
Recommendations for Technologies in Distance Learning Program at Coastal Carolina University

Sarah D. Briggs
Technology in Education to Advance Learning
Coastal Carolina University

Conway, SC.
843-349-2517
sbriggs@coastal.edu

At Coastal Carolina University, a Distance Learning curriculum has recently been mandated for the entire University, with the objectives of boosting enrollment figures and to provide more robust student learning opportunities. With the directive to teach entirely online, the symptom of the specific problem includes addressing technological issues that come with teaching online. Examples include course set up and delivery, emulating the natural classroom environment, and connecting with, or reaching, students online.

This project explored possible technologies which are available for use in aiding in communication, presentation, and collaboration online, with regard to content delivery. A recommended set of technologies to aid in the delivery of a Distance Learning course has since been made available to instructors who will be teaching Distance Learning courses at Coastal Carolina University.

The question for research in this investigation was: What technologies that are both proven to be useful and are preferred by Coastal Carolina's student, faculty, and staff population can be used to facilitate a completely remote, Distance Learning class.

The consulting approach used for this research is of mixed methodology through archival data research, focus group research, and opinion questioner. All three methods addressed the use of technologies in the current state of the Distance Learning program at Coastal Carolina University. The goal of this research was to provide technology recommendations for a future program model.

The models for diagnostic processing in this organizational change project include feedback loops constructed from data obtained in preliminary meetings concerning the current use of technologies used with Distance Learning at Coastal Carolina University. Feedback from participants in the past was used to create topics for specific items for the opinion survey in this research.

Participants

Research participants were faculty, staff, and students currently affiliated with Coastal Carolina University. Research participants are faculty, staff, and students currently affiliated with Coastal Carolina University. Complete project participant numbers totaled 94 respondents, including 45 faculty, 24 staff, and 24 student responses. Of the 94 participants, 56 were male and 38 were female. Twenty respondents report being eighteen to twenty-five years old (n=20), twenty report

being twenty-six to thirty-seven (n=20), twenty-two respondents are thirty eight to forty five years old (n=22), twelve respondents are forty-six to fifty-five years old (n=12), and one participant reported being over sixty six years old (n=1). Seventy one project participants report either participating in or conducting an online course in the past (n=71), as the remaining twenty-three have not (n=23). When participants were asked their comfort level “using the Internet and World Wide Web”, eighty-one participants responded that they are “very comfortable” (n=81), twelve respondents report being “somewhat comfortable” (n=12), one participant responded as being “not at all comfortable” (n=1).

Approach

The consulting approach used for this research was of mixed methodology survey research through archival data research, focus group research, and opinion survey questioner (Stringer, p. 177).

Measures

The research question is *What technologies would work best to facilitate a distance learning program at Coastal Carolina University?* The researcher broke this down into question sets, categorized by respondent opinion on ease of use, availability, accessibility, and preference on various technologies that are suggested for use in distance learning functions.

The qualitative measure of data used in this research methodology include archival data interpretation.

The quantitative data collection method includes a survey (see Appendix A) administered to Coastal Carolina University faculty, staff, and students regarding preferred technologies to be used in Distance Learning courses. The online opinion survey addresses the use of specific technologies to be used in the Distance Learning curriculum at Coastal Carolina University. The survey consists of 14 items for which respondents were asked to rate their level of comfort or agreement regarding the potential use of each technology to be used in a Distance Learning course at Coastal Carolina. Items were scaled by count of response for each option. Final tallies were then ranked, highest (most responses), to lowest (least responses).

The survey was constructed into three portions; the first addressing technology communication medium- the second addressing specific technologies for each medium, and the third section available for open comments from survey respondents.

Items on the first portion the survey were grouped under communication medium preferences, supplemental material, and number of resources preferred. Specific items in this portion include; “Have you ever taken or conducted a Distance Learning Course before (entirely online)?” and “What is your comfort level using the Internet and World Wide Web?”

