating and promoting the interaction between the students and teachers that used to take place in conventional educational settings. On the other hand, Marjanovic & Orłowska (2000) argue that the challenge is not to recreate the traditional classroom with all its inherent problems, but rather to create new learning environments providing unique communication patterns, changed limitations to the types of learning activities that are possible and provide a new high quality learning experience.

Distance education via the Internet addresses these concerns because apart from favouring teacher-student interactions, it provides the optimum infrastructure for the development of

environments based on innovative pedagogies and contemporary theories of education such as the socio-constructivist perspective of learning. Supporting multimedia and hypermedia elements, the Internet promises to provide solutions to many problems linked to traditional distance education. One of the critiques of Guillemet (1989) on distance education was that students having a preference for group work were penalized since it was difficult to promote pedagogies supporting group and collaborative work. Virtual web-based collaborative environments such as discussion forums, chat applications, and newsgroups help these types of students to find peers and tutors online who would support them in their learning activities. Virtual group work has proved to be an effective pedagogical strategy as reported in different works (Santally, 2003; Veerman & Veldhuis-Diermanse, 2001; Hakkinen *et al.*, 2001).

Santally (2003) describes how appropriate pedagogical activities can help students with different learning styles to contribute in a virtual discussion forum. This study took place at the University of Mauritius where students were given a discussion topic and their interactions were recorded and analysed. The study showed that online forums are useful tools to enhance the learning process for students since they encourage critical reflection by providing enough wait-time for students to reflect on when responding to postings of other peers.

Veerman & Veldhuis-Diermanse (2001) have analysed learner interactions in four different collaborative environments (synchronous and asynchronous) and they found that the asynchronous learning environments favour the collective construction of knowledge (constructivist approach) while synchronous learning environments favour the development of higher cognitive skills compared to asynchronous learning environments.

The Learning Material

The CSE 1010E (Introduction to Information Technology) was initially delivered through print-based distance education mode and it became the first module to be delivered online at the University of Mauritius on a very large scale (~ 1000 students). The CSE 1010E module (Figure 1) has now been delivered without any major problems, for approximately two academic years now. The module is hosted by the University of Mauritius Virtual Campus, which provides the technological infrastructure and pedagogical tools to enhance the teaching and learning process.

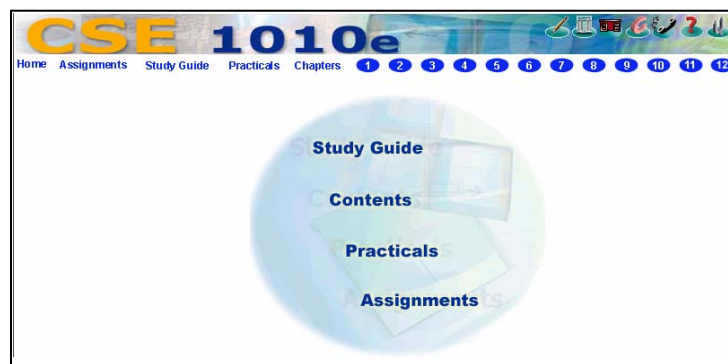


Figure 1: The CSE 1010E home page

Students have an online study guide (also available in print format) where they have access to an instructional plan that helps them in their learning. They get instructions about chapters to read and exercises to carry out. The contents section provides students with a multimedia learning

material arranged in a hypertext structure that helps them to understand concepts easily. Students also have access to a range of self-assessment questions for each chapter. The assignments and practical sections contain necessary information about continuous assessment and hands-on activities to be carried out in the lab. Students also have access to online discussion forums where they can discuss with peers and tutors about concepts and topics related to their module. Participation on online forums does count as part of the continuous assessment. This acts as a motivation factor for students to participate.

The Evaluation Grid/Instrument

The evaluation grid has been devised, based on the assumption that the learning environment is being evaluated from cognitive expert point of view. It is divided into two principal sections: (1) general aspects regrouping the content and technical elements; and (2) the pedagogical approaches regrouping the statements describing the characteristics of the learner based on cognitivist approaches. The students' profiles that we retain for the evaluation grid are: the learner with a unique profile, the contextual learner and the co-active learner.

