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DISTANCE LEARNING

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Distance Learning, an official publication of the United States Distance Learning Association (USDLA), is sponsored by the USDLA, by the Fischler School of Education and Human Services at Nova Southeastern University, and by Information Age Publishing. Distance Learning is published six times a year for leaders, practitioners, and decision makers in the fields of distance learning, e-learning, telecommunications, and related areas. It is a professional magazine with information for those who provide instruction to all types of learners, of all ages, using telecommunications technologies of all types. Articles are written by practitioners for practitioners with the intent of providing usable information and ideas for readers. Articles are accepted from authors with interesting and important information about the effective practice of distance teaching and learning.

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Learner Interactivity in Higher Education

Comparing Face-to-face, Hybrid, and Online Instruction

Timothy Alan Brannan

The purpose of this study was to compare the opinions of students toward the interactions they encounter while taking college courses in face-to-face, hybrid, and completely online environments. The study used a survey instrument containing open-ended questions asking students to describe how the interactions were encouraged in four categories; student-instructor interactions, student-student interactions, student-content interactions, and student-technology interactions. The instrument was sent to a sample of 106 students who had participated in courses using each of the three environments. The findings of this study supported the use of technology in instruction and found that technology can increase the four interactions found in the classroom.

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Introduction

Distance education programs have been used to reach and serve students since the development of correspondence courses in the late nineteenth century (Thomerson & Smith, 1996). With the widespread adoption of the World Wide Web, Internet-delivered courses have provided a vehicle for Web-enhanced and virtual learning that is gaining popularity on college and university campuses. Studies of various types of distance education programs have repeatedly indicated that cognitive achievement of distance learning students and traditional classroom students is comparable (Thomerson & Smith, 1996). However, some of these same studies found that distant students often did not enjoy their classroom experience, did not interact as frequently with fellow students or the instructor, or did not feel as comfortable in the distance classroom settings as did students attending a traditional class (Thomerson & Smith, 1996).

In 1989, Moore proposed a theory of distance education based on the need to accommodate within the classroom three essential interactions: learner-content, learner-instructor, and learner-learner (Moore, 1989). In 1994, Hillman, Willis, and Gunawardena augmented Moore's model with a fourth interaction, learner-interface (Hillman et al., 1994). This interaction addresses learners' accommo-

dation to technological learning platforms.

It was the interactions in these face-to-face, hybrid, and online instructional environments that were examined in this study. Multiple studies have examined the way traditional and virtual classes are similar and different, but none to date have looked at how a course delivered in these environments impact interaction in the classroom and the student's perception of the learning environment.

Statement of the Problem

Although the popularity of online instruction has increased in recent years, the interactions in courses offered online as compared to other instructional delivery methods has yet to be fully investigated. Shale and Garrison (1990) state that, in its most fundamental form, education is interaction between teacher, student, and subject content. Without interaction, teaching becomes simply passing on content as if it were dogmatic truth, and the cycle of knowledge acquisition to evaluation and validation is nonexistent (Shale & Garrison, 1990). The idea and importance of interaction in distance education is a much-discussed topic (Hillman et al., 1994). Moore provides a framework for studying interaction in distance education by identifying the three types of interactions: learner-instructor, learner-learner, and learner-content.

The first interaction described by Moore, learner-content, can be defined as the process of "intellectually interacting with content" to bring about changes in the learner's understanding, perspective, or cognitive structures (Moore, 1989). The second interaction, learner-instructor, examines an instructor's attempt to motivate and stimulate the learner and allows for clarification the learner may need regarding the content of the learning (Moore, 1989). The final interaction—learner-learner—addresses interactions between one learner and another or among groups of learners with or without instructor intervention (Moore, 1989).

Hillman et al. (1994) added a fourth interaction, learner-interface, to Moore's model. A facet of distance education that is increasingly overlooked is the effect of high-technology devices on interaction (Hillman et al., 1994). The learner-interface interaction is accomplished by means of high-technology devices that serve as the interface, the point or means of interaction, between the learner and his or her content, instructor, and fellow learners (Hillman et al., 1994). As technology increasingly becomes the means of communication between learner-instructor, learner-learner and learner-content, the design of these mediating technologies becomes correspondingly more important (Hillman et al., 1994).

Most of the research to date relating to the topic of distance education has been devoted to the "no significant difference phenomenon" (Russell, 1999). Russell's compilation of more than 300 comparative research studies suggests that students in distance learning courses learn as well as on-campus, face-to-face students (Russell, 1999). Studies in which the learning outcomes are not the only variable and research that investigates student perceptions of the four interactions mentioned above are needed; therefore, the following questions are raised:

Research Question 1:

> In what ways do student perceptions differ when students in face-to-face, hybrid, and completely online environments are asked to identify their interactions with the instructor?

Research Question 2:

> In what ways do student perceptions differ when students in face-to-face, hybrid, and completely online environments are asked to identify their interactions with the other students in the class?

Research Question 3:

> In what ways do student perceptions differ when students in face-to-face, hybrid, and completely online environments are asked to identify their interactions with the course content?

Research Question 4:

> In what ways do student perceptions differ when students in face-to-face, hybrid, and completely online environments are asked to identify their interactions with the technology used in the class?

Research Question 5:

> Is age a differentiating factor when student-identified interactions in the three different classroom settings are compared?

Research Question 6:

> Is gender a differentiating factor when student-identified interactions in the three different classroom settings are compared?

Methodolgy

Research Design

The study employed a causal-comparative design and used a survey instrument and a focus group to collect the necessary data. This provided both quantitative and qualitative data. A survey instru-

Table 1. Course Enrollments by Delivery Method

Course Title	Face-to-Face Enrollment	Hybrid Enrollment	Online Enrollment
Accounting 210	447	14	25
Chemistry 151	228	12	18
Comp Info Sys 203	28	19	35
History 212	321	16	39
Management 225	64	12	17
Marketing 200	105	14	20
Psychology 200	777	19	84
Total	1,880	106	238

Table 2. Quantitative Score Representation

Term	Range of Scores
Poor	1.0–1.5
Not Good	1.5–2.5
Average	2.5–3.5
Good	3.5–4.5
Excellent	4.5–5.0

ment containing open-ended questions and Likert-type items was used to collect information regarding the students' rating of the four interactions.

Population and Sample

The population for this study included students who attended seven courses at Lansing Community College that were offered via all three instructional methods—face-to-face, hybrid, and online—during the fall semester of 2001. Table 1 lists the total student enrollments in the face-to-face, hybrid, and online sections.

Due to the large size of the population and the disproportionate number of students in the traditional classroom group, a stratified sample using the equal allocation method was used. Using random numbers, 106 face-to-face students and 106 online students were randomly selected for the sample. They joined all 106 hybrid students used in the study.

Out of a sample size of 318, 53 surveys were returned, for a response rate of 16.67%. In addition, 10 students returned the postcard indicating interest in attending the focus group. Out of the 10 who indicated interest in attending the focus group, five actually attended the focus group. Reasons cited for not being able to attend included inconvenient time, family/other commitments, and living too far away to attend.

Due to the small number of survey respondents, the study results cannot be generalized beyond the group of individuals who participated in the survey. The distribution of respondents across different factors was good; however, the overall response rate was too low to draw a great deal of meaning from the data.

Data Collection

A survey instrument containing open-ended questions was used to gather information on how the four interactions—instructor-student, student-student, content-student, technology-student—were encouraged. The survey also included a Likert-type item to collect information regarding the students' rating of each of the four interactions. Demographic information regarding age, computer skill, pursuance of a degree/certificate, and sex was collected from participants in the study.

A focus group was used as a second method of data collection. One focus group consisting of five people responded to the survey that they were interested and attended the focus group. Data from the study were shared with each of these participants, and their feedback to the data presented was recorded via cassette and by a recorder.

Criteria for Data Analysis and Statistical Procedures

A set of criteria was defined to assist in the analysis of data. These criteria, defined in Table 2, provide discrete qualitative descriptors for all means derived through the study.

One-way analysis of variance (ANOVA) tests were first used to analyze the data; however, these tests did not to appear to show differences. Therefore, paired t-tests were used to see if there were real differences that might have not appeared in the ANOVA. This procedure is described by Hopkins when he states that

> there's nothing to say that the p value for the overall effect is any

more valid than the *p* value for individual contrasts. So if you've set up your study with a particular contrast in mind go ahead and do that contrast, regardless of the p value for the overall effect. Performing the pre-planned contrast does not have to be contingent upon obtaining significance for the overall effect. (Hopkins, 2000)

FINDINGS

COURSE INFORMATION

The specific courses and numbers of students who participated in the survey for each course are detailed in Table 3.

Table 3. Distribution and Percentage of Total Participation of Study Participants According to Course

Course	Number of Study Participants	Percent of Total
Accounting 210	6	11.3
Computer Information Systems for Business 203	6	11.3
Chemistry 151	7	13.2
Management 225	7	13.2
Psychology 200	7	13.2
History 212	9	17.0
Marketing 200	11	20.8
Total	53	100.0

DELIVERY TYPE

The delivery type and numbers of students who participated in the survey for each delivery type is detailed in Table 4.

Table 4. Distribution of Study Participants According to Delivery Type

Delivery Type	Number of Study Participants	Percent of Total
Face-to-face	17	32.1
Hybrid	15	28.3
Online	21	39.6
Total	53	100.0

DEMOGRAPHICS

The demographics section of this study provides additional information on the study participants. These data include the study participants' age, computer skills, gender, and if they were pursuing a degree/certificate at the time they returned the survey. The study participants' ages ranged from 18 to 58 years. The average age of participants in this study was 28.62 years, which is only slightly greater than 27.5 years, the average age of the general student population at the college. This can be considered typical for the non-traditional group of students who enroll at a community college.

Table 5 shows the number of students and their mean age and standard deviation for each of the three delivery types.

Table 5. Study Participants' Age According to Delivery Type

Delivery Type	Number of Students	Mean Age	Standard Deviation
Face-to-face	17	25.88	7.18
Hybrid	15	31.53	14.12
Online	21	28.76	8.24

Table 6. Study Participant Gender

Gender	Number of Students	Percent of Total
Male	11	20.8
Female	41	77.4
Missing	1	1.9
Total	53	100.0

When multiple t-tests are applied to these data to examine if differences in mean age according to delivery type may have occurred by chance, the level of significance was .157 for face-to-face compared to hybrid, .265 for face-to-face compared to online, and .463 for hybrid compared to online. This indicates there is no difference between the study participants' age and delivery type. The gender of the students who participated in the survey is detailed in Table 6.

Table 7. Combined Ratings for the Four Interactions based on Delivery Type

Delivery Type	Student-Instructor	Student-Student	Student-Content	Student-Technology
Face-to-face	3.58	3.11	3.88	3.11**
Hybrid	3.93	2.93*	3.93	4.13
Online	3.95	3.90*	4.28	4.21**

*Difference for Student-Student Interaction that can be attributed to hybrid and online delivery type (> .05).
**Difference for Student-Technology Interaction that can be attributed to face-to-face and online delivery type (> .05)

Table 8. Combined Ratings for the Four Interactions Based on Age

Age	Student-Instructor	Student-Student	Student-Content	Student-Technology
Young Half	3.65	3.31	4.04	3.58*
Old Half	4.00	3.44	4.04	4.42*

* Difference for Student-Technology Interaction that can be attributed to age (> .05)

Table 9. Combined Ratings for the Four Interactions Based on Computer Skills

Computer Skills	Student-Instructor	Student-Student	Student-Content	Student-Technology
Low	3.65	3.00	4.05	3.48*
High	3.97	3.67	4.04	4.41*

* Difference for Student-Technology Interaction that can be attributed to computer skills (> .05)

Summary of Survey Findings

Delivery Type and the Four Interactions

Table 7 shows that the mean interaction ratings for each of the hybrid and online delivery types appear higher than the face-to-face mean ratings with the exception of one: student-student interaction. Overall, study participants felt instructors encouraged the four interactions more in technologically-mediated courses. In fact, the interaction ratings increased progressively from no technological delivery in the class, to some technological delivery and, finally, courses completely delivered via technology—with the exception of student-student interaction.

