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Final Report and Digital Prototype Assignment

Digital Prototype

The digital prototype for this project is hosted at www.coursesites.com as Intro to Blackboard 9.1 Electronic Workshop (PURDUE_HKeier_EDCI569).

Project Description (from the Paper Prototype Assignment)
The Blackboard 9.1 Electronic Workshop is designed and implemented as a self-paced interactive Blackboard course that will teach faculty and staff the basic techniques for creating online courses. Each of the topics included in the workshop will be presented as a standalone module, in which the participant will read an overview, review the steps required to accomplish the given task within Blackboard, watch a demonstration video or review a tutorial produced by Blackboard, engage in an activity to enhance later recall and to connect the topic to use in a live course, and then practice the technique in a development course made available for their use. Additionally, Discussion Boards will be made available for workshop participants to interact with colleagues also completing the workshop.

Each participant will be provided with a development course for practice. The development course will also be later used for assessment at the participant's request. Participants requesting course reviews who successfully complete each module assignment will be awarded a Certificate of Completion. Members of the Blackboard Support Group will be enrolled in the development courses in order to serve as mock students, provide assistance if needed, to monitor participant progress, and to perform the assessment of participant learning. Blackboard was selected as the delivery medium for the Electronic Workshop to provide a realistic context for learning and to reinforce the instruction.

The current project is to design and build a Digital Prototype of the Electronic Workshop.

Design Process

Overview
The design process began with deciding upon a topic, and I chose to create an Introduction to Blackboard Electronic Workshop because it addresses a growing need at the institution where I am Blackboard Administrator (I also oversee faculty training). Our courses are increasingly taught by adjuncts who are not available to attend in-person workshops, and with only one trainer on staff, it is difficult to offer training at night and on weekends. Additionally, the college is increasing its online course offerings and courses offered in partnership with other institutions (such as the United States Military Academy at West Point), resulting in a growing number of

faculty who need to be trained on Blackboard, a number of whom do not live locally. The project was a challenge in that I had not created electronic instruction before and that the workshop needed to be created so that the learner could complete it with little in-person contact.

Key Decisions

Key decisions in the project included whether to create the workshop within Blackboard or to attempt some other hosting solution; whether to use only standard, default Blackboard tools or to incorporate additional software; and the breadth of instructional content.

In the case of a hosting and design platform, I decided to use Coursesites.com for a few reasons. Most importantly, Coursesites is the free version of Blackboard 9.1. Creating the workshop on Coursesites allowed me to mirror the post-instruction, real world performance context (faculty creating live courses). Offering the workshop within the actual context faculty will build their own courses should reinforce learning and enhance later recall through modeling the behaviors I hope the faculty will acquire as a result of the instruction. Additionally, creating the workshop in Coursesites allows me to import the workshop into Blackboard. Lastly, Coursesites is free and can be accessed by anyone with an account, so providing access to the workshop during the development process was not an issue.

Matching the eventual performance context was also why I decided to only use default tools. Although third party vendor applications such as SoftChalk and Respondus are available on Coursesites, they are not licensed by John Jay and will not be available for the faculty to use. To employ them in the workshop could distract from learning and the actual techniques the faculty would later use in building their own courses. I did not want to expose the faculty to tools they wouldn't later have.

While the amount of content was influenced by the project directions to include at least eight learning objectives, decisions regarding what content to include in the electronic workshop were driven by what could be considered as basic elements in an online course. I felt it was important to err on the side of inclusiveness. I recognize that the electronic workshop may be completed by faculty who want to use Blackboard to enhance in-person classes and as such may not employ all of the techniques included in the workshop. Faculty teaching in-person classes may not want to use Discussion Boards or Assignments, for example. However, faculty can most effectively make choices regarding what to include in their Blackboard courses when they know what the possibilities are. It has been my experience that faculty use only a fraction of Blackboard because they do not fully understand what it can do. Additionally, the electronic workshop format allowed more content to be included than is feasible for in-person workshops due to time constraints and learner fatigue. When I have offered equivalent content in an in-person workshop, the workshop would run to three hours or more. Faculty did not often have such a long stretch of time available and it was a tiring experience for learner and facilitator alike. It

may be the case that the opportunity to complete the instruction electronically and at their own pace may encourage more faculty to participate in the training.

Changes Made During Build Process

Based on the feedback from the Learning Objectives Assignment, the objective statements were revised in the Paper Prototype so that the conditions better served the objectives. Revising the objectives also allowed me to see that creating assignments had been overlooked in the Learning Objectives Assignment. As the general aim of the instruction is to provide faculty and staff with the basic techniques they need to know in order to build a Blackboard course, including a module for assignments was necessary. In addition, when constructing the Paper Prototype, objectives #1 (edit mode) and #2 (edit the course menu) were combined to form one course environment module. It did not seem that either objective was sufficiently long or detailed that they required standalone instruction, and the topics were closely related. Combining the two learning objectives into a single module also lent some balance to the length of the individual modules.

