



ONLINE PROTOTYPE LESSON
USABILITY TESTING PLAN

FOR

*FOUNDATIONS OF FORMATIVE
RESEARCH METHODOLOGY*

APRIL 2008

EME7634 – ADVANCED INSTRUCTIONAL DESIGN

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Introduction

This document defines the strategy for usability testing of a prototype online learning lesson for Dr. Hirumi's Advanced Instructional Design course at UCF. The prototype lesson is in development by The Team (i.e., George Bradford, Taryn Hess, and Damon Regan), and is titled, "Foundations of Formative Research Methodology" (hereafter referred to as "Online Learning Lesson"). This document defines the objectives and plan for implementing usability testing, including a schedule for completion.

Objectives

A key objective of the Online Learning Lesson usability testing is to gain concurrence from users that the lesson will satisfactorily achieve its design intent. A secondary objective is to explore an alternative lesson design based on Schwarz, Lin, Brophy, & Bransford's *Flexibly Adaptive Instructional Designs* (1999).

Scope

The scope of usability testing for the Online Learning Lesson is limited to testing the Web-based lesson, its interface, functionality, and critical dimensions of instructional design: objectives, assessments, and instructional strategies.

Testing Design

Usability Testing Team

The usability testing team will be drawn from the Course Development and Web Services team, as well as from graduate students within the doctoral program in education. In addition, one expert within the field of instructional technology has agreed to participate in this evaluation plan. Thus, there will be one expert and three to four instructional design testers. Expert and instructional design testers are defined by the degree of experience with their academic level of achievement, experience within the field of instructional design, and experience with the lesson topic.

If problems are identified in the first stage testing, The Team will determine if additional testing is needed on those specific pieces prior to completion of that test stage, or alternatively, that further testing can occur during subsequent phases. If further testing is needed during the first stage, new testers will be drawn from the above groups.

Methodology

The information technology industry typically employs one or more, or even a mix of, from the four standard methods (see table 1: Usability Evaluation Methods) to evaluate user interfaces. The table below (Weiss, 1993) presents each methodology with a brief description.

Table 1: Usability Evaluation Methods

Method	How it works
Explicit criteria	A reviewer critiques the interface using a checklist that contains distinct, well-understood attributes of a good user interface.
Heuristic evaluation	A group of reviewers look at a system and try to come up with an opinion about what is good or bad about the interface.
Usability testing	An expert tester uses specialized recording equipment to study a test population of users operating the application in a controlled setting, such as a usability lab.
Cognitive walkthroughs	A reviewer walks users through each step of each procedure required to run an application, keeping detailed records of each case where there is a discrepancy between how the user thought the application should work and how it actually worked.

Usability Method Recommendation

For the purpose of evaluating the usability of the online lesson prototype, The Team recommends using the explicit criteria method for the following reasons:

- Time. The critical path to the delivery date does not afford an extended form of usability testing. Testing must be designed to provide feedback on the usability of the lesson without compromising the project schedule. The feedback will only be used to evaluate usability of a prototype, not a final lesson. The explicit criteria evaluation methodology will not negatively impact the project schedule and will provide sufficient feedback.
- Cost. The explicit criteria method does not require the procurement of new equipment, or the employment of expert testers. There is no associated training cost to run the evaluation.
- Simplicity. The explicit criteria method permits individuals who are not interface experts to completely critique an interface using distinct, well-understood attributes. Reviewer feedback will be more easily translated into a redesign plan. The method presents fewer steps and fewer dependencies.

The method includes a reviewer Online Lesson Usability Survey and reviewer Review by Context Instructions (see appendices). The items within the Usability Survey are derived from two sources: Elaine Weiss, author of “Making Computers People-Literate” (1993), and Robert Hays, author of “Quality Evaluation Tool for Computer- and Web-Delivered Instruction” (2005). The Review by Context Instructions is sufficiently detailed to permit different persons proctoring different sessions to provide context by which reviewers interact with the lesson. The Proctor will be a member of The Team. The proposed site of the review is at the reviewer’s office workspace.

Steps of the evaluation analysis follow:

1. Reviewer feedback will be broken into two parts - a) information derived from Likert scales, and b) information derived from reviewer comments (i.e., reviewer responses to open-ended questions).
2. Feedback information is then organized as discrete redesign items and recommendations will be made based on ranked redesign item complexity.
3. Interface redesign of agreed upon simple items (i.e., items not requiring more than 30 minutes to make) will be made.
4. Instructional redesign of agreed upon simple items (i.e., items not requiring complex changes to the lesson design that are based on the Flexibly Adaptive Instructional Design guidelines) will be considered.
5. Show stoppers will be identified and presented and recommendations for next steps will be identified.