Age and the Four Interactions

Table 8 shows that the mean interaction ratings appear higher for the "Old Half," 25–58 year age group, except for student-content interaction, for which the mean rating was the same. Overall, older study participants rated the four interactions higher.

Computer Skills and the Four Interactions

Table 9 shows that the mean interaction ratings appear higher for study participants who had "High" (advanced or expert) computer skills. The one exception was student-content interaction, for which the mean ratings were almost identical. Overall, study participants who had higher computer skills rated the interactions higher.

Gender and the Four Interactions

Table 10 shows that mean interaction ratings appear higher for female study participants. Overall, female study participants rated the four interactions higher than did male study participants.

Pursuing Degree/Certificate and the Four Interactions

Table 11 shows that the mean interaction ratings for the student-instructor and student-student interactions appear higher for study participants who were seeking a degree or certificate. The mean ratings were almost identical for student-content interaction. Study participants who were not seeking a degree or certificate rated student-technology interaction higher.

Conclusions

The purpose of this study was to determine if there is a relationship between student perceptions of each of the four interactions: student-instructor, student-student, student-content, and student-technology and the delivery type of the course in which the student is enrolled: face-to-face, as a hybrid, and online. Data from this research will assist institutions in making informed decisions regarding the adoption of technology in instruc-

Table 10. Combined Ratings for the Four Interactions Based on Gender

Gender	Student-Instructor	Student-Student	Student-Content	Student-Technology
Female	4.02*	3.49	4.11	4.00
Male	3.09*	3.09	3.91	3.83

* Difference for Student-Instructor Interaction that can be attributed to gender (> .05)

Table 11. Combined Ratings for the Four Interactions Based on Degree/Certificate

Degree/ Certificate	Student-Instructor	Student-Student	Student-Content	Student-Technology
Yes	3.90	3.45	4.04	3.74
No	3.74	3.35	4.09	4.16

tion based on which delivery methods promote the highest level of interactivity.

Student-Instructor Interaction

Overall, students felt the interaction between the instructor and students was good. However, when examining how students rated the interaction between the instructor and student by delivery type, face-to-face students rated this interaction 3.58 (average to good), hybrid 3.93 (good), and online 3.95 (good). This study shows a trend that student-instructor interactions are impacted favorably by the use of technology in the classroom, not only by face-to-face interaction with the instructor.

The focus group responses support that interactions between the instructor and student are impacted favorably by the use of technology in the classroom. Delivery of information changes from face-to-face to online, and quiet students may interact more online due to a perception of less peer pressure. Everyone gets his or her say online. Instructors tended to encourage interaction online versus a face-to-face class in which the instructor would typically lecture.

When testing for significance between the variables delivery type, computer skills, course type, pursuance of a degree or certificate, and age, the results were all negative in relation to student-instructor interaction. However, when comparing gender and student-instructor interaction rating, the level of significance is at .030, which shows there is an apparent difference between the study participant's gender and student-instructor interaction at a 95% confidence level. Female participants rated the student-instructor interaction "Good" (4.02), versus male participants, who rated the student-instructor interaction "Average" (3.09).

The student rating by delivery type presents the ever-increasing role technology has in the classroom and how instructors must change their way of thinking about the integration of technology with instruction. It is not surprising that the focus group highlighted the fact that student-instructor interaction increased as the technology became the delivery method. Instructors must learn to transition from strict lecture to facilitative learning regardless of the delivery method of the instruction. Adopting a "guide on the side" mentality versus a "sage on the stage" philosophy will enable instructors to see how technology can increase interaction with their students. Another important point indicated by the open-ended questions and the focus group related to checking in with students both at the beginning of and during the semester. By adapting lessons to the needs of the students in the class and ensuring their individual learning styles are being accounted for, an instructor will increase the students' level of satisfaction of the learning experience.

Student-Student Interaction

Overall, students felt that the interaction between and among students was average. In fact, 11 of the 13 student-student interactions were rated below 3.5 (Good). The student-student interaction ratings were the lowest of all forms of interaction studied. This student-student interaction is critical to supporting the learning environment, regardless of delivery type. However, when examining how students rated the interaction between and among students by delivery type, face-to-face students rated this interaction 3.11 (Average), hybrid students 2.93 (Average) and online students 3.90 (Good). Again, this study shows a trend that student-student interactions are impacted favorably by the use of technology in the classroom, especially for completely online courses, in which the instructor may grade students based on their interactions between one another.

The focus group targeted two points relating to student-student interaction: the fact that online interaction between students was encouraged, and the instructors assigned group projects. Student-student interaction online was rated

good, as compared to average for the hybrid and face-to-face delivery. These data were the same as what the focus group expected as online interaction between and among students was not only encouraged, but the student's final grade depended on participating in discussion forums and posting responses to other students' work and group projects. The only problem the focus group had with group projects required for online courses was an inequity created among group members when one of the group failed to participate. Many instructors have prepared for this inequity by having group members evaluate each other's contribution and that being a portion of the student's grade. The hybrid class would be an excellent way for group work to continue even when the class meets only half of the time face-to-face.

When testing for significance between the variables computer skills, course type, pursuance of a degree or certificate, age, or gender, the results were all negative in relation to student-student interaction. However, when comparing hybrid to online delivery types, online study participants rated student-student interaction higher than did hybrid study participants.

Student-Content Interaction

Overall, students felt the interaction between the course content and students was good. However, when examining how students rated the interaction between the course content and student by delivery type, face-to-face rated this interaction 3.88 (Good), hybrid 3.93 (Good) and online 4.28 (Good). This study shows a trend that student-content interactions are impacted favorably by the use of technology, especially for online courses in which all of the course content is online.

The focus group agreed with the data, especially in regards to the fact that instructors put more content online and required students to interact with that content in online classes. In fact, the students in the focus groups wished more instructors would use the technology to put more content online regardless of delivery type. They would like to see the following information online for all classes: Internet links, announcements, syllabus, assignments, lecture notes, discussion, group work, and e-mail. If a student missed class for any reason, he or she should be able to access the system to see what was missed.

When testing for significance between the variables delivery type, computer skills, course type, pursuance of a degree or certificate, age, or gender, the results were all negative in relation to student-content interaction.

Student-Technology Interaction

Overall, students felt the interaction between the technology and the students was good. However, when examining how students rated the interaction between the technology and students by delivery type, face-to-face rated this interaction 3.11 (Average), hybrid 4.13 (Good) and online 4.21 (Good). It is not surprising that technology-student interactions are impacted favorably by the use of technology in the classroom. It is interesting to point out that the student-technology interaction rating for the hybrid class (face-to-face and online) was very close to that of the online rating.

The focus group agreed that student-technology interaction was impacted favorably with the use of technology in the classroom, especially since hybrid and online courses required the use of Blackboard. The overall theme from the survey and focus group is that all classes should take advantage of the technology available. This is critical, as once students graduate from college they will be expected to use technology in their professions, and the college should prepare them for this challenge.

When testing for significance between the variables course type, pursuance of a degree or certificate, or gender, the results were all negative in relation to student-technology interaction. When comparing delivery type and student-technology interaction rating, the level of significance is at .014, which shows there is an apparent difference between the delivery type and student-technology interaction at a 95% confidence level. This is not surprising, given that the level of student-technology interaction is much greater in courses that are delivered directly via technology or a substantial portion of the course is delivered via technology. In addition, when comparing computer skill groupings, the "High Computer Skill" group rated student-technology interaction higher than the "Low Computer Skill" group. The level of significance is at .014, which shows there is an apparent difference between the skill level grouping and student-technology interaction at a 95% confidence level. It makes sense that study participants who report having better computer skills would rate student-technology interactions higher than those who report having novice or intermediate computer skills.

The study participants in the "Old Half" age grouping, 25-58 years, rated student-technology interaction higher than the "Young Half" age grouping. This also showed a level of significance at .030, which shows there is an apparent difference between the age and student-technology interaction at a 95% confidence level. One could conclude this is based on the experience an older worker has using

technology in the workforce versus younger students who may have better computer skills, but less experience in application of the technology. As computer use and the adoption of Blackboard by instructors for their face-to-face course increases, the researcher theorizes that the difference between delivery type and the student-technology interaction would decrease.

Conclusion

This study has demonstrated that the use of technology can increase student perceptions relating to the four interactions found in the classroom, even though the results cannot be generalized beyond the students who participated, due to the limited number of responses. In addition, the study also provides examples of how instructors encouraged these interactions. The other important finding is that instructors should be well-versed in education technology, and colleges and universities need to prepare students in the use of technology. Students today will be expected to use technology in the work place, and it is up to institutions of higher education to better prepare these students for the challenges they will face while on the job.

It is important to note that the online students rated the four interactions slightly higher than both the face-to-face and hybrid students. In a few cases, the difference was significant and demonstrates a commitment from instructors to encourage interaction between and among the students, and to ensure the online students have access to course content. The fact that the student-technology interaction and delivery type test for significance was positive should provide the institution with incentive to provide training to both faculty and students so the technology skills of both groups will improve.

When asked to reflect on the hour and a half spent discussing the four types of interaction, the focus group had some interesting thoughts and suggestions to enhance the learning for the students. Initially, members of the group were skeptical about taking a class online or as a hybrid. Now, however, they like their experience better in those types of classes even though it boils down to the instructor teaching the section. They were also quick to add that the delivery method selected for courses should be based on the subject, as not all subjects are suited for online delivery, and instructors should be well prepared and know the subject as well as the technology before trying to teach a hybrid or online class. Finally, the students were happy the college was allowing them the opportunity to use technology and for emphasizing it in the instruction they received, as the students are well aware that they will be expected to use technology in the workforce.

In conclusion, technology, like any other classroom instructional tool, is only as good as the user. Preparation of instructors and students is critical to the successful infusion of technology in the classroom. This study has demonstrated that the four interactions in higher education can be supported as well, if not better, through the use of technology and that students' perceptions of the interactions validate that these interactions need to be encouraged regardless of the delivery type.

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Designing a Principles-based Online Training Program for Instructors

Christa Ehmann and Beth L. Hewett

With rapid developments in technology and communications, online learning opportunities continue to proliferate in both secondary and postsecondary education contexts in the United States. There are greater opportunities to aggregate teacher knowledge and connect teachers with students—and each other—than ever before. Increasing numbers of predominantly traditional, "brick and mortar," programs consider a blended approach of face-to-face and online learning options valuable for student and faculty development. Given the pedagogical and technological innovations of the field, there are many options for constructing online programs. For example, some institutions are engaging in "whole course redesigns" which reduce class lecture time, with the increasing use of technology to provide more one-to-one, online instruction to students (see for example, the Pew Charitable Trust's Program in Course Redesign, http://www.center.rpi.edu/PewGrant.html, Twigg 2003). In other venues, on-campus learning centers and academic support services are using online tutoring and learning support to complement the face-to-face support they already provide. Across the board, however, there has been little exploration into how to train instructors to teach in such asynchronous and synchronous environments. As a community of educators, therefore, we are at the very beginning of needed exploration into these issues.

With that in mind, this article considers key issues for those who are in the position of developing training programs for online instructors or tutors. Based on our recently published book *Preparing Educators for Online Writing Instruction: Principles and Processes* (2004), the issues addressed here focus on the cross-disciplinary practice and pedagogy of online instruction. Rooted in the training of hundreds of secondary and postsecondary teachers and professors, our work concentrates on how to apply desired principles, streamline processes for small and larger-scale training programs, and develop accountability methods for online instructors.