When building the Digital Prototype, I did not make significant changes from the Paper Prototype. As per the feedback received on the Paper Prototype, images were inserted into the Step-by-Step content items of each module. Seeing the images inserted into the instructional content inspired the idea to add topic-specific Quick Guides to each of the Step-by-Step content items. The Quick Guides are brief 1-3 page Microsoft Word documents that faculty can print out or download for later use. The Quick Guides were then used to create a comprehensive workshop Handbook covering the techniques contained in the instructional modules, mirroring how a handout would be offered for an in-person workshop. The Handbook was added to the Digital Prototype as a content item in the About this Workshop module. The Handbook is not included as required reading but for the convenience of the workshop participant. However, the Quick Guides and Handbook are reusable learning objects that can be repurposed, such as on the school Distance Learning website currently under construction.

Minor wording changes were made when transferring the content from the Paper Prototype to the Digital Prototype build process to improve the readability of the content and correct some awkward phrasing. One such example is in the About this Workshop Overview content item. In the Paper Prototype, the last sentence of the first paragraph read “It is assumed that workshop participants have basic computer skills such as use of the Microsoft Office Suite and standard web browsers, and can use email.” In the Digital Prototype build of the workshop, this was edited to read “knowledge of Microsoft Office and standard web browsers....”

Feedback from reviewers

Course invitations were sent to a variety of classmates and faculty members at John Jay College. In addition, the workshop was previewed for staff colleagues at John Jay in an ad hoc focus group format. The feedback was consistently positive.

Feedback from those who reviewed the course highlighted the ease of navigation and the way modules logically built upon each other. The content within the modules was characterized as clear and concise, and the standardized format was thought to make the modules internally easy to navigate and while simultaneously reducing the potential for distraction. The sequence of activities within the modules were noted for reinforcing the instructional content, instilling confidence in the learner, and appealing to multiple learning styles. The numbering with visuals used for the Step-by-Step content items was well received. The assessments were mentioned as being consistent with the learning objectives, and the content was thought to be relevant to the skills the learners are asked to perform. The faculty reviewer summarized her comments thusly, "An instructor working on her own course would be able to immediately perform the same actions in her class after practicing with an assignment."

Notably, the Think About It and Idea Exchange Discussion Board were specifically mentioned as standouts for encouraging faculty to consider innovative ways the tools could be used for instruction and for collaboration by the reviewers who offered detailed feedback. Specifically, the faculty reviewer wrote:

> "Perhaps the best elements of each lesson are the Think About It box and the Idea Exchange. One of the most frustrating things students complain about is the great disparity in the content and quality of the courses they take online. In departments where people don't routinely discuss distance learning it's common to encounter instructors who work in isolation. They often create the most rudimentary courses because they have no idea of Blackboard's potential. On the other hand, there are people doing groundbreaking work on Blackboard and no one outside of their department knows about it. The Think About It box and the Idea Exchange promote creativity and innovation beyond departmental borders. That not only helps the instructors—ultimately it helps the students. Brilliant!" (J.-L. Peters, personal communication, June 12, 2012).

The feedback, however, did also provide directions for further improvements. Both classmates who examined the workshop and the faculty reviewer mentioned the use of the workshop as a "just-in-time" resource that should remain available indefinitely, as it was more accessible than a manual and would be a resource faculty could return to in order to refresh skills or investigate new approaches to course design. However, this would require a time investment monitoring the Idea Exchange that would have to be carefully considered. Additionally, a classmate's feedback questioned the assessment process, should participation in the workshop grow to include a large

number of learners. While I would not be the only person associated with the workshop should it be adopted at John Jay, this is a very valid point. At present, the Blackboard Support Group is just my assistant and myself. I believe that should the workshop be adopted in its current format (where development courses are examined and Certificate of Completion is issued) more reviewers will be needed and a process to manage the review process will need to be established. One interesting possibility might be to build a community of practice in which faculty serve as reviewers for fellow faculty and take a leadership role in monitoring the Idea Exchange. We might be able to recruit faculty reviewers and Idea Exchange leaders from early workshop participants.

Changes Made in Response to Formative Evaluation

No changes were made in response to the formative evaluation. However, as noted previously, images were inserted into the Step-by-Step content items in each module, which led to the creation of a Workshop Handout and topic-specific Quick Guides.