A learner with a unique profile

Every learner has a unique profile that distinguishes him from other learners. This profile depends on different variables such as cognitive, meta-cognitive and socio-affective factors that affect their learning experience. The important factors that we consider in this study are (1) learning styles, and (2) cognitive styles.

Learning Styles

A number of studies (Kolb, 1984; Santally, 2003; McLoughlin, 1999) have shown that students have different styles of learning. Individuals have different learning styles, which indicate preferences for particular learning experiences. There are different instruments to determine students' learning styles. Two well-known learning style instruments are the Kolb (1984) Learning Style Inventory and the Honey and Mumford (1986) Learning Style Questionnaire. Kolb classifies students as assimilators, divergers, convergers and accommodators while Honey and Mumford classify students as reflectors, activists, pragmatists and theorists. For more information on learning styles, please see Santally (2003) and Ayersman & Minden (1995).

Researchers have emphasized on the importance of considering the various learning styles while designing educational materials. We need to highlight here the fact that this is a difficult task if we have to deal with thirty to forty students at a time. Teaching average students through their learning styles help them in achieving better results in the exams (Dunn *et al.*, 1995).

Cognitive Styles

The research literature classifies cognitive styles in two major subgroups (Ayersman & Von Minden, 1995): Information Gathering and Information Organizing. Within the subgrouping of Information Gathering, there are Visual/Haptic, Visualizer/Verbalizer, and levelling/sharpening styles (Jonassen & Grabowski, 1993). Within the subgroup of Information organizing, there are serialist/holist and analytical/relational styles. Barber & Milone (1980) developed a simpler instrument to measure cognitive styles (VAK Instrument), which simply classifies learners as being visual, auditory and kinaesthetic or a combination of these. Cognitive styles are recognized as describing learner traits and are mostly related to their preferred way to process information.

A Contextual Learner

Many students face problems to use and apply knowledge and abilities acquired via traditional learning situations to real-life and everyday contexts (Carragher *et al.*, 1985). This problem mainly stems from decontextualised formal learning experiences, which means learning of facts that are

isolated from the contexts in which they derive meaning (Choi & Hannafin, 1995). In such cases, students may pass exams but be unable to apply the same knowledge in everyday circumstances. Contextual learning therefore has several implications for the design of learning environments. Such environments need to emphasize on higher-order thinking skills over memorization of factual information (Choi & Hannafin, 1995). Duffy & Jonassen (1991) stress on the importance of the paradigm shift in the role of the teachers to facilitate contextual learning. The teacher needs no longer be a knowledge transmitter but he needs to play the role of a coach or facilitator of students' understanding. Contextual learning also requires a need to re-engineer existing assessment methods. Since contextual learning environments focus on the individual's cognitive processes and transfer of knowledge, assessment needs to be dynamic, and reflect ever-merging samples of the learner's progress (McLellan, 1993).

A Coactive Learner

A coactive learner is always in constant interaction with peers, the physical learning environment and the tools that are accessible to him that will help in the realisation of learning tasks required. The coactive learner has control over the navigation sequence and his interaction with the other constituents of the environment. He is therefore engaged in an active process of knowledge construction in an interactive environment. Such an environment needs to be conceived in such a way that it promotes interactivity between learners and tutors as well as providing the appropriate tools for communication and collaboration among the actors involved in the process. This scenario can be represented by the framework offered by *Cultural-historical Activity Theory* (Vygotsky, 1978) and its later application to organisational learning called *expansive learning* (Engestrom, 1987, 2001) which is increasingly being used to inform the design of better teaching materials and e-Learning environments.

The basic concept of activity theory is that learning is a human activity that is socially situated and artefact-mediated. In essence, tools mediate the processes between the subject and object; rules mediate the processes between subject and community; and division of labour mediates the processes between community and object (figure 2).