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The Case for Principle-centered, Online Training

We believe that teaching is a process of (a) helping students to ask and address thoughtful questions, and (b) helping students construct meaning through first-hand experience. We also believe that these pedagogical objectives can be applied to online learning environments as well. To be sure, an overarching question for individuals who are engaging in online teaching and learning endeavors is this: do online teachers need training to facilitate such pedagogical objectives?

Our experience suggests that there are few straightforward transitions from face-to-face to online contexts because there are, indeed, inherently different aspects of the teaching and learning that occurs online (e.g., acclimating to a text-based mode of communication in synchronous and asynchronous modalities, and establishing rapport in a potentially faceless medium). Instructors cannot directly transplant their understandings, strategies, and skills from face-to-face to online teaching environments. Thus, whether training a team of peer undergraduate writing tutors to work via an online writing lab or training a team of seasoned face-to-face educators who will be launching a new graduate online seminar, it is our experience that training programs for online instructors are indeed necessary and vital.

Furthermore, cognizant of the inevitable technology changes to which thinkers such as Kilby (2001) refer, we have seen that trainers must identify instructional principles for training that outlive specific technology platforms and then choose training methods adaptable to particular platforms. In other words, whether one uses email or particular educational/commercial software for a classroom- or Internet-based networking platform, a training program can engage well-considered training and pedagogical principles that address online teaching and learning as a whole (also see Covey's notion of "true north," 1992). The result will be a program that is philosophically sound, yet contextually adaptive—a program that maintains its coherence even when an institution changes and/or upgrades its technology platform(s).

Training Principles

With a commitment to action research, rhetoric/composition, adult learning, business-based online "e-training," as well as our experiences as cross-disciplinary educators, we submit five commonly accepted pedagogical principles to serve as the basis in the development of any online training program: (1) Investigation, (2) Immersion, (3) Individualization, (4) Association, and (5) Reflection. The following sections provide brief descriptions of each principle, including practical examples that apply those principles.

Investigation

In light of the many unknowns about online learning from both teacher and student perspectives, we suggest that educators approach training as a means of investigating the activities and beliefs of the participants involved. To that end, Investigation serves as our first principle in designing an online training program. We conceptualize one of the "fundamental aim[s]" of training as "to improve[ing] practice" (Elliott 1992, p. 49) through systematic investigation, thereby advancing knowledge that fosters the improvement of future iterations of the training program. Specifically, training can be organized such that there are two spiraled layers of inextricable observation, reflection, and action occurring—the first and most obvious layer relates to the trainee as he or she develops as an online instructor. The second layer has to do with a generally deeper understanding of teaching and learning in the online medium.

Practical implications: Throughout training, we have experienced the necessity of collecting feedback from trainees through a variety of means, including: questionnaires, meta-cognitive exercises, trainer/trainee synchronous online discussions, qualitative feedback from individual trainers, analysis of archived training sessions, and/or occasional telephone interviews. These mechanisms are built into the training program. Resulting feedback informs the periodic revision of training plans, processes, and procedures. Such revision can include training materials with novice trainees and macro-level changes regarding supervision, standards, guidance, technology, instructors, and additional development targeted to experienced trainers.

Immersion

When we think about our earliest days as educators, the value of "living and breathing" our new teaching and learning processes cannot be overemphasized. We have experienced that this value holds true for online learning as well; indeed, we believe that *teaching online necessitates training online*. Our second principle, therefore, is that of Immersion. Drawing on what we know about adult learning (for example, Apps, 1991; Knowles, 1990; Galbraith, 1991; Galbraith & Zelenak, 1991), training is also developed to meet the needs of the adult learner who (to differing degrees) is self directed, experi-

enced in life and teaching, socially ready for the task, sees immediate applications of the learning, and is able to self-diagnose strengths and weaknesses as an instructor (Kowles, 1990).

Practical implications: Among others, practical implications of immersing trainers in the online environment include the following. All information-based communications, with the exception of extreme cases, are handled through email, synchronous chat, or listserv discussions, as well as through reference materials on a Website, which are available both to trainees and trainers. All meetings of trainees and trainers are arranged and conducted on the Web, as are asynchronous scheduling and progress reports, and synchronous or asynchronous technology or pedagogy troubleshooting. The trainer models the learning process by acting in the online roles of both "teacher" and student. Trainees have the opportunity to practice their skills both privately and online for the trainer, who then assesses the results. Finally, we recommend providing access to theory and pertinent outside readings that complement practical exercises.

Individualization

Our third principle—Individualization—suggests that training be tailored to meet the needs of individual participants. As Apps (1991) explains: "Some people learn best by looking at the whole picture first and then examining the pieces. Others want to start with the pieces, add them together, and create a whole" (p. 34). Balancing the administrative need for standardization with learners' needs for flexibility, however, is something that every online program director must address in developing a training program. The intention here is to design programs that are systematic and efficient, yet flexible enough to accommodate differences in the cognitive and affective needs of trainees. Implicit to the principle of Individualization is a place for human instruction or mentoring (possibly combined with static content or artificial intelligence) throughout both the asynchronous and synchronous training processes.

Practical implications: We recommend pairing each trainee with an online mentor or individual trainer, who then coaches that trainee throughout the program. Tailor and implement feedback protocols based on trainees' performances on the simulations, referred to in the previous section on "Immersion." Feedback through commentary can be embedded locally within the interaction under review, provided via a more global assessment—or both. The value to such tailored feedback increases when it sparks broader discussion or thinking about online pedagogy or other teaching issues. On that note, such methods of individualization recognize that individuals will address theory at different learning stages and with different levels of interest and direct application to their instructional practices.

Association

In our experience, individuals seek the support and mentorship of their colleagues and peers when they take on new teaching and learning endeavors. Especially in the seemingly sterile, impersonal venue of online media, developing a sense of "team" with trainers as well as other trainee participants is important to success. Thus, our principle of Association addresses individuals' desire to work in connection with others. Although many would call a professional and/or educational team that works together toward a common end a "community," we deliberately choose a different term: Association, inspired by Buber (1923/1970). We conceptualize training as promoting the development of "cyber-associations" that are primarily built on a sense of shared experience based on a transactional or business purpose—like that of many teaching groups. Comprised of professional relationships, an association supports trainees who are, first and foremost, going about the business of online instruction.

Practical implications: Creating, as Renwick (2001) recommends, a "facilitator network" that includes one's program-level facilitators. Such a network is not unlike the various special-interest group listservs. An expanded network, such as the Box Hill Learning Network, offers a "'playground' for experimentation and practice" (p. 5), allowing both for planned meetings or spontaneous opportunities to talk with the program director though online media. Such meetings enable teachers to express their concerns and ideas in a more private venue and may, as well, be good forums for airing differences, which leads to both individual and programmatic growth. Similarly, establishing internal, team-based listservs or e-mail exchange encourages discussion that varies according to mode and audience. People use each other to generate and bounce ideas, provide alternate views, and commiserate—around the "cyber water cooler." Some current technology enables group viewing of training (especially synchronous) and archived interactions. With these tools, training coordinators can provide support systems of "lead" and "non-lead" tutors/instructors, who mentor and train online "buddies" for new online work.

Reflection

The final principle conceptualizes training as a reflective and iterative process during which trainees' assumptions about teaching and learning in an online environment are unpacked and redefined through a series of developmental phases. Indeed, Blair and Monske (2003) suggest that instructors' potential for successfully moving from traditional to online instruction is related to feedback from peers who are knowledgeable about the technology-based medium in which the teaching interactions occur. As such, fostering opportunities for trainees to think about, analyze, and reshape their practice based on what they are seeing in the online context is of utmost importance. Although "reflection" is admittedly more intricate than simply "thinking about" one's practice, the point we wish to emphasize here is that training programs can account for the time and space trainees need to think about their practice in both a theoretical and practical light. One of the great strengths of online learning and online training is that interactions between trainer and trainee, instructor and student, are saved and archived. In this regard, we see online experiences as ripe for analysis, and of particular importance for the training and professional development of instructors.

Practical implications: In practice, an online instructor's actual hiring or interview process for the online position can involve an initial foray into the online environment through simulations that demonstrate the applicant's strengths and weaknesses. Follow-up discussions (either via phone or e-mail) with the coordinator/recruiter can then set expectations about the type of self-analysis that will be promoted throughout the training program. Metacognitive exercises start the process with a reflection about the nature of online instruction. Additional evaluative exercises can be interspersed throughout the process. In other words, within the training phase, there is time for the learning process to steep and settle. Static content and archives of past work can be available for review and reference. The end of training can be marked by a telephone discussion with the coordinator to reconnect outside of the online environment.

The Training Spiral

These principles in mind, training programs can be designed to approach new online instructors not just as trainees, but as collaborators in a process in which training coordinators critically observe what is happening during training exercises, explore the perspectives of the participants involved, and work to accommodate identified needs. Opportunities for play and practice, observation, reflection, and evaluation at both an individual and broader programmatic levels are built in. As such, training is not a linear process. Rather, it is both generative and recursive in that it promotes a culture of observation, reflection, and practice—on the trainee level as well as programmatic level. With this in mind, we visualize training as a spiral:

- The narrow bottom of the spiral (narrower understanding of the potential and uses of the environment) depicts pre-training.
- The broad top of the spiral (broadened viewpoints, skills, assumptions, associations, and knowledge) depicts post-training.
- The spiral, theoretically, is infinite in its outgrowth, representing generative development on the part of the trainee, trainer, and training program overall.
- Finally, the spiral is a conical shape, suggestive of the recursive nature of the online training/development process.

Presenting a "road map" of different phases of online training, Figure 1 illustrates how we have brought together the principles "in practice."

Using the principles outlined here, we recommend a training program that involves learner-centered practical exercises that are complemented by time for self-evaluation and trainer feedback. Once instructors begin the orientation process, they complete a series of tasks: from platform-based technology orientation to asynchronous teaching simulations to a meta-cognitive self-reflection on their progress. At each stage, trainees receive feedback from a trainer and/or supervisor. In such a human adaptive approach, the learners can stop and retrace steps as needed. After successfully navigating the asynchronous program, those learners who also will teach in synchronous environments have opportunities to practice further on simulations and engage in live online teaching. Trainees experience the role of learner overtly, as they practice simulated role-playing first from the student's position as questioner and then from the teacher's position as instructor. And, throughout the entire orientation process, teacher-trainees may use a variety of tools such as e-mail, live chat, and a listserv to communicate and support their development. The trainee can, at several junctions, end training by mutual or individual decision, enter a new path for continued learning sequences, or end training by completing the learning cycle. Further, before training is initiated, the trainer receives information about the trainee such as educational background, experiences, strengths, and weaknesses as they apply to