Schedule and Deadlines

For First Stage testing, schedule follows (table 2: Usability Testing Schedule). For other testing, a schedule and will be provided when application availability for testing dates are firm.

Table 2: Usability Testing Schedule

Dates	Items
April 6	<ul style="list-style-type: none"> • Usability Test Plan Complete • Instructional Content incorporated into the Online Lesson
April 7	<ul style="list-style-type: none"> • Acceptance of usability test plan
April 7	<ul style="list-style-type: none"> • Online Lesson finalized for usability testing
April 7	<ul style="list-style-type: none"> • Online Lesson loaded onto host http server
April 8-9	<ul style="list-style-type: none"> • Review of Online Lesson carried out at Reviewer work desks • Feedback forms returned to the Team for analysis
April 10-11	<ul style="list-style-type: none"> • Analysis of usability test complete • Analysis incorporated into report • Agreed upon changes are made to the Online Lesson
April 13	<ul style="list-style-type: none"> • Written report of evaluation delivered to project management team • Verbal report of evaluation findings presented to senior instructional designer and/or faculty member (show stoppers are identified) • Next steps identified with senior instructional designer and/or faculty member

Instructional Unit – Results of Lesson Prototype Evaluation

Results summary

The analysis of the evaluator’s survey results was carried out by developing and employing a custom made spreadsheet in Microsoft’s Excel software. The tool is designed to provide a relatively easy approach to identifying trends, as well as for conducting item analyses.

Overall, the lesson prototype received an 81% (table 3: Overall Score by Originator, % out of 100) on a scoring solution based on Likert scaled survey questions. The score represents three experienced instructional designers and one expert reviewer. The degree of variation in the responses contributes to an overall lowering of the score.

Table 3: Overall Score by Originator, % out of 100

Origination	Score Value	Score %
Evaluator 1	325	81%
Evaluator 2	329	82%
Evaluator 3	289	72%
Evaluator 4	354	89%
Overall	1600	81.1%

An item analysis (table 4: Descriptive Analysis of Online Lesson Design Elements) produced the following results as examined by design focus area (note: the maximum score possible in either the M or A columns is 5, which reflects evaluators’ consensus of being well-designed):

Table 4: Descriptive Analysis of Online Lesson Design Elements

Design Target	M*	A**	SD***
Big Picture	4	3.9	1.269
Presentation Interface	4	3.6	1.246
Navigation Interface	5	4.4	1.096
Explanation Interface	5	4.1	0.879
Instructional Objectives	5	4.1	0.879
Instructional Strategies	5	4.1	1.423
Assessment Strategies	5	4.3	1.102
Curricular Alignment	5	4.42	0.881
Selection & Use of Media	4	3.92	1.176
Appropriateness to Target Audience	5	4.42	0.776
Usability	4	3.92	1.178
Evidence of Research	5	4.63	0.744

* Mode. ** Average. *** Standard Deviation.

For this analysis, the Mode is used to provide insight into the perspective of the evaluator’s opinion on a survey question item. While most often the mode calculation is ignored in statistical analyses, in cases such as interface or design issues amongst near-experts and experts, the calculation reflects a “majority rules” perspective, which is quite useful in identifying trends to improve design issues.

However, the mode calculation can have issues when the sample size is less than the range of possible values an item can be, and it will result in an error.

To mitigate this issue, the calculation formula was set that if the result is an error, the median will be calculated. The median calculation generates a “middle value,” which is a compromise to a majority rule approach, but it is sufficient to note the evaluator’s “vote” on a survey’s item. The average is also calculated to provide perspective on the difference between what the “majority rules” is on a particular item – this calculation is an indication that the range of scores is sufficient to warrant further investigation into the item, or to the survey instrument itself. To further support that analysis perspective, the standard deviation is included.

Another interesting analysis is possible with the data and the analysis tool’s range of features, but remains beyond the scope of the present analysis, by examining the differences on particular survey items by sorting on level of experience within the field. Evaluators with higher academic achievement and experience within the field of instructional technology seem more closely aligned, while different from the experienced instructional designers with less academic achievement and less field experience. Those differences on each area of focus reflect an interesting change of perspective on design issues.

To identify potential “show stoppers” in the design of the lesson, The Team agreed that Likert survey items across respondents that resulted in a combined mode (or median) value below a threshold value of “3” would be reviewed for potential adjustments to the design. The following items (table 5: Identified Questions Below Acceptable Threshold) were identified by the evaluators as items that might require adjustment to the final lesson design:

Survey Item Nr.	Survey Question
4.04	Getting back to where you were is... [somewhat difficult]
6.09	Do you believe that the objectives are reasonable given the amount of time for the lesson?
7.24	Do you find that any of the “other” media (i.e., still images, video, and audio) needs to be removed or changed?