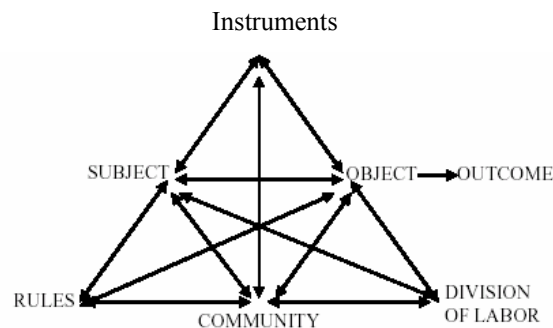


Figure 2: Engestrom's Structure of Human Activity (Engestrom, 1987)

In a learning situation, the subject is the student and the object would be a learning activity. The aim of the student is to carry out the activity and he has access to a network allowing him to interact and communicate with the other components of this environment (instruments and tools, community of peers and teachers, rules to preserve good functioning of the system as well as promote collaboration and cooperation) to attain his goal (the outcome) which would be a sound learning experience.

Content Evaluation

1=very bad || 2=bad || 3=average || 4=good || 5=very good

		1	2	3	4	5
1.	Presentation of learning outcomes and course plan				x	
2.	Organisation and clarity of information presented			x		
3.	Usefulness of examples and illustrations used in the course			x		
4.	Coherence of contents/activities with established learning outcomes				x	
5.	Usefulness and clarity of guidelines given for the course				x	
6.	General Evaluation of the contents				x	

Technical Evaluation

1=very bad || 2=bad || 3=average || 4=good || 5=very good

1	Navigational structure and ease of navigation			x		
2.	Cognitive ergonomics of the user interface			x		
3.	Accessibility to the environment				x	
4.	Ease of downloading of documents				x	
5.	Technical help and support to use the environment			x		
6.	Ease of use of communication and collaboration tools			x		
7.	General evaluation of technical aspects			x		

A Unique Learner Profile

1=very bad || 2=bad || 3=average || 4=good || 5=very good

1	Environment favours the use of different learning strategies		x			
2.	Multimedia elements caters for different cognitive styles			x		
3.	Activities are coherent with students learning styles			x		
4.	Activities included help students to complete Kolb Learning cycle			x		
5.	Environment favours a differentiated pedagogical approach adapted to individual student needs.		x			

Contextual Learning

1=very bad || 2=bad || 3=average || 4=good || 5=very good

		1	2	3	4	5
1	Learning activities and tasks are related to authentic situations				x	
2.	Activities urge students to use higher levels cognitive abilities				x	
3.	A variety of evaluation methods are used (e.g. Portfolios, projects, continuous assessment, group work...)				x	
4.	Inclusion of examples, templates, previous students work and models of expected answers to facilitate putting the students in context			x		
5.	Appropriateness of metaphor used to better situate the context			x		

A Co-Active Learner

1=very bad || 2=bad || 3=average || 4=good || 5=very good

1	Activities included incite students to work in groups and collaborate online				x	
2.	Activities favour frequent interactions between learner and tutor				x	
3.	The environment provides student with a panoply of interactive tools and resources			x		
4.	The environment favours pedagogical approaches based on knowledge construction			x		

Analysis of the CSE 1010E Learning Environment

The analysis shows that the environment is average from a cognitive perspective especially from a pedagogical approach. The best aspects of the environment are the good quality of the course contents and the technical aspects while it is average on the pedagogical side. The first thing to point out here is that the learning environment is two-fold: firstly, it contains the course itself, that is the module contents, assignments and self-assessment questions; and secondly it contains the virtual campus platform that hosts the course contents and provides access to communication and collaboration tools as well as other resources to help the student in his learning endeavour.

It is obvious, from the grid that the virtual campus has been conceived to promote a cognitive and constructivist approach to learning but the CSE1010E course itself has been mainly developed on a behaviourist perspective of learning. CSE1010E is a classical module with its contents structured in chapters that the students need to master to take part in the exams. The module actually being delivered on the virtual campus is basically just an electronic replica of the traditional version. To read contents online and to learn it “by heart” to succeed in exams is a concept completely out of phase with the cognitivist perspective and does not satisfy the conditions necessary to offer a learning experience tailored to the needs of a learner with a unique profile, coactive and in context.

On the other hand, we notice that the virtual campus is multilingual, ergonomic, easy to learn and very usable. The environment uses the space metaphor to represent virtual classrooms, conference halls, library and the café etc. The use of such appropriate metaphors helps reduce the cognitive load on the student to understand and use the functionalities of the system.