The second portion of the online survey addresses specific technologies used to facilitate the tasks of communication, collaboration, and presentation in the online environment. Respondents were asked to select each specific item of technology (such as Twitter, Facebook, and e-mail) as it applies to the functions of communication, collaboration, or presentation, online; that they would feel comfortable using. Specific items included statements such as: “To communicate with instructor and/ or classmates I prefer, (a)Real time chat, Instant messaging programs (such

as AOL Instant Messenger), (b) Social Networking sites (such as Facebook, MySpace, LinkedIn), (c) University Email (CCU Webmail), (d) Using webconferencing software with webcams (such as Skype), (e) Text messaging (via cell phones) (to contact instructor), (f) Engaging in blog or online forum discussion, and (g) Using Tweet/ Twitter to communicate and present information; “I would feel comfortable taking a class that uses various technologies to aid online instruction: (a) Agree, or (b) Disagree.

The third portion of the survey included the prompt *Additional comments* for respondents to list open comments.

Procedures

The online opinion survey regarding the use of specific technologies to be used in the Distance Learning curriculum at Coastal was sent to faculty, students, and staff via email. The survey consists of 14 items for which respondents were asked to rate their level of comfort or agreement regarding the potential use of each technology to be used in a Distance Learning course at Coastal Carolina. Participants select the preferred option by clicking a checkbox next to the option on the screen.

Quantitative data from the online surveys which were administered were recorded by instance response to each question type and recorded on a spreadsheet by question. Total counts for each question were calculated, as well as mean, median and mode responses.

Assumptions and limitations of the study derive from the self-report method used in data collection, as participants were asked to gauge or determine their “own level of technology expertise as applied to each option”, regarding the various technology products and platforms which were offered. Some participants may have not known much about the product when answering, or do not understand the scope of the product. Ninety –seven percent (97%) of the survey participants rated themselves as “Comfortable using the Internet” on the survey, yet to what degree or scope they use it or how well they understand Internet navigation was not clarified. In addition, participants for the online survey were contacted via e-mail invitation. Those individuals who do not currently use the Internet or email were automatically discarded from the participant pool, thus limiting the study only to current Internet users.

Results, Goals, and Discussion

Between the archival data mining and survey responses, one trend which is clear is that our students, faculty, and staff are not convinced the current Blackboard course management system alone is adequate to facilitate the functions needed for a great online program. Students noted that they need more popular options, while faculty look for a robust platform or means to host course artifacts and discussions. Survey results confirmed initial findings of focus group discussions concerning the need to bring in new and different technologies to host online courses.

There was a consensus among faculty and students alike that the delivery method should be interactive, as this is the only way, as one participant commented, “to emulate the discussion in the natural classroom environment.” Research also is in accordance with this comment, noting that the correspondence method of course design is outdated (Moller et al., 2008). Moller et al.

(2008), the authors reiterate that technologies are a natural part of the equation when considering an interactive online model.

Participants from the online survey noted that they do generally prefer to use various or multiple mediums in addition to the current Blackboard CE learning system. Forty-eight respondents prefer to use multiple resources, as only 16 respondents noted that they prefer to use only one technology, Blackboard ($n = 48$ multiple, $n = 16$ only Bb). Participant selection of various technologies to communicate, collaborate, and present in the virtual classroom were ranked by preference selection instance. Using the Coastal Carolina University e-mail system to communicate had the most instances of preference ($n = 55$), followed by real time chat services such as AOL instant messenger ($n = 48$), blog, online forums ($n = 42$), social networking sites such as Facebook and MySpace ($n = 32$), web conferencing software such as Skype ($n = 31$), using cell phone text messaging for contact ($n = 24$), and using the online Twitter networking application ($n = 14$).

As far as the use of supplemental or additional materials to use for presentation, users rated the following, listed by instance of preference. Users rated *additional online resources* (additional web pages) ($n = 62$), followed by *Library's online resources* ($n = 51$), *textbook website* ($n = 50$), and *epacks or online workbooks* ($n = 50$).

Discussion

Table 1 presents the technologies suggested for use by this research. The first column on the matrix displays a specific problem or limitation with the current Blackboard CE learning system in relation to classroom learning activities suggested by research participants. The second column on the matrix then presents a specific technology recommended by the researcher which can be used to address the problem. The third column associates the category(s) which the technology falls into (communication, collaboration, presentation), and is followed by examples of learning activities in the virtual classroom found in the fourth column.