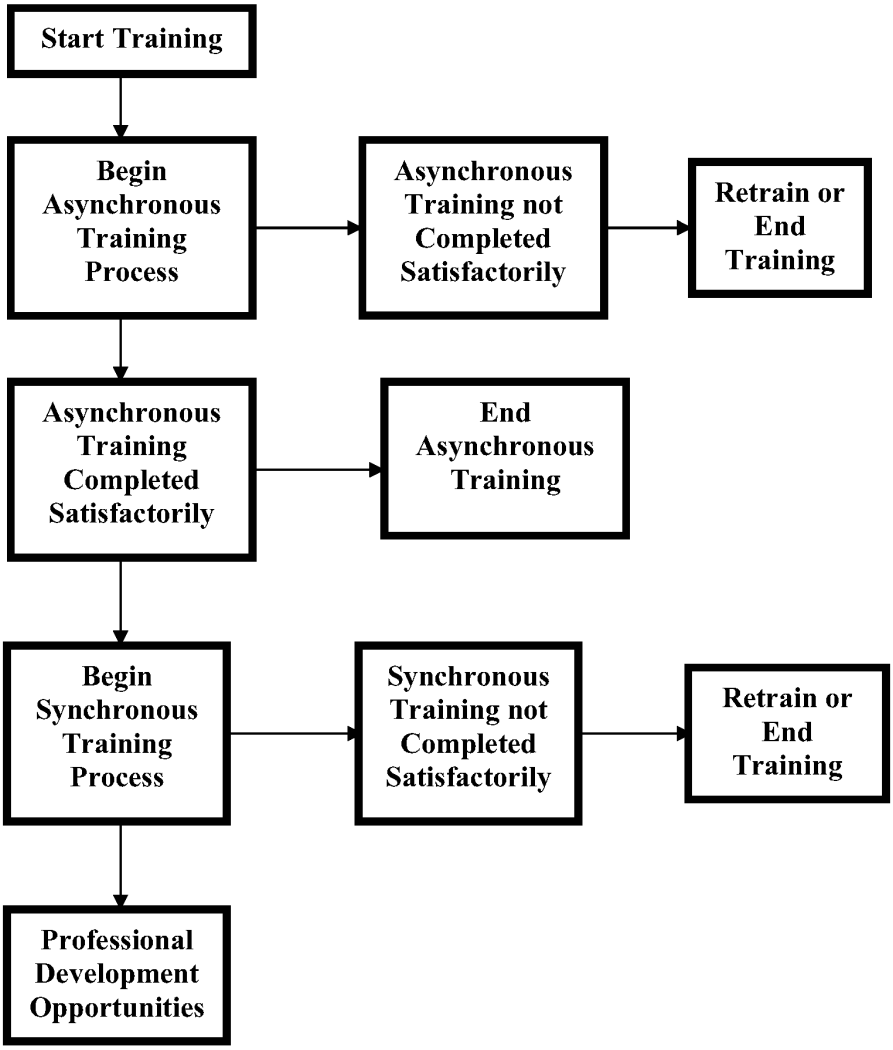

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Figure 1. A Learner-Centered Training Model

teaching in the online environment. In our own training contexts, this information has emerged from a rigorous screening process in which both the applicant and the program director have determined that a particular individual is a good candidate for the online orientation. Thus, the online instructor training process inherently recognizes the individuality of the trainee at every point in the process.

Conclusion

Preparing online instructors through such a principle-based program has distinct benefits for developing instructional skills, flexibility, and growth, as well as for instructor retention.

Authors' Note: This article is adapted from chapters in Hewett and Ehmann (2004).

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Experiential Learning and the Discussion Board

A Strategy, a Rubric, and Management Techniques

Cleo Magnuson

The online discussion board can be a tool that the instructor can use in the Web-enhanced, Web-supported, or the fully online course. The use of this tool and the subsequent activity that occurs on a discussion board can serve as an optimal method to provide experiential learning opportunities for the learner and promote higher order/ critical thinking through problem-based learning. A discussion board strategy is outlined that includes the key components to incorporate in a discussion within the online environment. A rubric is included to assist in the assessment of the learner's online discussion posts.

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The Discussion Board Strategy

Utilizing a discussion board strategy is an efficient way to present a discussion board question, provide an experiential learning opportunity that is problem-based and have students engage in higher order/critical thinking tasks. To accomplish all of this through the use of a discussion board activity, the instructor can employ a strategy. The following steps can be used to guide the instructor:

1. Determine the topic for the discussion board activity based on the content.
2. Determine the goals and objectives to be accomplished: the goals and objectives are tied to the content.
3. Decide what role the instructor will have and what role the learner(s) will have.
4. Determine the methodology or way in which the learner(s) can be engaged in the discussion board activity.
5. Sculpt the question to encourage higher order/critical thinking. Consider providing an experiential learning opportunity within the context of the activity. This question can be problem-based.
6. Consider how the learner(s) might approach the problem/

question posed on the discussion board.
7. Manage the discussion board.
8. Assess the learner's posts.
9. Reflect on the process.
10. Produce and provide any scaffolds that are required.

When designing an online course, whether it will be experiential in nature or not, planning is a key element. As part of the planning process, the instructor will have incorporated sound instructional design principles in both the design and development of the course. The instructor will have clearly-identified the goals for the course as well as the objectives. Specific objectives for the each module/theme and/or week (dependent on how the instructor presents the content) will be based on the overall goals for the course. Inherent in the instructor's plan will also be the methodology to be used when teaching the course. If the instructor wishes to encourage experiential learning, content and activities would be formulated keeping in mind the components of experiential learning. Within the planning process, then, the instructor will have identified how these components would influence the learner.

Experiential Learning and the Discussion Board

So how does the instructor use the discussion board to promote experiential learning? Let us first examine the components of experiential learning which are: Knowledge, Activity and Reflection (Institute for Experiential Learning, 2003). Utilizing these three components, let us look at experiential learning in terms of the learner, beginning first with knowledge, then engagement in an activity and, finally, learner reflection. As part of knowledge acquisition, the learner first observes and reflects on the content that has been presented. At this point, the learner is in the process of relating the newly-acquired information (new knowledge) to prior knowledge. The learner is then engaged in an activity and is provided with an opportunity that would promote higher-order thinking (generalization and conceptualization of the new concept). Engaging the student in higher-order thinking or critical thinking tasks requires the learner to work at the level of analysis, synthesis or evaluation as identified in Bloom's taxonomy (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). Finally, after having been engaged in an activity, the learner then reflects and seamlessly integrates the new information into their knowledge system.

But what is needed to mediate this experiential learning process within the online environment so that learning does occur? Muilenburg and Berge (2002) discuss the four types of thinking that promote discussion: critical thinking, higher order thinking, distributive thinking, and constructive thinking. The authors identify that these types of thinking are both hierarchical and interrelated (para. 9) and further reflect that "The level of student thinking is directly proportional to the level of questions asked" (para. 12).

Experiential and Problem-based Learning

Question construction becomes a critical element within any discussion and particularly in the asynchronous online discussion. When the instructor is incorporating experiential learning activities and wishes to encourage higher order/critical thinking, then the presentation of carefully crafted real-world problems may work toward this end. Through the presentation of real-world problems in the context of problem-based learning, the instructor can provide opportunities for experiential learning. Question construction can focus on real-world problems that promote higher-order thinking and which, by their very nature, do not have cut-and-dried answers. Furthermore, these problems require students to come to consensus on solutions to the problem/topic presented. These real-world problems allow the learner to use acquired knowledge, participate in an activity to promote higher order thinking and, finally, engage in reflection. Additional benefits are also seen. Abdullah (1998) reflects that in problem-based learning in language instruction, students learn skills such as listening, reading, writing, and speaking and, in actuality, "they construct an understanding of language as it is used in real-world contexts" (para 2).

The Development of a Discussion Board Strategy

So let's reflect on what the instructor would have accomplished at this point through the use of the discussion board strategy. The instructor would have formulated the goals and objectives for the activity, identified a problem-based topic and determined a question that encourages experiential learning and is based on a real-world situation. In addition, the instructor would have decided on both the instructor's and learners' roles and defined the methodology or the way in which the learners would work to answer the question (group/individual).

Morrison, Ross, and Kemp (2001) discuss a variety of ways in which the learner can be engaged in a discussion: instructor-led, group work, panel discussion, case study, and

role playing, to name a few. These same formats can be applied to the discussion board activity also, including response to a guest speaker, participation in a focus group, and individual postings. When we also consider the types of interactions discussed by Moore and Kearsley (1996), we see that a well-designed discussion board activity can encourage student-to-student, faculty-to-student, and student-to-content interaction.

Now that the instructor has defined the methodology (format in which the students will work and post), the discussion board question can be presented. The instructor would tie the question to the content so that contextually the learner could begin to make connections between prior knowledge and the newly acquired knowledge. These connections and engagement in the activity are part of the process of determining the response to the question posed.

The Learner

The learner must now engage in a process to meet the requirements of the question: effectively answering the question before posting to the discussion board. By adapting Savery and Duffy's (1995) model as discussed in Abdullah (1998), the learner working in a group along with the members of the group might employ a strategy that includes determining possible solutions to the question, determining the information and resources relevant to the problem and then make assignments for information gathering. Once all of the information had been brought together and reviewed, possible solutions would be generated. If, on reflection, the learners determined they still needed more information in order to answer the question, certain steps would be revisited. The group's answer to the question/scenario/case would then be posted to the main discussion board and a group designated moderator(s) or all members of the group would then lead/participate in the classroom discussion. For some student groups, the process to engage in may be transparent, but it is wholly possible that some student groups may need guidance as to how to begin to answer the discussion board question. Savery and Duffey's (1995) model in Abdullah (1998) provides a logical process for the instructor to use when assisting the learners.

In the online environment, the learner must find ways to communicate with other learners working together as a group to answer the discussion board question. The use of technologies can be the learner's resource to accomplish this. Some course management systems (CMS) provide a way in which group discussion boards can be set up (by the instructor) to act as a private meeting place (asynchronously) for the group. If this is not available, the instructor can encourage students to communicate by e-mail and/or use the chat feature and meet in a designated chat room where (if possible) the chat can be archived. Archiving the chat can be valuable for both the learner and the instructor. Some stand-alone software, such as NetMeeting, allows chats to be saved. Furthermore, an archived chat can be useful to both the learner and the instructor as a record of who participated as part of the group and who did not. Additionally, the instructor can review the archive to check the process that the learners are using to answer the question and determine if any additional assistance is needed.

To encourage participation by all members of the group, the instructor may wish to incorporate an assessment process that addresses group participation. For example, journaling by each participant in the group can chronicle his or her involvement in the group project, or a peer evaluation form generated by the instructor can be completed by each group member.

Managing the Online Discussion Board

Management strategies employed by the instructor may be dependent upon the way in which the task for the discussion board activity has been structured. For example, the management of group and individual postings may differ somewhat.

There are a number of ways that the instructor can have students who are formulating a group response post to the board. The instructor may have the group formulate and post only a single response to the instructor's question. Each group member, however, may be required to serve as moderator for one day during the week that the group response is posted. The instructor's role in this case would become one of being a facilitator redirecting the class discussion as necessary. A role-playing activity, panel discussion, or case study can also be conducted by dividing students into groups.

The instructor may choose to present a question and require individual responses to be posted to the board. Individual posting may generate a great many posts. The instructor may choose to moderate the board and respond to some of the posts versus all of the posts. Redirection and refinement may be necessary as the discussion activity progresses. At the end of the activity, the instructor may choose to summarize the key concepts brought forth as a result of the discussion board activity or designate a student to do so.

Stating clearly the posting requirements for the activity should

assist the student in knowing what frequency of response is required. To encourage participation in the discussion board activity, points may be assigned just as they would be to any other assignment given within the course. Additionally, since the instructor is seeking a rich discussion that encourages higher-order thinking and critical thinking, the frequency of the post should be designated. Requiring the learner to post only one time to the board may not provide a rich interaction between the learners and the development of a community of learners. The key element in the discussion board activity is having students return frequently to the board to agree/refute or address additional issues that are tied to the content and the discussion board question.

Assessing the Discussion Board Activity

Clear goals and objectives for the discussion board activity as well as a posted rubric may assist the learner in identifying what needs to be done and what is considered an appropriate response. The instructor may choose to include the rubric within the course syllabus.