Lessons Learned

One thing that really worked well was the site map portion of the Paper Prototype. It brought clarity to the project, in both completing the Paper Prototype Assignment and in turn building the Digital Prototype. Although it appears as section 6 of the Paper Prototype, the site map was actually one of the first (if not the first) section I completed. The site map enabled me to create the storyboards I needed (I could see how sections were the same and differed), what content needed to be written, and how far down learners would need to drill down through to get to the instructional content. But most importantly, I was able to use the completed site map as a checklist of sorts for the whole project. It organized my thoughts, kept me on task, and enabled me to see the workshop as a whole rather than individual, disconnected pieces of content. The site map is a technique I will absolutely use again.

I believe that receiving feedback from only one of the two faculty members I asked illustrates how the academic calendar impacts course development. In the future, when developing material outside of the courses I'm taking as a student, I would provide a longer time for feedback, particularly since course development in higher education often takes place during semester breaks. Often, during semester breaks, less people are available to review the course or potential reviewers are engaged in other labor intensive projects in the absence of classes. In the case of the two faculty members I asked for feedback, one was unfortunately traveling this past week and didn't offer the feedback despite assurances to the contrary.

However, I was surprised by the faculty reviewer's response to the Think About It content item and the Idea Exchanges. The particular faculty member was asked for feedback because she is a leading user of Blackboard on campus. I felt that if something was missing from the course, Professor Peters would be able to find it. While I value and am flattered by the feedback, I believe the Idea Exchange as she advocates it be used must be considered carefully as I noted above. Additionally, I believe I need to get feedback on the workshop from a less experienced Blackboard user. Professor Peters' reactions to the workshop are influenced by her enthusiasm for Blackboard, and as an experienced user, her training needs and what she would get out of training are very different from an entry-level user. I would still ask for an experienced user's feedback in the future because it is informative in its own way, but it needs to be balanced by feedback by someone who lacks that same experience.

Implications and Recommendations

Throughout this report I have mentioned things that I would do differently, and those would naturally inform the recommendations I would make to other instructional designers. I would have to add that instructional designers should be to build into their projects generous time for receiving feedback from evaluators, and be prepared to follow up with the reviewers when it isn't received. In general, I think that any time estimates developed should be structured to include unanticipated setbacks and delays. I believe it's better to allot more time than is needed

than not enough, and it always seems to be the case that a task will take longer than you think it will. Also, having a set project plan with due dates for subprojects is helpful for completing the project on time (in some ways, our course served this purpose, with the assignments we had to do along the way).

Appendix 1: Revised Objective Statements (from Paper Prototype Assignment)

This project will draw upon the learning objectives format as outlined by Mager (1997).

1. Given a Blackboard development course, the participant will correctly activate the Edit Mode by clicking the Edit Mode button and selecting the "ON" option, according to the example given in the learning module.

Performance: Be able to activate Edit Mode
Condition: Given a Blackboard development course
Criteria: Participant is able to edit the course

2. Given an editable Blackboard course menu, the participant is able to edit the course menu by correctly adding and renaming an item on the course menu.

Performance: Be able to edit the menu
Condition: Given an editable Blackboard course menu
Criteria: Correctly add an item and rename an item on the menu

3. Given an Adobe PDF document, a Word file, and a PowerPoint presentation, the participant will successfully create course Content Items within a course Content Area so that the content and files may be viewed by students in the course.

Performance: Create course content items with attached files within a course Content Area
Condition: Given an Adobe PDF document, a Word file, and a PowerPoint presentation
Criteria: Content and files are viewable by students in the course

4. Given sample search keywords, the participant will successfully use the Mashup Tool to locate, select, and incorporate a YouTube video into the course so that the video may be viewed by students in the course.

Performance: Locate, select, and incorporate a YouTube video into the course
Condition: Given sample search keywords
Criteria: Video is viewable by students

5. Given a sample assignment topic, the participant will successfully create an Assignment that can be completed by students in the course.

Performance: Create an Assignment that requires a student submission
Condition: Given a sample assignment topic

Criteria: Assignment is viewable by student

6. Given a Discussion Board topic, the participant will create a Discussion Board forum that includes a main topic post so that the forum may be viewed by students in the course.

Performance: Create a Discussion Board forum that includes a main topic post
Condition: Given a Discussion Board topic
Criteria: Forum is viewable by students

7. Given the Send Email tool, the participant will successfully use the tool to send email to students.

Performance: Use the Email tool to send email to students
Condition: Given the Send Email tool
Criteria: Email is received by students

8. Given a sample Course Announcement, the participant will successfully post a Course Announcement and send the Announcement out to students via email.

Performance: Post an Announcement to the course
Condition: Given a sample Course Announcement
Criteria: Announcement is viewable by students and is received via email

9. Given a Course Properties selection screen, the participant will correctly select the Course Availability course setting so that the course is accessible to students.