It is to be noted, that in the current virtual campus setting, the same version and type of content is proposed to the students. One of the critiques addressed to e-learning environments is the lack of personalisation in the courses (Cristea, 2003; Rumetshofer & Wob, 2003; McLouglin, 1999; Ayersman & Minden, 1995). This is a problem with the current environment since it fails to cater for individual learning styles and cognitive preferences. A recent study (Santally, 2003) on learning/cognitive styles of students and their perceptions of web-based learning showed that students find that the course does not meet their individual preferences and that they prefer to print the contents rather than read the whole bunch of HTML text online.

However, on the other hand, the environment favours the student's use of metacognitive strategies to better manage their learning. With the "bookmarking" facility offered by the system, students are able to save important links so that they may come back again to these very easily for example when they need to revise. In this way, the student can also keep a trace of his learning paths. Furthermore, the course plan offered by the environment help the students to better plan their learning. Here it implies that the environment provides the facility to incite students to make use of metacognitive strategies.

The environment allows students to work in asynchronous collaboration to exchange messages and to participate in online virtual discussion forums. The forum tool is very much used at the University of Mauritius by academics to carry out pedagogical activities whose practise in traditional classrooms is limited. However, the decision to use the forum tool depends on the tutors and there are many tutors who do not use this facility at all in the online environment. It is therefore difficult to precisely evaluate the effectiveness of forums embedded in the current context.

Discussion and Conclusion

In this study, our analysis mainly focused on two principal aspects of the environment: the module and the virtual campus. An important thing to point out after the analysis is that the tools by themselves do not promote any particular approach, method or pedagogy. It is the way we use and incite the students to use these tools for learning purposes which is more important. For an environment to meet the cognitivist criteria the nature of the tools and the instructions do not merely suffice; this depends also on how much the students and tutors adapt and master the learning environment. Therefore the way that pedagogical experts conceive the activities play a determining role in the promotion of a particular approach to learning.

We have seen in the analysis that the module has been conceived on behaviourist principles while the virtual campus has all the necessary ingredients to promote a cognitivist approach. The role of the teacher is therefore essential in the process since to conceive a particular pedagogy and to apply it in authentic situations is a different thing.

The education system in Mauritius is mainly based on behaviorism just like the majority of educational systems throughout the world. It is therefore obvious that teachers and even instructional designers continue to work on these principles. Therefore we recommend that appropriate training (or re-training) be given to these persons in the cognitive sciences education field. This is however, a time-consuming process before such changes can be visible in any education system. The reform of such educational practices need not only be on the pedagogical design level but depends also on the educational policies of countries and nations.

There is also a need to change the way a student's progress is assessed. Assessment and evaluation form an integral part in the educational process. For instance, the normal weightage for examinations and continuous assessment in most classic educational systems are 70% and 30% respectively. The weightage for continuous assessment where students are given authentic tasks such as mini-projects could be increased. Reliable alternatives should also be found to gradually replace traditional written exams where many students do not work at their best under pressure.

There is also a need to find out about student perceptions of such environments and pedagogical approaches. We have been emphasizing on the need for learner-centred approaches to education and on the new role of the teachers in the process. Although the majority of students found web-based learning interesting and stimulating (Santally, 2004), there are students who still prefer the classic approach to education and prefer spend 3 hours in a lecture and to take an exam fifteen weeks later rather than to actively participate each week in knowledge construction activities. They find that these new approaches need much more involvement on their part. This is mainly a problem encountered with mature learners who have other professional and social obligations than with young university students.

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Keywords: Internet, Web-based Learning, World-Wide Web, Distance Education, Distance Learning, Online Learning, e-Learning, Pedagogy, Cognitive Evaluation, Constructivist Learning, Learner-centered Instruction.

Editor's Note: Conservative elements in society and in academia have, until recently, rejected distance learning as a viable alternative to traditional education. This paper documents progress made in the legal profession to admit distance learning courses toward the J.D. degree and standards that are applied to ensure that standards are met.