When assessing the learner's post(s), the following components are critical elements within the context of encouraging higher order thinking: quality of the posts, evidence of reflection and evaluation (Land & Dornisch, 2001/2002), relating new information to prior knowledge, constructive responses to the posts of others, and refuting/agreeing with supporting references included. Spelling/grammar and the frequency of response by the learner also contribute to the quality of the post and the degree to which the student is engaged and reflecting on his or her own statements and those of peers and/or the instructor. All of these elements are part of the "Components of the Rubric," as seen in Table 1, Rubric for the Discussion Board.

The learner's post can be "Below Baseline," "Engaged," "Emerging," or "Exemplary" in response to each of the rubric components. A maximum score of 21 can be attained. Each component is assessed individually to determine at what level the student is performing with regard to that element.

Instructor Reflection

Just as the instructor would reflect on what worked and what did not in the face-to-face classroom, so too in the online environment reflection becomes important. Table 2, in a general manner, identifies what a discussion board should look like versus what it should not look like.

Scaffolds for Learning

After reviewing the results of the activity, the instructor may determine that specific pieces of information did not seem to have been assimilated by the students, based on the content given. It is at this point that the instructor may begin to identify that scaffolds are needed. Before exploring the various types of scaffolds, let us first visually define the term *scaffold*.

Initially, when we think about scaffolds, a picture of a construction site may come to mind. At the construction site, there may be many scaffolds constructed to support workers so that they can complete the construction tasks. So too, in the online learning environment we want to put in place these support systems so that students who did not acquire the information through the teaching process can now do so (Bull et al., 1999).

The instructor may build the following types of scaffolds: tutorials with print screens and/or additional files that expound further on various concepts. These file types could include audio, video and/or Microsoft Office files (MS Power Point, MS Word, MS Excel) and/or Flash movies. A list of readings and resources may become a scaffold. Alternative technologies may also be viewed as scaffolds such as e-mail, phone, fax, the discussion board and linked help screens which are located within course management systems.

Summary

The discussion board strategy is an effective way for the instructor teaching a fully online or a Web-enhanced course to provide opportunities for students to engage in critical thinking with their peers. Before this interaction can occur, however, the instructor must carefully plan the activity. Planning, goals and objectives, question construction, and methodology will influence the richness of the discussion. To encourage higher order/critical thinking the instructor may wish to incorporate a real-world experience, keeping in mind the components of experiential learning and how this interplays with problem-based learning.

Once the instructor launches the discussion board activity and the methodology to be used (group work/ individual posting), management strategies may need to be employed. The instructor may choose to also incorporate a peer evaluation component or a journal assignment in which the student chronicles his or her individual contribution to the project when students are working as part of a group.

Once the discussion postings have begun by the group or by individuals depending on the assigned task, the instructor will begin to monitor the discussion. The instruc-

Table 1. Rubric for Discussion Board

Components	Below Baseline	Engaged	Emerging	Exemplary
Quality of posts	Related to topic/ largely fact based	Limited understanding of problem but some analysis.	Adequate understanding of problem although analysis, synthesis evaluation is limited.	Clear analysis, synthesis and evaluation.
Evidence of varied levels of reflection (Land & Dornisch, 2001/02)	No reflection[1]	Response shows postings have been read.	Recognition of multiple perspectives[2].	Extension and refinement of perspectives[3].
Related new info to prior knowledge	No reference to prior knowledge.	Attempt but it is weak/limited.	Postings reflect prior knowledge related to new info but no evidence of integration of new content.	Prior knowledge is actively referenced and clearly relates to problem. Evidence of integration of new content.
Constructive response to other's ideas	No response.	Recognition of other's opinions but no evaluation of these.	Recognition of other's opinions but limited evaluation.	Recognition of other's opinions with examples of analysis/ synthesis of those opinions.
Evidence of support for opinions	No references/studies cited in support of statements made.	Attempt to reflect on literature but not clearly stated.	Limited evidence of review of literature but attempt is clearly stated.	Clear cut evidence of critical review of literature that is correctly cited.
*Regularity of postings	Response to question but no response to other's posts.	Response to question and responded to 1 other post.	Response to question and responded to 2 other posts.	Response to question and responded to 4 -5 other posts.
**Mechanics of postings	Poor sentence structure and organization with frequent spelling/grammatical errors.	Complete sentences but could improve on organization; has 3 spelling/grammatical errors.	Complete sentences but could improve on organization; has 1-2 spelling/grammatical errors.	Complete sentences, well thought out organization. No spelling or grammatical errors.

Dependent on the instructor's grading schema, points may apply to each of the 4 levels: Below Baseline (0), Engaged (1), Emerging (2), and Exemplary (3). Maximum score with this applied rubric would then be a score of 21.
*Regularity of postings: Frequency of postings may be dependent on length of period available to respond: Instructor preference.
**Mechanics of posting: Grammar, spelling and organization.
Definitions based on Land and Dornisch (2002).
[1] No reflection: Student did not show evidence of having read or responded to any postings.
[2] Recognition of multiple perspectives: Students identify and recognize how a posting has similarities and differences from another's but do not elaborate or explain.
[3] Extension and refinement of perspectives: Students recognize how a posting(s) has similarities and differences from another perspective and elaborate with personal anecdote, experience, and/or opinions/conclusions. Dependent on the question presented by the instructor, the student's posting may reflect how the idea extended or promoted further advancement of the initial idea.

tor must become adept at knowing when to break in to the discussion and when to step back and let the discussion evolve.

The rubric reflects the requirements for the activity and how the instructor will evaluate the posts. Including the rubric within the syllabus may be an effective way to assist students in knowing what is required of them. After the student's work has been graded, the

Table 2. What Should the Discussion Board Look Like?

Like This!	Not like this!
• Clear topic: goals/objectives/relate to content.	• Closed questions.
• Open ended questions.	• Rambling discussion.
• Reflective questions.	• No re-direction.
• Informed discussion: I learned something from this.	• No netiquette/ flaming.
• Has direction: focus/re-direction.	• Certain students monopolize the discussion.
• Summary.	• No summary.

student can then review the goals and objectives to determine where it is that he or she was successful or unsuccessful, as the case might be. The course goals stated in the syllabus and the objectives for the discussion board task itself can again become a guide to the student as to the information that may require further review.

It is also important that the instructor reflect upon the discussion board activity once it has been completed to identify where the students are having difficulty or where they were successful. If specific difficulties were observed, the instructor can determine if scaffolds are needed and then provide those as a follow up. Thus, the implementation of the discussion board strategy becomes an effective tool for teaching and learning.

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Using Online Technology to Expand Standard Language Skills of Nontraditional Students

Theodore Coker and Lenora Majors

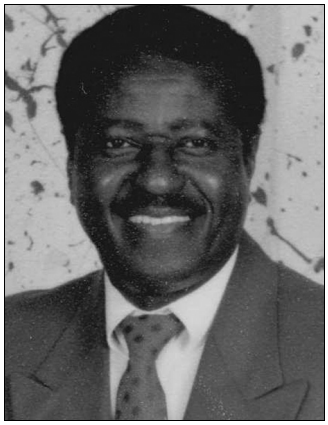
Today, there is a prolific growth in the number of nontraditional students in colleges and universities throughout the United States. This increase is most dramatic in institutions offering online technology. The University of Nevada Reno's online enrollment, for example, has shown a tremendous increase in this population (Powers, 2002).

The ameliorative activity of the forensic competition design provides the opportunity for debate using higher-order thinking skills through questioning, responding, and the adjudication by class members. This process incorporates all levels of Bloom's Taxonomy.

This design, which reduces student anxiety during presentation and performance, intertwines the use of Blackboard.com to provide peer collaboration. Additionally, it encourages the opportunity for sharing and interacting with research in a collaborative forum. This has the capability to extend interaction of nontraditional audiences both inside and outside the institution (Ko, 2000).

Many culturally diverse teacher education programs require nontraditional students to have the prerequisites needed for basic skills performance in mathematics, reading comprehension, and writing. The lack of these skills in language development provides a rationale for designing the history and philosophical foundations course to accommodate these deficit needs. However, in addition to being unaccustomed to and unprepared for the rigors of the traditional college academic courses, the nontraditional student often lacks the technology skills needed to accomplish academic assignments (Manner, 2003).

Consequently, there is great effort by higher education institutions to identify the academic and psychosocial variables. To achieve this goal, many institutions are developing programs needed for



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students to successfully perform and complete their course of study.

The use of innovative nontraditional approaches is a powerful means of developing language skills through reading, free writing, and oral deliberations. The forensic activity incorporating problems in education found in "Do we still need public schools" (Center on National Educational Policy, 1996) encourages students to consciously apply standard language patterns in deliberations. The incorporation of a competitive activity expands development of students with the inclusion of high-interest reading selections such as "The good-and the not-so-good news about American schools" (Center on National Educational Policy, 1996). The process used goes beyond the traditional study and memorization that are prevalent in traditional instructional approaches. The result is a venue for the conscious application of Standard English skills in the academic setting.

Assessment of the activity involves the students' invitation of college's professors to attend their presentations. These professors offer their professional reactions and critique to the students' performance in the activity. This entire process is taped for an extended evaluation of oral language and stage presence. The class members who do not participate in the panel adjudicate the debate and write an opinion for their presentation. The process gives students the opportunity to conduct peer assessments, identify grammatical usage problems, and gain personal experience in assessing grammar.

The practice of using online media to develop course materials for nontraditional students is not new. Several institutions are using these media in innovative course applications. Nova Southeastern University, the University of Phoenix, and many other institutions have developed online degree programs in a number of disciplines.

Some instructors have experienced difficulties with the task of converting traditional materials to online formats. Consequently, they often develop course content and omit strategies that promote critical thinking during the conversion process (Visser, Visser, & Schlosser, 2002).

Researchers and instructional designers are beginning to utilize attributes of course management systems to facilitate cognitive development and higher-order thinking skills. Berge (2002) suggested the use of well-designed student interaction via discussion boards and chats as one method to move the student from a lower to a higher level of cognitive processing.

Thus, in accordance to Benjamin Bloom (1956), the interaction process should facilitate the students' progression of the taxonomy from the lower levels of knowledge and comprehension to the higher levels of synthesis and evaluation (Berge, 2002). The process is greatly facilitated by the features of discussion boards, virtual classrooms inherently characteristic of online learning systems.

The forensic activity is a three-pronged attack designed to enhance the language skills of nontraditional students. Berge's feature of online learning programs is an important function to integrate both the content and the cognitive processes into one learning activity. The use of the debate format enhances outcome-based education (Maxim, 2003).

The forensic activity specifically involves a duel between college students about the virtues of a public versus private school; nevertheless the process is flexible enough to accommodate almost any topic.

An illustration of the interconnectivity of the module is shown in Figure 1.

Knowledge and Awareness: The subject matter and course information is presented in the face-to-face and online environment. The con-

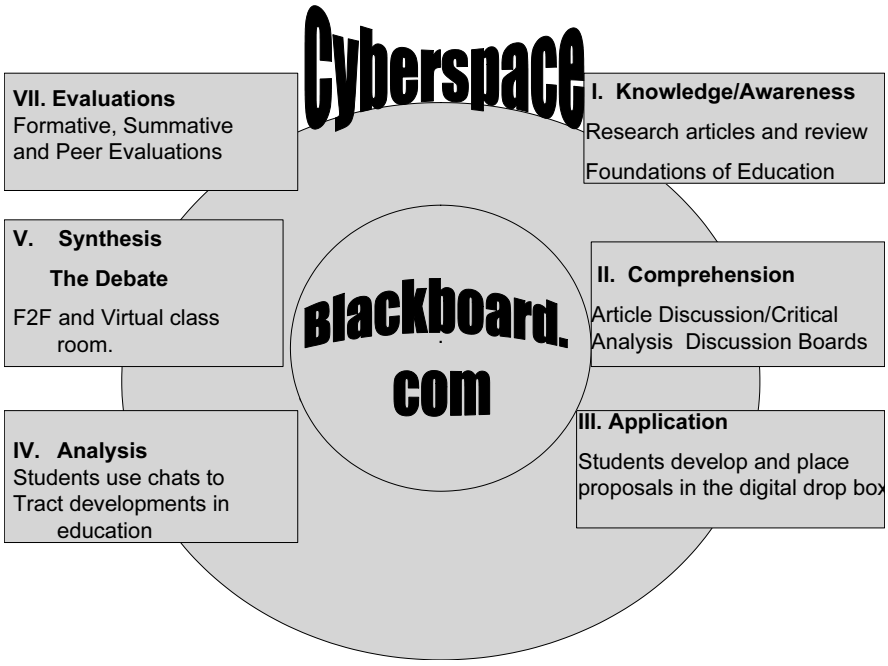

Figure 1. From Bloom's Taxonomy of Instructional Objectives

tent is presented with shared Web sites and virtual chats.