* Threshold test set to score values below 3.

To determine the extent of design adjustment that might be necessary, The Team also identified key responses to the survey instrument’s open-ended questions. The following list reflects the concerns the evaluators had with the design, and complete the perspective of the items that fell below the acceptable threshold as identified in table 5.

The evaluators wrote the following regarding navigation and the interface:

Person 1: Experienced Instructional Designer

“I clicked on a few items and was annoyed when they opened in same browser window and I had to use browser back button. I also wish there was more numbering along the way or a Table of Contents so I knew how far along I was in the module. I was afraid to go to the map on the first page in fear that I would not be able to get back to the page I was on.”

Person 2: Experienced Instructional Designer

“The color scheme was bland. It didn't take anything away from the presentation of the material but it didn't add anything either. The name Main Menu is somewhat misused.

I would recommend using a word like start lesson or begin.

I became confused on what to click on to proceed. My confusion came whether I should click on the images or text to proceed. I would recommend deleting the next link on the main menu page and just have them click on the start here graphic. On the Challenge1.htm page I would recommend having the different stages on the left hand side hyperlinked instead of clicking next.”

Person 3: Experienced Instructional Designer

“Though the initial color scheme of the course was soothing, it quickly became somewhat boring as it was mostly B/W, with shades of gray. Links were easy to see though.”

Person 1: Experienced Instructional Designer

“[Survey question – regarding how easy it is to navigate] 5.6... I would have liked numbers in the Navigation Flow Graphic that were also attached to the module files to again help me know where I was in the path.”

Person 1: Experienced Instructional Designer

“I couldn't get quiz/self assessment to submit but questions seemed OK. Rubric was good, but again would like it to open in a new window.

The evaluators wrote the following regarding the instructional objectives, strategies, or assessments:

Person 1: Experienced Instructional Designer

“[Survey question – regarding how easy it is to understand the instructions] 5.7... There seemed to be a lot of posting to a discussion board. I would like to have had the name of the discussion board as to know where to place my thoughts. There were several requests to post and I would hate to have all students dumping great thoughts into one pool that will overwhelm at least me as a student!”

“I guess my online learning experience sways feedback. I kind of got sick of the discussion/forum tool after weeks and weeks of course tasks sending me there to collaborate. Maybe mix up some of the activities and have them do something else.

I did like the videos! That broke up the reading!”

Person 2: Experienced Instructional Designer

“It took me awhile to find where the objectives were. I would recommend placing the objectives on the front page instead of the 3th or 4th page in.”

Person 3: Experienced Instructional Designer

“I found the course design to be understandable and concise for the most part. However, I found the Camtasia lecture to be difficult to follow and incorporate into my understanding due to variances in audio and general concept discussion. The graph of the subject/activities could not be seen on one screen, making it difficult to comprehend at first. Also, some of the type formats was difficult to read (a lot of bold on white background).”

Person 4: Expert – Tenured Professor of Educational Technology

The expert indicated that our feedback strategy (i.e., survey question # 7.18) is not enough. I verified that the expert means that this topic is sufficiently complex to require face-2-face sessions in addition to the online component.

Design changes

By combining the results from the threshold table and the narrative responses from the evaluators, the analysis left The Team with one concern (that is mitigated) and several recommendations.

One evaluator indicated some concern whether the scope of assignments was reasonable within the time frame indicated (i.e., one to two weeks). But an item review of responses indicates that the other evaluators, including the expert, do not find that the scope of the assignments to time frame is an issue. Therefore, the recommendation is to leave the assignment levels unchanged.

The evaluators also had several ideas regarding the navigation interface. The following is a short list of improvements that would likely satisfy the evaluators' concerns:

- All links within the lesson that lead to resources outside the lesson should open in a new window or tab within the web browser software (i.e., use the ‘target=”_blank”’ command within the ‘href’ syntax for that link).
- Regarding knowing where the student is within the scope of the entire lesson (as regards the navigation buttons), numbered labels for each step can be added to indicate where the user is within the full lesson's scope.
- Regarding the comment on the risk that the students will post everything into one discussion board, this concern can be addressed by adding a direction to post into a specific discussion board, which will be added later.
- Regarding the comment on where to start (i.e., from the Main page), the following adjustment might correct the potential confusion: Add a line of text in the narrative of the instruction that instructs the student to proceed by clicking “Start Here” or the “Next” button in the navigation pane.
- Regarding the comment on the “Main Menu” name being misused, the following adjustment is suggested: Change the name to “Start Lesson” or something similar.
- The expert's recommendation is that the final lesson design should be an "M" (i.e., “mixed” or “blended”) type course, so that face-2-face session(s) can fill in gaps to learner's understandings of the topic. This recommendation requires additional designer notes as to how the instructor might handle the topic in the face-2-face session(s).