The Reluctance to Embrace Distance Learning as an Essential Component of the Law School Curriculum

Jeff Ershler

Abstract

This article examines the reluctance of law schools to embrace distance learning as an essential component of the law school curriculum. Recent reforms approved by the American Bar Association section on Distance Learning reveal that first year law students are essentially excluded from participating in distance learning. Moreover, the American Bar Association's guidelines for technical requirements for the law schools and the willingness of law instructors to participate in on-line education are seen as obstacles to full inclusion of distance learning.

Introduction

The law school experience is decidedly an interactive experience. Students are almost always subject to an official attendance policy that requires their physical presence in the classroom on a regular basis with a limited number of acceptable absences. Often, the rationale for an attendance policy is to foster learning in a synchronistic real-time forum where students can discover the rationale behind legal arguments via the Socratic method.

Although distance learning has become a staple of higher education, law schools have been reluctant to embrace this new format. This method of delivery ostensibly permits a larger number of students to access courses who may be too far removed from the campus to attend, too busy to attend regular sessions, or who prefer taking a class on-line.

As part of the rationale for caution in proceeding with embracing distance learning, James White (1997), a consultant on Legal Education to the American Bar Association made the following statement:

“Educating a student for a Juris Doctor degree is professional education of a most distinct variety. It involves more than the mere delivery of information or simply learning facts, history or even logic. During a law school education a student is expected to participate in a learning community whereby he or she will ultimately learn, experience, and develop skills and knowledge that will advance the legal system, society and his or her career. This law school experience involves interaction with faculty not only in the classroom, but also in other places and at other times. Students also learn from each other by inquiry and challenge, review and study groups. In sum, law school is an educational process in which a student matures with the law and his or her ability to use and develop it.”

According to the American Bar Association's section on distance learning (2002), currently there are not any law schools approved by the ABA that provide a J.D. degree completely via correspondence study. The ABA's policy 304 (f) previously stated “a law school shall not grant credit for study by correspondence.” This policy seemed to preclude the utilization of distance learning as a method for delivering the law school curriculum. However, recent modifications to

this policy make it clear that distance education, as a part of the law school experience, is now permissible. ABA Standard 304 (b) (2002) states the following:

“A law school shall require, as a condition for graduation, successful completion of a course of study in residence of not fewer than 56,000 minutes of instruction time, except as otherwise provided. At least 45,000 of these minutes shall be by attendance in regularly scheduled class sessions at the law school conferring the degree, or, in the case of a student receiving credit for studies at another law school, at the law school at which credit was earned. Law schools may, however, allow credit for distance education as provided in Standard 306. Law schools may also allow credit for study outside the classroom as provided in Standard 305.”

This newly approved policy still clings to the notion of establishing minimum requirements of physical presence in the classroom, but permits some of the law school experience to be on-line.

To explain the policy changes, the ABA detailed the new rules for distance learning and how these rules would be implemented. ABA Standard 305 states that a “law school may grant credit toward the J.D. degree for courses or a program that permits or requires student participation in studies or activities away from or outside the law school or in a format that does not involve attendance at regularly scheduled class sessions.”

The ABA further indicated that Standard 305 by its own force does not allow credit for distance education courses. However, Standard 306 (a) addresses this issue. The Standard reads:

“A law school may offer credit toward the J.D. degree for study offered through distance education consistent with the provisions of this Standard and Interpretations of this Standard. Such credit shall be awarded only if academic content, the method of course delivery, and the method of evaluating student performance are approved as part of the school’s regular curriculum approval process.”

Standard 306 (c1) and (c2) even permits the distance education courses to count towards the 45,000 minutes of classroom instruction time, provided that “there is ample interaction with the instructor and other students both inside and outside the formal structure of the course throughout its duration; and there is ample monitoring of student effort and accomplishment as the course progresses.”

However, there is a limitation to how many hours a law student may earn under a distance education program. Standard 306 (d) indicates “ a law school shall not grant a student more than four credit hours in any term, nor more than a total of 12 credit hours, toward the J.D. degree for courses qualifying under this Standard. Standard 307 (e) states, “No student shall enroll in courses qualifying for credit under this Standard until that student has completed instruction equivalent to 28 credit hours toward the J.D. degree.” This Standard further limits enrollment to those students who have substantially completed their first full year of study. The fact that first year students are still required to be subject to the traditional curriculum reveals that the ABA is still loyal to tradition and not yet ready to embrace the full possibilities of distance learning.