Comprehension and Cognitive Development: The students prepare to incorporate the philosophies of education. The students make extensive use of the discussion boards responding to the questions from the instructor and from their peers. Additionally, they review and reinforce viewpoints article review and research. A further assessment check for students occurs via the test function of Blackboard.com.

Application/Cognitive Development: Application involves reading and responding to the issues and trends in education. The discussion board helps to promote student discourse on the issues. The students' ability to apply oral and written Standard English is critical. They also develop and place their proposals, which are a result of this process, in the digital drop box for the teacher to peruse and inspect.

Analysis/Cognitive Development: Acute awareness of the principles of educational achievement is one key to cognitive development. Students begin to assess and analyze the developmental processes of educational issues and trends that are incorporated in these concepts. The students use the chat rooms and discussion board to edit and review the materials.

Synthesis: The competition and debating activities, the discovery process, and the searching and researching of the issues ensure synthesis. The class is divided into groups; the affirmative and negative sides are designated. Research for supportive information for each side's viewpoint is presented. The group pages and discussion board features of Blackboard are used to engage both sides in the research, discussion, and interaction needed for the debates.

At this point, the students' eclectic and personal educational philosophies begin to manifest via the dynamic interactions that emerge as a by-product of the face-to-face, chat room, and discussion board conversations. These activities culminate in the debate.

The debate: The students engage in the debate in the face-to-face environment, but continue the Analysis and Cross-examinations process in the virtual classroom. Collaboration, with both positive and negative viewpoints, is conducted. The student adjudicators begin to summarize and finalize the formative evaluation process and post assessments activities for analysis on the discussion boards.

Evaluation: Formative and summative evaluation by peer reviews are conducted during this phase**.** Dick and Carey (2002) stated the formative evaluation process should be ongoing throughout the developmental stages of the project. It involves such phases as the one-to-one review, the small group review, and the field trial.

Peer reviews occur in the follow-up sessions, with feedback involving the assessment of facts and the critique of oral language. Additionally, other factors of the debate such as stage presence, voice, and enunciation are assessed.

This three-pronged attack featuring the use of forensic competitions, Bloom's Taxonomy, and Blackboard.com's online environment is a powerful strategy to build the students' entry and subordinate level skills while raising their cognitive ability. The forensic competition provides the opportunity for students to practice their primary verbal skills for composition and discourse, the application of Bloom's Taxonomy provides the theoretical framework for the activity, and the use of Blackboard.com system provides the groundings and reinforcements necessary to build a technological foundation.

The lesson learned is aligned with higher education strategies to develop innovative programs that serve to facilitate the retention rates of nontraditional students in the academic setting.

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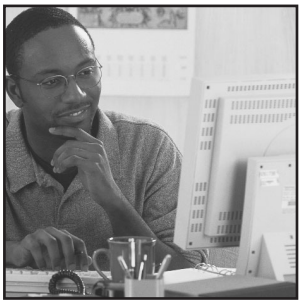

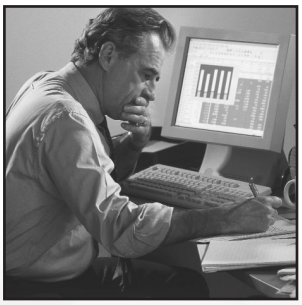

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Bringing life to learning

Strategies for Developing Instructional Design Practice Online

Jennifer Morris, Erin Jo Adair, Kevin J. Calhoun, Elizabeth Rodgers, and Jon Scoresby

More opportunities are needed for learning service professionals and students to practice authentic instructional design as a part of their respective training and academic preparation, prior to assuming employment as a learning designer. Creating an online case event provides an opportunity for participants to use instructional systems design in an authentic, team-oriented, online learning environment. The process is a rewarding, challenging, and complex endeavor. The strategies outlined in this paper for creating an online case event include providing a case, implementing a project management plan, selecting media, and acquiring the appropriate permissions and endorsements.

Introduction

The purpose of an online instructional design case event is to provide an opportunity for learning service professionals to practice instructional design in a realistic and situated Web-based learning environment. There are a myriad of decisions to be made when developing instructional design practice online. This is a presentation of important strategies for developing instructional design practice online. The strategies discussed are selecting a case, incorporating project management, media selection, and acquiring permissions and endorsements.

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Selecting a Case

A case needs to be created that illustrates a genuine and authentic problem that requires an instructional design solution. When developing a case for an event, consideration should be given to the fact that novice instructional designers require a genuine problem to reflect the situations that they would encounter in the workplace, or approximate this environment as closely as possible. The intended audience for the event needs to be determined. The rationale for authentic learning is that learners can realize the utility of the concept that is being taught. More specifically, problem-based learning is an instructional strategy in which students actively resolve problems in realistic situations. The creation of a case rests on the characteristics of problem generation and problem presentation. The case event should be designed to challenge participants to demonstrate knowledge of instructional design principles and this exercise should

incorporate the problem that was presented.

Following the endorsement of the scope, create an inventory of all available and useful resources. This inventory should include available materials and tools required to develop such an online environment, as well as human resources and skills available within the design team, as well as those that may be called upon from outside persons (Greer, 2002). Each person's availability and stake in the project should be confirmed and any discrepancies between the scope of the project and available resources should be addressed. Having resources readily available in one place simplifies communication efforts when design team members need to call on individuals or locate materials. At this point, the project can now begin to take shape including the planning and outlining of all activities that will create this complex interactive environment.

By preparing the scope, resources, and outline of activities, project managers will find it much easier to generate a plan for communication between all stakeholders; a more detailed work breakdown structure, and cost estimations within a given budgetary framework. Careful preparation also allows design teams to anticipate obstacles and potential barriers to accomplishing the end goal.

Media

When choosing media for online instructional design practice, helpful strategies include media selection, creation, and formative evaluation. The chosen media will contribute to the practice environment's authenticity. Presenting a project online would provide an opportunity for a large pool of participants and is only limited by the availability of Internet access. The particulars that go into the success of the end product must be carefully considered in addition to outlining the necessary computer programming involved in such a project.

Any programming involved in the development of the site and posting to the server may be limited to a few assigned programmers who work outside of this project. Using outside programmers has significant limitations to editing materials on the site and may incur additional costs if significant programming revisions are made. Researching outside options, including purchasing server space from a private Web-hosting company that allows write-access and submission access to registered users, is recommended.

Instructional design needs are as varied as job possibilities. Correct media selection is essential as the novice instructional designers must be able to practice in an authentic environment. At this point, the content delivery is paramount because it will build the environment and the learning situation. "Instructional learning goals should drive media selection, application, and the course development process. Characteristics of the distance learner and the impact of technology are also important considerations in instructional media selection and course development" (Florida Gulf Coast University, 2003). Content and media selection should complement each other. For example, a database could be used to facilitate the interaction between users, and record their reflections of the learning process. Researchers and others can then view information recorded in the database.

The following factors should be considered in product development: the exact training needs, skills required to produce instructional media, skills that are lacking, and hardware/software requirements (Brusca, 1995). The design team should consist of those who have the ability to do what is needed. For example, programming a Website requires a programmer. The chosen programming language must be one the programmer knows. An implicit understanding of what language and database will be used and their capabilities is imperative.

As Dick, Carey, and Carey (2001) have noted,

> Formative evaluation is the process designers use to obtain data that can be used to revise their instruction to make it more efficient and effective. The emphasis in formative evaluation is on the collection and analysis of data and the revision of the instruction. (p. 284)

In this context, formative evaluation is the process by which outside sources are solicited to provide feedback and input to the direction of the project. Compile a list of contacts that can assist with the instructional design process, content development, and media selection.

Permissions and Endorsements

Careful consideration must be given to security and legal issues. As online learning becomes more and more prevalent, copyright issues are becoming more of a concern. To prepare learning media for the Internet, remember that copyright regulations apply to the following areas:

- Literary, dramatic, and musical works
- Artistic works
- Trademarks
- Sound recordings, films, broadcasts, and cable programs
- Any typographical arrangements of published work

Before using any published or copyrighted material, first consider the copyright issues. Many materials used in an educational manner have a variety of copyrights and copyright owners. These regulations also apply to Web pages, graphics, and multimedia. Almost everything created privately and originally after April 1, 1989 in the United States is copyrighted and protected, whether it has a notice or not. Generally, the owner of the copyright is the publisher of the work. In some cases, joint copyright ownership may be held between the publisher of the work and the creator.

Before any copyrighted material can be used in a public manner, permission must be sought from the copyright owner and licensing fees or dues may need to be paid. Media utilized for educational purposes are still subject to copyright laws. "Fair use" is a limited exception dealing with material used for reporting current events or for criticism or review. Even with these types of materials, only a limited portion of the work is allowed for fair use. Copyright issues should be addressed in advance before the project begins.

Many institutions of higher education and business abide by a code of ethics. With the wealth of information accessible via the Internet, it is easier than ever for individuals to copy text, graphics, or ideas from the Internet. All participants should be apprised of institutional honor policies and codes of ethics and how they apply to the project environment.

When creating material for an educational institution or a business organization, the design team must be aware of the respective institution's policies and procedures for dealing with human subjects. The Institutional Review Board (IRB) is available to ensure and oversee the ethical treatment of human subjects in research. Any activities involving human subjects must be approved by the IRB and comply with their standards. Although they operate on a local basis, Institutional Review Boards are federally regulated to make certain all boards are equally represented and fairly run.

All applications, documents, and materials must be submitted to the IRB before any work can commence involving human subjects. The IRB may require extra documentation or legal notices in addition to all materials created for the project. The IRB may also require compulsory notices and letters to be signed by all participants to ensure their awareness and compliance with the project.

The term "intellectual property" refers to creations of the mind such as literary or artistic works, concepts, symbols, names, images, designs, and much more. The subject applies to both the teacher and the student, and refers to who owns what they create when participating in online learning.

Legally, intellectual property created under employment belongs to the employer, not the creator. The creator can change this by establishing guidelines before materials are created. Government can regulate ownership and granting rights of intellectual property. The importance of having intellectual property control over works is to ensure that the material is being used for the intended manner. Conversely, be aware of all the intellectual property rules of any materials used from someone else's work. Most likely, any works created by participants during an online project will belong to the institution hosting the event. Overt measures must be taken to ensure that participants understand who has control and ownership over their creations. Having participants read and agree to an intellectual property clause before any work has been done will help to clearly establish who has ownership rights concerning all intellectual property.

Recommendations

Online case-based learning is a versatile and valuable tool. The right strategies are needed to create an appropriate learning and practice opportunity. Recommendations include employing the strategies of creating a case that challenges participants and incorporates the characteristics of problem generation and presentation. Effective project management includes having a well-defined scope, prepared resources, and an outline of activities. Media selection should include choosing media that are familiar to the developers and forming a list of contacts that can be used for formative evaluation. The design team should be well-versed on copyright laws, intellectual property, and ethical codes in order to acquire permissions and endorsements. Employing these strategies will ensure a successful online practice opportunity.