Performance: Select the Course availability setting
Condition: Given a Course Properties selection screen
Criteria: Course is available on Blackboard

Pre-requisites: Pre-instruction prerequisites include the ability to log into an external website or server given a log-in link, basic computer skills such as clicking “Browse” to select or open files from a hard drive or storage volume, the ability to follow hyperlinks, the ability to drag and drop an item, the ability to open a secondary menu by clicking on an arrow icon, clicking labeled buttons in a web environment, and using controls to start and stop an embedded video labeled with standard play, pause, and stop icons.

References

Mager, R.F. (1997). Preparing instructional objectives. (3rd ed.). Belmont, CA: David S. Lake.

Merrill, D.M. (2001). Five-star design rating. Utah State University, Department of Instructional Technology.

Appendix 1: Merrill's Five Star Instructional Design Rating, Digital Prototype

The following is based on:
Merrill, D.M. (2001). Five-star design rating . Utah State University, Department of Instructional Technology.

Does the instruction teach kinds-of, how-to or what-happens?
The Electronic Workshop is an example of "how-to" learning.

Is the instructional architecture tutorial or experiential?
The workshop includes both tutorial and experiential content. Learners are asked to read through tutorial materials and then apply the techniques detailed in the instruction.

Is the courseware TELL-&-ASK (T&A) instruction?
The instruction as designed is not tell and ask instruction. Although there is tutorial content the assessment activity requires learners to demonstrate constructive and creative use of the material.

1. Is the courseware presented in the context of real world problems?	Yes
a. Does the courseware show learners the task they will be able to do or the problem they will be able to solve as a result of completing a module or course?	Yes
b. Are students engaged at the problem or task level not just the operation or action levels?	Yes
c. Does the courseware involve a progression of problems rather than a single problem?	Yes
2. Does the courseware attempt to activate relevant prior knowledge or experience?	Yes
	Yes
a. Does the courseware direct learners to recall, relate, describe, or apply knowledge from relevant past experience that can be used as a foundation for new knowledge?	Yes
b. Does the courseware provide relevant experience that can be used as a foundation for the new knowledge?	Yes
c. If learners already know some of the content are they given an opportunity to demonstrate their previously acquired knowledge or skill.	
3. Does the courseware demonstrate (show examples) of what is to be learned rather than merely tell information about what is to be learned?	Yes
a. Are the demonstrations (examples) consistent with the content being taught?	
(1) Examples and non-examples for concepts?	Yes (1)
(2) Demonstrations for procedures?	Yes
(3) Visualizations for processes?	Yes
(4) Modeling for behavior?	Yes

b. Are at least some of the following learner guidance techniques employed?	
(1) Learners are directed to relevant information?	Yes
(2) Multiple representations are used for the demonstrations?	Yes
(3) Multiple demonstrations are explicitly compared?	No (2)
c. Is media relevant to the content and used to enhance learning?	Yes
4. Do learners have an opportunity to practice and apply their newly acquired knowledge or skill?	Yes
a. Are the application (practice) and the posttest consistent with the stated or implied objectives?	Yes
(1) Information-about practice requires learners to recall or recognize information.	Yes
(2) Parts-of practice requires the learners to locate, name, and/or describe each part.	Yes
(3) Kinds-of practice requires learners to identify new examples of each kind.	Yes
(4) How-to practice requires learners to do the procedure.	Yes
(5) What-happens practice requires learners to predict a consequence of a process given conditions, or to find faulted conditions given an unexpected consequence.	Yes
b. Does the courseware require learners to use new knowledge or skill to solve a varied sequence of problems and do learners receive corrective feedback on their performance?	Yes Yes/No
c. In most application or practice activities, are learners able to access context sensitive help or guidance when having difficulty with the instructional materials? Is this coaching gradually diminished as the instruction progresses?	(3)
5. Does the courseware provide techniques that encourage learners to integrate (transfer) the new knowledge or skill into their everyday life?	Yes
a. Does the courseware provide an opportunity for learners to publicly demonstrate their new knowledge or skill?	Yes
b. Does the courseware provide an opportunity for learners to reflect-on, discuss, and defend their new knowledge or skill?	Yes
c. Does the courseware provide an opportunity for learners to create, invent, or explore new and personal ways to use their new knowledge or skill?	Yes

Notes:

(1) Non-examples are not appropriate to the current instruction.

(2) Multiple demonstrations are provided via text with corresponding images and videos. Additionally, the text within the lesson was used to create print handouts the learners could download for their own convenience. No explicit comparisons were made because the techniques in each demonstration were the same.

(4) Help is offered throughout the workshop, but it is not reduced as training advances. Assistance is offered in the same manner for each module.