The current course management system, Blackboard CE, has the capabilities to communicate both synchronously (real-time) and asynchronously (not real-time) one-on-one. Blackboard's internal discussion board and blog functions can complete these communication tasks respectively. However, during focus group discussion, students expressed the belief that they would benefit instructionally from being able to see their instructor and classmates at times.

Students and faculty alike agreed that being able to "see" classmates and instructor would help them "connect in the online classroom. Research by Dzakiria (2008) supports this, noting that a sense of personality can come through better when backed by visual. Using videoconferencing (Skype) technology would allow for students to see the class instructor, the instructor see the class, and students see one another. It emulates the natural classroom environment in that there are multiple learners in one location (virtually).

Table 1.
 Table 1 Suggested Technologies

Limitation	Suggested technology	Functions	Specific learning activities
Students cannot see each other or instructor online	Skype web conferencing	Communication (visual, audio)	Peer-to-peer conference, student-instructor meeting
Students cannot meet a group online and do group work	Skype with doc sharing plug-in	Collaboration (group work)	Sharing documents, document markup, see one another to meet and discuss
Students cannot easily and instantly access instructor/ need for more prompt communication, must be logged on Blackboard to use Blackboard chat function	Instant Messenger	Communication	Peer-to-peer conference, group conference, and collaboration
Need for all communication to come from one source. Must be logged onto Blackboard to get Blackboard e-mail	University e-mail for private and prompt communication	Communication	Class announcements, communication
Need way to easily access and share supplemental websites. Blackboard web links list does not allow for student postings.	Blackboard Scholar, a social bookmarking site that can link from Blackboard	Presentation/ collaboration	Students can share each other's web resources or important bookmarked library pages (group work), learning community

Notes from archival data mining also indicate that students express they “need a way to connect instantly and simultaneously” with instructors.

The Blackboard CE course management system has instant messaging service which allows for synchronous, real-time chatting (typing) computer- to- computer. A concern expressed by students was that they “never were online on Blackboard, so could not find instructors easily”. Students suggested that instructors created AOL Instant Messenger accounts to use. Many of Coastal Carolina’s students report using the service on a regular basis, as 48 respondents reported that they would prefer to use this service for real-time communication.

The last complaint addressed is regarding the “sharing” of external learning resources (such as other websites). On the online surveys, using additional external websites to aid in instruction had the highest rating (79%). Students conveyed that having all materials available and easily accessible was also important. The researcher suggests using Blackboard as a main portal to access all resources.

Recommendations

Recommendations from this research included (a) instructors hosting their basic course materials on Blackboard, (b) using other means to provide just in time chat services, (c) and linking to other learning and reference resources online. Students in this research study indicated that they prefer having all materials accessible through one portal. In addition, just-in-time chat services (real-time, synchronous communication) can be facilitated by using either Facebook chat services, or America Online Instant messenger. Both services can be accessed through a direct Blackboard link. Students in this research indicated they prefer use of these services to communicate with instructors in real-time, as they are both mediums that are already heavily used by our student population at Coastal Carolina University. Lastly, any additional resources used in class (such as online workbooks, other websites, etc.) should be linked to from within the Blackboard course module. Instructors can post links to these additional resources from the stable and secure Blackboard Learning environment.

The template for course design, along with summary of findings from this research were presented to the Distance Learning Advisory Committee during August 2009 and adopted in December 2009. The recommendations are presented to faculty as a principle of good practice for general distance learning course design at Coastal Carolina University in distance learning instructor training sessions.

References

- Coastal Carolina University. (2009). *Quick facts*. Retrieved from <http://www.coastal.edu/about/quickfacts.html>
- Dzakiria, H. (2008, June). Students' accounts of the need for continuous support in a distance learning programme. *Open Learning*, 23(2), 103–111.
- Hoic-Bozic, N., Mornar, V., & Boticki, I. (2009, February). A blended learning approach to course design and implementation. *IEEE Transactions on Education*, 52(1), 19–30.
- Ke, F., & Hoadley, C. (2009, August). Evaluating online learning communities. *Educational Technology Research & Development*, 57(4), 487–510.
- Moller, L., Forshay, W., & Huett, J. (2008, May). The evolution of distance education: Implications for instructional design on the potential of the web. *TechTrends: Linking Research & Practice to Improve Learning*, 52(3), 70–75.