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The Role of E-learning in Corporate Universities

Ryan Watkins

It is typically challenging to define either what a "corporate university" is and/or what it is not. Yet, this growing trend among organizational training centers to expand their roles beyond the traditional training functions has in tandem extended the role of e-learning in today's organizations. As organizations have moved through quality management, reengineering, outsourcing, right-sizing, and a half-dozen other trends, the role of e-learning over the past decade has become increasingly important in preparing the workforce for success. So as training centers look to expand their roles within organizations, it is becoming essential for e-learning to define its role within both the broader "corporate university" and the organization as a whole.

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Corporate universities ideally assist organizations in accomplishing a range of organizational missions, including but not limited to the training of employees on the knowledge and skills that are required for workplace performance. By supporting the organization in the achievement of these missions, the corporate university can become a mechanism for creating company culture, encouraging lifelong learning, managing and retaining organizational knowledge, developing communities of practice, and building the capacity of the organization to change, grow, and succeed. These expanded opportunities for professionals in training, organizational development, instructional design, e-learning, and human resources development offer organizations unique prospects for using their skilled workforce to create an environment in which learning opportunities are utilized as a key element in the recruitment and retention of employees, as well as the long-term advancement of the company.

Moving from technologies like automated slideshows on floppy disk to interactive online group learning experiences, e-learning has kept up with the demands of organizations through the introduction of both new technologies as well as applicable pedagogy. This capacity of e-learning to evolve through innovations in both technology and pedagogy will also play an essential role in developing e-learning as an indispensable component of corporate universities. After all, e-learning offers organizations a means to expand learning opportunities outside the traditional training classroom.

Challenging the traditional notions of where training (and learning) takes place, e-learning can additionally do far more than just transform classroom training courses for online delivery. E-learning can help change the culture of an organization, facilitate knowledge sharing and management, build valuable relationships across organizational units, and prepare the workforce for the

demands of evolving businesses. Yet, in order for e-learning (or even a corporate university) to be successful in achieving its goals, the strategic decisions of the initiative must be aligned with the strategic direction of the organizations, its clients, and the clients' clients. This alignment of strategic direction is what can, and should, define the role of e-learning in corporate universities.

As a result, effective strategic plans begin with some unconventional wisdom that starts outside of the organization (Kaufman, Stith, Triner, & Watkins 1998; Kaufman, Oakley-Brown, Watkins, & Leigh, 2003). By defining the common goals and objectives both within the organization and among the stakeholders outside of the organization (for example, external clients and their clients), strategic plans can begin to define the results that all agree must be achieved for everyone to be successful.

Among his reflections on healthy interpersonal relationships, the social philosopher and business leader Charles Handy (1999) adds: "It seems to be the same with organizations. The healthiest are those which exist for others, not for themselves" (p. 48). For organizations, this pragmatic perspective is applied through strategic planning initiatives that begin with the shared goals of the organization, its clients, the clients' clients, and the community they serve. By starting here, instead of in the details of daily operations, each of the partners can clearly view the common results they can accomplish together (Watkins, in press).

An "ideal vision" is a tool for defining, in measurable terms, the outcomes and the ideal starting place for defining strategic direction that is agreeable to both internal and external partners (Kaufman et al., 1998, 2003). Unlike vague vision statements, this vision focuses on the societal contributions that the organizations, together or separately, can make to clients, clients' clients, and others. By only specifying the results that are to be accomplished, the Ideal Vision can guide the strategic planning process away from the debatable opinions of preferred tools, techniques, suppliers, or other elements that focus on "how" the results will be achieved. Hence, discussions related to the process elements of the plan, the "how to," are then reserved for a time after the results to be accomplished; the "what" are defined in measurable terms.

After coming to an agreement with organizational partners and stakeholders on the shared definition of what results, or "outcomes," should be accomplished, organizations can then define the results, or "outputs," they will achieve and how they will contribute to the common objectives previously defined in the shared vision. At this stage in the planning process, organizations define the measurable results they will contribute to their clients, creating a clear strategic alignment of the results they accomplish with the shared goals of the organization and its partners (Kaufman et al., 2003, Watkins, in press). The resulting statement of what Outputs the organization will achieve and contribute can then define a mission and provide a guide for decision making that all organizational employees and partners can use with the assurance that it is strategically aligned with the shared goals and objectives defined at the vision level.

While preserving an exclusive focus on the results to be accomplished, the next useful step is to align the results to be achieved by individuals, groups, teams, divisions, and projects with those identified in the vision and mission. By aligning the results defined in this stage of planning with the mission, you can create clear and measurable objectives that all employees can use in guiding their decision making.

Then, and only then, does effective planning move to determining the "processes" (how results will be accomplished) and the "inputs" (what resources are necessary for implementing the processes). Consequently, the complete framework including the vision, mission, objectives, processes, and inputs can then be used by e-learning decision makers to ensure that the choices they make are adequately aligned with the strategic direction of the organization and its partners (Watkins & Kaufman, 2003).

This framework for aligning the role of learning with the objectives, missions, and visions of the multiple partners and stakeholders of any organization can be a valuable tool for defining the role of e-learning within a corporate university. Without micromanaging, this alignment of strategic direction allows for clear and specific guidance when making challenging decisions. After all, the role that e-learning plays in the continuing evolution of the corporate university and the organization is best defined by its contributions to the internal and external clients, the clients' clients, as well as the community they serve.

Note: Any opinion, findings, and conclusion or recommendations expressed in this material are those of the author and do not necessarily reflect the view of the National Science Foundation.

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Instructor Competencies: Standards for Face-to-Face, Online, and Blended Settings

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(Published in cooperation with the Association for Educational Communications and Technology and the International Board of Standards for Training, Performance and Instruction)

By **James D. Klein,** *Arizona State University,*
J. Michael Spector, *Florida State University,*
Barbara Grabowski, *Pennsylvania State University,* and **Ileana de la Teja,** *LICEF Research Center, Tele-universite*

This edition is not just a rehash of old, albeit classic and still important, stuff. Instead, it provides a fresh perspective on a topic of perennial interest for those working in the field that has been variously called training and development, human resource development, performance technology, and workplace learning and performance. The fresh perspective takes into consideration two additional instructor settings to the traditional face-to-face environments that most instructors and trainers know -- that is, online and blended settings. These settings are, of course, becoming more critical as instruction moves beyond classroom settings to include virtual and combinations of classroom and other media delivery methods.

The ibstpi instructor competencies match up well to *Mapping the Future* (Bernthal, Colteryahn, Davis, Naughton, Rothwell, & Wellins 2004), the current ASTD competency study of the field now known as Workplace Learning and Performance (WLP) and previously known as Training and Development (T&D). WLP is more than a new name for an old subject and represents a fundamental paradigm shift in what it means to be a professional in the field formerly known as training. WLP is all about getting improved performance -- and therefore improved results -- in organizational settings through planned and unplanned learning interventions. Instruction is thus a means to an end and not an end in itself. The ibstpi instructor competencies dovetail well with that philosophy.

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In Distance Learning, the Cup is Half … *Something*

Craig Ullman

The good people of NCREL, the North Central Regional Educational Laboratory, have come up with a "meta-analysis" on the effects of distance learning in K-12, and I'm not sure whether their study is incredibly validating—or a total disaster.

A meta-analysis is a study of a bunch of studies. Essentially, NCREL examined every respectable study on the effects of distance learning—any kind of distance learning—over the past 5 years and boiled them down to 14 that met all their criteria. Those 14 studies yielded "116 independent effect sizes drawn from a combined sample of 7561 students" (you can ready the meta-analysis at http://www.ncrel.org/tech/distance/k12distance.pdf). Their performances were compared to a control group of nondistance learning students.

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Most of the students in the studies were in secondary school; the classes were either synchronous or asynchronous, or some combination; the classes were held 5 days a week, or not. In short, the study reviewed a wide variety of distance learning practices, with very different affordances.

The study does go through a series of caveats before stating their conclusion. It's only one meta-analysis, after all. One must remember Piaget and of course Vygotsky. Some subject matter, like complex math, does not quite work in a distance learning format. And we need more information.

But the study does have a conclusion, however tentative: "The analysis resulted in an overall weighted effect size not significantly different from zero … distance education is as effective as classroom instruction."

My problem is, considering my deep antipathy to traditional classroom practice, I'm not sure whether the conclusion is good news or bad news. Another way of putting the results of the study is that *nothing matters.* Whatever educational choice you make, whatever technology (if any), and presumably pedagogy as well—it doesn't matter. The students will do about the same no matter what; those who come to school motivated to learn and expecting to succeed by and large will, and those who don't, by in large won't. This implies that, if we want to change educational outcomes, we're looking at the wrong end of the horse: instead of focusing on schools, teachers, pedagogy, and technology, we should be focusing on the much more difficult problem of the culture of poverty.

And we all know how likely that is.

Now I realize I'm jumping to conclusions; I'm going far, far beyond what the authors of the study state; e-learning is in its infancy and can get much better; and I really can't believe the argument I'm making anyway (otherwise, what have I been doing all

these years?). However, I know a simile that frightens me:

For decades, people paid big money to big shrinks who would listen to them for years, helping them with their day-to-day anxieties. Scientists and some academics in the psychology community complained that no form of analysis was scientifically based, and therefore couldn't possibly be affective.

Well, the research was done, and it turns out that there is no difference between a long, expensive analysis with an Ivy League psychologist, or regular visits with a social worker, or frequent chats with a good friend.

In other words, psychoanalysis is bunk. Are we just like psychoanalysts?

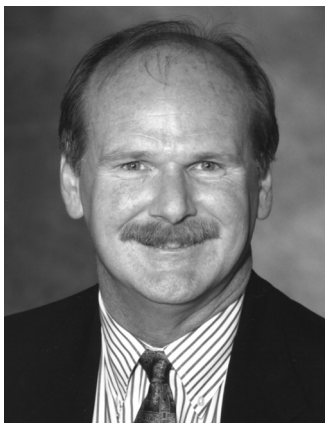
Why don't you stretch out on my couch and we'll talk about it. But I've only got an hour … er, fifty minutes.

"The good people at NCREL … have come up with a meta analysis on the effects of distance learning in K-12 … the analysis resulted in an overall weighted effective size not significantly different from zero … distance education is as effective as classroom instruction."

Revisiting Distance Education's Symphonic Legacy:
Still Crazy After All These Years or, Getting Better (all the time)

Don Olcott, Jr.

As one ponders the evolution of distance education the past 2 decades, the Paul Simon and Beatles songs remind us vividly that distance education is still a confounding and contradictory enigma constructed within the symphonic dissonance of higher education where dreams and realities of competing interests often collide. The ever-changing reservoir of literature defining what distance education was, is, and—most importantly—could be, appears to be at its most fragile point in years and in need of a renewed, focused, vision for the future.



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That eminent scholar, Yogi Berra, has summed up the primary problem with this erratic, moving target definition game succinctly: "if you don't know where you're going, you'll wind up somewhere else." In essence, this has been the endemic and ubiquitous problem for distance education the past decade. Many passionate advocates argued that distance education, with a misguided emphasis on technology, would increase educational quality, reduce expenses, raise revenues, foster more interaction, enhance access, lower your golf score, give faculty time for contemplation and research, and educate children on the value of educational learning over video games. And it is true, some people have lowered their golf scores with technology and educational access has been enhanced. Our other aspirations, regrettably, have fallen well short of earlier advocacy and promises. Why? Because the field embraced unrealistic and unnecessary goals.

Why should technology have to demonstrate it is "better" than classroom instruction or that it can produce higher "increases" in learning outcomes? Technology, in and of itself, is simply a tool, no better or worse than any other teaching strategy or technique used by grade school teachers or university professors alike.