States have become the guardians of the decision making process of who is eligible to become members of the bar. However, states have been reluctant participants to accredit law schools, and have relied heavily on ABA recommendations (2002) for accrediting. ABA policy seems to permit the use of distance learning courses with some limited exceptions. An argument has been forwarded that states could, therefore, jeopardize the legitimacy of the process of allowing individuals to become members of the bar who have participated in distance learning programs without giving careful scrutiny to the legitimacy of those programs.

States could circumvent this problem in at least two ways. States could participate in the accrediting process. However, a more realistic proposal is for states to delegate the power to ABA accredited law schools to establish review committees that could pre-approve distance learning courses as part of the standard law curriculum.

An exception has been carved out that seems to permit some utilization of distance education as a component of obtaining a J.D. The exception has been called experimental. (White, 1997).

One rationale for not utilizing distance learning as a tool in teaching law is the workload required for instructors. Instructors are beginning to get frustrated with the seemingly unwritten double standard that exists in distance education. An instructor simply has to do more work to make their product palatable to the masses, than they would if a course was taught in the traditional classroom setting. As the ABA's interpretation (2002) of Standard 306-4 indicates, "law schools shall take steps to provide students in distance education courses opportunities to interact with instructors that equal or exceed the opportunities for such interaction with instructors in a traditional classroom setting."

Instructors must also be more available and carefully balance their other professional responsibilities with the student's needs for contact. It may be that law school instructors are not willing to put forth the extra effort required of a distance learning facilitator.

Another justification for not utilizing distance learning may be the profession's unfamiliarity with utilizing a new form of teaching technology. Given the traditional reliance on the current paradigm for delivering instruction, or their prior experience with utilizing computers and distance learning technology, institutions that deliver the law school curriculum may not be familiar with how to utilize the contemporary resources to conduct an on-line class. Moreover, prior to implementing any distance learning program, the ABA, in their interpretation of Standard 306-5 (2002) requires law schools to have the technological capacity, staff, information resources, and facilities required to provide the support needed for instructors and students involved in distance education at the school. This Standard also requires law schools to establish mechanisms that assure that faculty who teach distance education courses and students who enroll in them have the skills and access to the technology necessary to enable them to participate effectively.

These goals could be readily met with the appropriation of funding to employ a distance learning team to manage the school's technologic resources and offering a few in-service courses of the variety that higher educational institutions regularly offer to introduce distance learning to faculty members. By nature, law instructors are an intellectual group; they should cultivate the opportunity and adapt quickly.

However, a more plausible rationale for the decision not to utilize distance learning in law school is the insistence of following the traditional method of instruction; utilizing the synchronistic experience of real-time Socratic methodology to help students derive the meaning of their discipline.

Technologic advancements have created on-line platforms that are well developed and permit the instructor of law to overcome the objections to using distance learning. Synchronistic real-time instruction is a reality for many instructors in higher education.

Particularly telling, is the absence of scholarship or inquiry devoted to examining the nature of why law schools are still reluctant to embrace distance education. At the 2000 Center for Computer Assisted Legal Instruction Conference on Distance Learning (2000), most of the seminars focused on strategies for implementing a distance learning program, but failed to focus on the important issue of whether or not law schools will actually utilize distance learning as a

tool. There was not a single seminar devoted to examination of how to encourage law schools to embrace distance learning.

Given the technologic improvements in distance education, and the creation of new policies that permit distance learning, there must be further investigation as to why law schools are reluctant to take advantage of this opportunity. More importantly, it is worth considering why the ABA has failed to take a position of true inclusion with respect to distance learning programs.

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Editor's Note: This month Brent Muirhead addresses graduate students about Internet resources for literature review. The overwhelming volume of information, more than ever, requires an organized approach to define, plan, search, study, record, and organize relevant resources. He recommends a combination of Internet and traditional library resources to demonstrate "careful and reflective investigation of research studies and vital information resources."

Literature Review Advice

Brent Muirhead

Introduction

The rapid expansion of available information has created new opportunities and challenges for today's research students. Academic and public libraries have developed sophisticated electronic resources to better manage knowledge to make it more accessible to researchers. The literature review process is often a major challenge for graduate students who must learn to effectively work with computer technology and manage larger volumes of available information. The focus of this discussion is to share practical advice for assisting individuals with the literature review process.

Research Skills

Contemporary graduate schools expect students to have expertise in a specific academic discipline and this knowledge base serves as a vital part of their degree program. Recently, there have been some changes made in graduate curriculums involving their expectations for skills, competencies and professional capabilities. Today, there is a greater emphasis on transferable skills (i.e. making presentations) to better equip graduates for a wider range of careers and research demands.

The tremendous expansion of electronic information resources has increased research opportunities exponentially. This fact makes it even more important that students are properly prepared to use the new technologies. In the United Kingdom, the Economic and Social Council (ESRC) has created a set of guidelines and proposals to help graduate educators improve their research training and encourage quality research projects. The ESRC has identified two basic types of skills required for researchers:

- 1. Core skills and abilities-** while the differences make subject disciplines distinctive, there exists a common core of skills and attitudes which all researchers should possess and should be able to apply in different situations with different topics and problems.
- 2. Ability to integrate theory and method-** research for all disciplines involves an understanding of the interrelationship between theory, method and research design, practical skills and particular methods, the knowledge base of the subject and methodological foundations (Hart, 1998, p. 5).

Graduate degree programs are an excellent place to develop and refine research skills. Hart (1998) states "it is important that research education and training does produce researchers who are competent and confident in a range of skills and capabilities and who have an appropriate knowledge base" (p. 6). Students create projects that demand having effective skills in conducting a literature review, developing a research design, writing and presenting their study. Therefore, it is vital that students must have a sound knowledge of the entire research process to produce

research that demonstrates quality work. The concept of scholarship should include competent investigations and it should transcend multiple activities while also involving a diversity of skills and activities. The process requires knowing how use one's imagination and creativity to read and interpret arguments, organize ideas, make connections between academic disciplines and effectively write and present ideas. The scholar must maintain a mindset that is open to new and innovative research methods and they should be willing to experiment with information and ideas. The skill of integration is a vital element in scholarly work. According to Hart (1998) "integration is about making connections between ideas, theories, and experience. It is about applying a method or methodology from one area to another: about placing some episode into a larger theoretical framework, thereby providing a new way of looking at the phenomenon" (p. 8). Integration demands individuals becoming disciplined at being systematic and reflective in their investigation endeavors. It requires being patient while re-examining and interpreting knowledge and being open to new perspectives on existing theories.

Graduate students should develop a research plan that helps them focus on developing skills that foster integration in their work and they should realize this may take time and substantial effort. Personally, people will often ask me how I acquired six graduate degrees and I related that I diligently studied for 8-10 hours a day for the past 20 years! It is encouraging to realize that studies on those who are associated with being a genius reported that they were very hard working individuals. Howe (1999) observes, "like ordinary men and women, major authors have had to invest large amounts of time and effort in order to become unusually skilled. Their heavy dependence on training and preparation is one of the many aspects of the human experience that creative geniuses share with other people" (p. 175).

The Literature Review Process

Reviews can vary greatly in their scope and depth of material examined. Therefore, the selection of study topic is a key factor and students are advised to be careful to avoid selecting topics that transcend the requirements of their degree programs. A primary reason for studying the literature is to demonstrate familiarity with research in the field and establish credibility for the individual's current investigation. The literature review is based on the assumption that research should build upon the work conducted by other researchers who are part of a larger intellectual community (Neuman, 1997).

The literature review helps the student to understand the historical context of their subject while focusing on current research efforts. Students will learn to identify areas of concern and become aware of any specific issues that have been neglected. A student might decide to change their topic if they realize that a more important topic needs to be studied and they can effectively address it within their degree program. The literature review can help students develop a framework for their own study by noting what others have done with their particular research design such as the data-collection techniques. Additionally, reading the literature will provide an overview of the major theories and ideas that have guided previous researchers. Students must have a good working knowledge of the key concepts in their field of study to develop an appropriate vocabulary for writing and communication of ideas (Hart, 1998).