Why didn't we simply say that technology and distance learning might just make teaching and learning more enjoyable and fun with the same academic results? This is analogous today to academics denying the fact that students are "consumers" of education and

that "convenience" is indeed a powerful motivating force for students in choosing alternative modes of learning. As the gatekeepers and creators of knowledge, the academy sometimes has a hard time with these subtle truths. *Lesson 1: The use of educational technology must be defined by its value as a teaching and learning tool first and foremost.*

The inherent reason for advocating these unattainable goals was economic investment, or more precisely, return on economic investment. If campuses made major capital expenditures for technology, then the results in the teaching and learning process had better exceed all measures of academic achievement, financial efficiencies, and instructional quality than the old ways. Of course, campuses built new football stadiums, remodeled gymnasiums, but never required undefeated seasons as the new measure of quality. Perhaps if we could sell tickets to alumni to attend history, philosophy, art, dance, and music classes, we would have avoided these contradictions.

Distance learning advocates got trapped by their own misguided rhetoric rather than arguing the merits of alternative approaches to teaching, learning, scheduling, and embracing the variety of learning styles among students. *Lesson 2: The value of educational technology for teaching and learning must be measured by its capacity to enrich the teaching-learning environment rather than unrealistic expectations for producing revenue or reducing expenses.*

Today, the result of this misguided approach has come back to haunt the field. A decade ago, distance education advocates argued simultaneously how different these teaching and learning processes were and yet how important that they should be mainstreamed into the core academic culture of the institution, a "separate but equal" philosophy. Most institutions weren't buying this argument because they conveniently bought a different philosophy, "separate but different." And who sold this to our campus leaders and faculty, the advocates of distance education.

Today, campuses are now mainstreaming technology and technology infrastructure planning into the core mission of the institution to serve *all* students of the institution (regardless of where they are) and, paradoxically, distance learning advocates are resistant to having their domain (organizational entities) become a core function of the institution. They have yet to realize that defending their distinctiveness was misguided from the beginning. *Lesson 3: education is education is education, regardless of where, when, how, at what pace, and through which medium it is delivered.*

A decade ago, distance education's defining characteristic was "separation of teacher and student." Today, students take courses online 100 yards from the professor's office *on-campus* … ten thousand miles away *off-campus.* Campus smart classrooms, in fact, utilize all the technologies that are used in distance delivery. Indeed, it seems the separation of teacher and learner concept has been altered. *Lesson 4: Remove the term "distance" from the annals of humankind.*

I would challenge the reader that if this piece has provoked a defensive response to a perceived critique of the field, I would argue quite the contrary. Technology advances have, in fact, revolutionized every facet of society—from education, business, and government to entertainment, banking, and commerce. The efficiencies of administrative, instructional, and financial online services can—and do—save money and, often more importantly, time for the user and the consumer.

This review is simply a realistic assessment of where we have come in the past 10 years. It is a harsh reminder to all of us who embrace the profession of education that we must never place the core educational process and purpose behind economic rhetoric, technology, or any other tool that diverts us from our most important responsibility: to help students learn. Learning theorists argue quite persuasively that some of the most effective learning occurs from trial and error and correcting and learning from one's mistakes. *For What It's Worth*, a defining cultural song of the 1960s by the Buffalo Springfield, shared an illuminating lyric: "nobody's right if everybody's wrong." Campus leaders and distance learning advocates are neither right nor wrong: they are just continuing to learn in a rapidly changing, techno-revolution environment how to do education better by improving teaching and learning processes for tomorrow's generation of students. And, for what it's worth, this is an ideal we can all embrace and nurture for our children and our children's children.

A Retrospective Musical Anthology for Distance Education

For What It's Worth. The role of educational technology and distance learning has made significant contributions to educational access, student learning, and improved teaching processes.

You Can't Always Get What You Want. This is the reality of competing interests for the same resources in higher education. In a challenging time of limited economic resources, campuses will have to set priorities for funding. Technology planning and investment will remain a high priority and can be successful if competing interests collaborate towards a common purpose of maintaining quality (and

fun) and expanding access to teaching and learning.

People. Barbara Streisand had it right: people are our most precious resource even in the knowledge age. The human capital of educational institutions must be developed, nurtured, rewarded, and embraced. Technology will not replace the human element in education. The futurists were wrong, although Mr. Orwell did make some extremely insightful observations.

We Can Work It Out. Collaboration will prevail over competition in the long-term. All constituents of the campus (faculty, administrators, students and, yes, techies) must work together to maximize the potential of technology for the university and college to do its business more efficiently and effectively.

It's Too Late To Turn Back Now. We have a choice. Technology, the Internet, the Web, and the rest are here to stay. Some of us may dream of the old days, yet our responsibility is to the future. We must collectively define the role of technology in the educational process for future generations. That's a fact, Jack.

The Sounds of Silence. We have to openly talk about these issues on all our campuses, with our community leaders, parents, business and government leaders and, most importantly, students. Waiting for the words of a prophet to be written on the subway wall to define our future is illusionary.

Tomorrow Never Knows. The future is uncertain, and change and ambiguity will likely be constants. We must nonetheless embrace the future of education and role of technology to guide our future rather than attempt to control it.

Getting Better (all the time). Education is an art and education is a science. We are making significant improvements in education at all levels. Combining the artistic and scientific mosaic of education is essential, not optional, with or without technology.

Experience is not what happens to you, it is what you do with what happens to you

—Aldous Huxley

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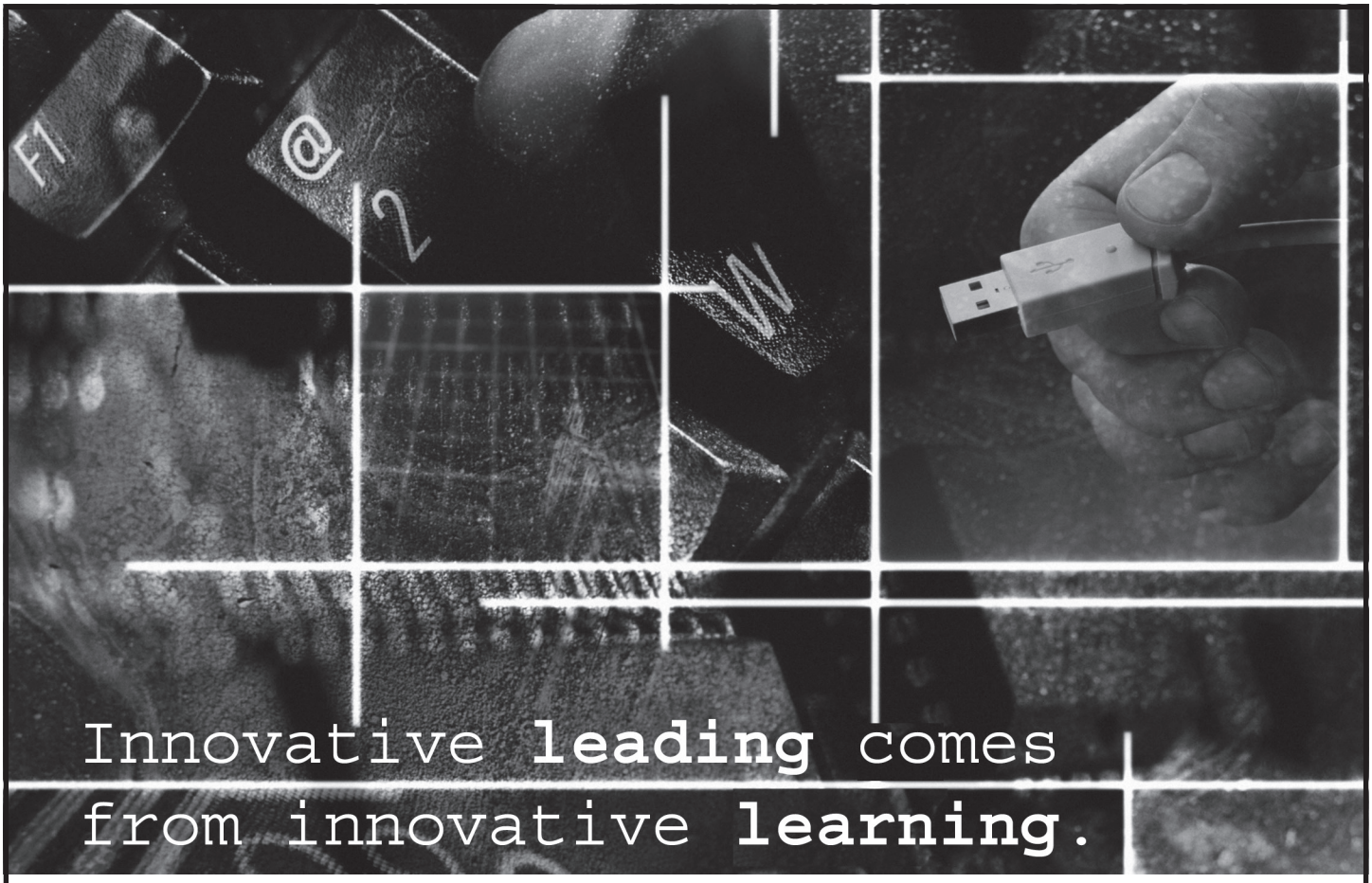

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Competitiveness and Distance Education

Michael Simonson

- *Distance learners are better students.*
- *Distance learners learn more.*
- *Distance education is cost effective.*
- *Distance education is more effective.*

This list could go on. These four statements are often said about the field of distance education, and are even sometimes believed, and that is unfortunate. It is very clear that these four ideas, and others similar to them, are not supported by sufficient evidence, in the opinion of most researchers who study distance education carefully. Certainly, in some instances better students take online courses, and in a few situations distance education students learn more. It may even be possible to show a cost benefit for instruction delivered at a distance for specific courses or programs, and effectiveness is so difficult to define that almost anything is effective to some one or some group. No, we should not try to build the reputation of distance teaching and learning on weakly supported claims which to the critic sound more like slogans than statements of fact.

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With that stated, the distance education field is very attractive to many students, including better ones. Students do learn and learn well in properly designed courses delivered at a distance. Cost effectiveness is a goal often reached, and effectiveness is a goal of every distance educator. However, supporters of the field should probably not make broadly sweeping generalizations that do not tell the whole story.

Recently, the Alliance for Higher Education Competitiveness issued a report that took a potentially more important position of advocacy for distance education—competitiveness. Their report, titled "Achieving Success in Internet-Supported Learning in Higher Education," was released in February 2005. It was summarized in the *Chronicle of Higher Education* by Dan Carnevale in the issue of February 4, 2005, on page A31.

While this report did not specifically talk about institutional competitiveness, the fact that the Alliance for Higher Education Competitiveness would issue a report such as this one is interesting. The idea of institutional competitiveness is not often discussed when advocates of the field try to explain the exponential growth of distance education. Competitiveness is the process of trying to obtain what others want, which in the case of higher education is students, reputation, prestige, and even market share.

Has distance education now reached the point where it produces in educational organizations a competitive advantage? Well now, this is an area we should explore.

There is an oft-repeated and difficult-to-substantiate research statement that, for any group of students, about three quarters prefer face-to-face instruction if given free choice, but three quarters of the same group demand to be permitted to learn at any time and in any place, since they do not have free choice. The organization that offers instruction—quality instruction—at a distance may possess a competitive advantage over other institutions. Competitiveness and competitive advantage works in business; why not education? This idea sounds promising; now someone needs to support research about this idea—perhaps the Alliance for Higher Education Competitiveness.

And finally, obtain a copy of the Alliance's report at http://www.a-hec.org/e-learning_study.html. It is interesting reading.