The review of the literature should be done in an organized manner to effectively cover the material related to the research problem. The wise researcher will often conduct a review using sequential steps including the following:

- analyze the problem statement.
- search and read secondary literature.

- select the appropriate index for a reference service or database.
- transform the problem statement into search language.
- conduct a manual and/or computer search.
- read the pertinent primary literature.
- organize notes.
- write the review (*Introduction to educational research*, 2003, p. 73).

Students should create a specific plan to systematically investigate the literature that effectively covers both electronic and print sources of information. One part of the plan should contain a basic record keeping system that will help organize work accomplished to develop leads for future research and avoid losing valuable data. For instance, students can save articles on the Internet with their web browser. This will make much easier to locate the next time the article is needed. Also, it is wise to create a basic set of questions to quickly scan the importance of an article. Locke, Silverman and Spirduso (1998, pp. 148-149) recommend starting with asking five basic questions of the research article:

- What is the report about?
- How does the study fit into what is already known?
- How was the study done?
- What was found?
- What do the results mean?

Reviewing the literature will require developing a methodology to analyze and critically appraise the quality of the writer's work. Students can begin by creating a descriptive summary of their studies to provide a basic overview of the material. The next step in the review process involves analyzing articles to better understand the reasoning underlying the author's work. Hart (1998) notes that "you are aiming to make explicit the nature of the connections between the methodology choices an author has made and the data they have collected through to the interpretations they have made of their data" (p. 56).

Identifying the style and structure of the author's reasoning will require looking at the article in a more in depth manner. Students must explore issues such as methodological assumptions, aims and purposes of the research and evidence presented. For instance, knowing the purpose of the author's work does help to categorize the article. Creswell (2002) relates that a research project may:

- address gaps in knowledge by investigating an area of research that fills a void in existing information.
- expand knowledge by extending research to new ideas or practices.
- replicate knowledge by testing old results with new participants or new research sites.
- add voices of individuals to knowledge, individuals whose perspectives have not been heard or whose views have been minimized in our society (p. 4).

The critical analysis of articles is one of the more demanding aspects of the literature review but it helps the student discern the quality of work produced within the field (Hart, 1998). Students should strive to demonstrate their careful and reflective investigation of research studies and vital information resources. Their discussion should reflect a vivid awareness of theories and

arguments that acknowledges both their strengths and weaknesses. A balanced review will affirm the usefulness and merits of a theory while exploring areas that need improvement. Research criticism must be based on understandable arguments that effectively identify inadequate or flawed evidence. Additionally, students will sometimes be able to use aspects of different writers work to develop their own synthesis of ideas and offer new perspectives on their subject matter.

Reviewing the literature requires patience and diligence to carefully select and examine research studies. Gall, Borg and Gall (1996) highlight seven common mistakes that people can make during the review process:

The researcher

- Does not clearly relate the findings of the literature review to the researcher's own study.
- Does not take sufficient time to define the best descriptors and identify the best sources to use in reviewing the literature related to one's topic.
- Relies on secondary sources rather than on primary sources in reviewing the literature.
- Uncritically accepts another researcher's findings and interpretations as valid, rather than examining critically all aspects of the research design and analysis.
- Does not report the search procedures that were used in the literature review.
- Reports isolated statistical results rather than synthesizing them by chi-square or meta-analysis methods.
- Does not consider contrary findings and alternative interpretations in synthesizing qualitative literature (pp. 161-162).

Graduate students can sometimes error in their approach to studying the literature. Students will strive to read everything remotely related to their topic and waste time on trivial articles and materials. A good literature review will stress only the most important and relevant documents. Also, individuals can spend all of their time reading and fail to write about their project. Usually, most people would choose reading over writing because it tends to be less demanding than writing. Students need to be reminded that writing is another way to reflect upon ideas and foster a better understanding of information relationships (Language Center, 2004).

Conclusion

A solid review of the literature will communicate a sense of purpose in every article, report and book examined. The reader will not be informed by long lists of studies that appear to be randomly strung together. In contrast, readers appreciate reviews that are well organized, reflective and that highlight the most important studies. Students who become skilled at investigating research will produce authentic reviews that demonstrate creative insights and promote scholarly work (Hart, 1998; Neuman, 1998).

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