The Team (George Bradford, Taryn Hess, and Damon Regan)

Appendices and references

1. Testing Instrument and Exercise
 - Purpose and Explanation of use
 - Usability Exercise with general and task instructions
 - Usability Survey (82 Likert scale items, plus 7 open-ended questions)
 - Survey Tool: Actual survey accompanies this document separately as it makes use of MS Word form features
 - Analysis Tool: Actual analysis tool accompanies this document separately
2. Observation Instructions & Note-Taking Guidelines (The Team elected this would not be necessary for this project)
3. Evaluators' commentary
4. References

Testing Instrument and Exercise

Purpose:

To assist The Team to tailor the design solution of the online course *Introduction to Formative Research*. The reviewer responses will help determine the best lesson design and provide an important part of user acceptance.

These survey questions break down into the following eight categories:

- **Experience** - to determine the level of experience selected participants (i.e., end-users) have with online learning lessons and with the subject matter.
- **The big picture** - to determine end-user perceptions of the lesson design at a high level.
- **Presentation interface** - to determine end-users perceptions of the look-and-feel of the solution interface.
- **Navigation interface** - to determine end-user perceptions of navigating through the system.
- **Explanation interface** - to determine end-user perceptions of explanatory content within the system.
- **Instructional objectives** – to determine end-user perceptions of the clarity, utility, and reasonableness of the instructional objectives.
- **Instructional strategies** – to determine end-user perceptions of the supporting text, activities, exercises, instructional sequence, learner feedback opportunities, and/or other media designed to support fulfillment of the instructional objectives.
- **Instructional assessments** – to determine end-user perceptions of the appropriateness, effectiveness, and relevance the assessment items have to the instructional objectives.

When:

Use the Online Learning Usability Survey to support the completion of an online lesson design prototype.

Processes:

- Identify the number and names of end-users to participate in this usability survey
- Document results from survey with faculty of record and instructional design team manager
- Identify changes to be made to the online solution and place in two categories: show stoppers and other modifications

Outputs:

- Analysis of the end-user responses
 - Assess the risk of adjusting the online development solution
-

Usability Exercise

Online Lesson Usability Test Exercise

General instructions Read through these instructions completely before proceeding.
When you have completed all tasks, complete the Online Course Usability Survey.

Task instructions Hello,
Thank you for agreeing to review this online lesson prototype. We estimate that you will require an hour to an hour and-a-half to complete this review, so please find an appropriate opportunity when you will be able to complete the review in one sitting. Please complete this Usability test by 4pm (EST), Thursday, April 10, 2008.

Most of you were asked to participate in this review for the following reasons: the formative evaluation strategy for this project requires individuals with instructional design experience, but who also have not had Dr. Hirumi's Advanced Instructional Design Course (EME 7634). Some experience with research techniques is useful, but not required, as this course is an introduction to a relatively new research methodology that is based on case study approaches. One of you was asked to participate in this review because you are a recognized expert in this field.

Review has two parts The review of this online lesson has two parts. In part 1, you will navigate through and "experience" to a reasonable degree the design of the lesson. In part 2, you will complete an evaluation form regarding your experience with the lesson.

In part 1 (below these instructions), you are given an Internet URL to navigate to where the lesson is hosted. You will go through the course without actually completing the reading assignments or writing the final paper.

In part 2, you are given a comprehensive set of questions regarding the range of elements that are part of producing an online course. While somewhat lengthy, the questions are designed to gather your opinions and perceptions of this course.

Two different roles: follow the role you really are **Experienced Instructional Designer**

You were selected because you are an instructional designer with experience. Now, imagine you are enrolled in a course titled “Advanced Instructional Design.” Review and evaluate this course as an experienced designer, but one who is taking the course as a student.

Expert - Tenured Professor of Instructional Technology

If you are the expert reviewer, a recognized expert in the field who would support placing this lesson into “production” at your university for graduate level students, then please fully pursue this role and evaluate appropriately. Your evaluation will determine any changes that will be required to provide the instructor of record with direction before you will permit this lesson being placed into production.

Authentic lesson

This lesson presents you with authentic circumstances by which you will indirectly learn about, differentiate from, and ultimately consider the implementation of a grounded instructional design theory as it is applied to learning a research method to improve the grounded design theory.

Navigate to lesson prototype

Please navigate to the following URL: Foundations of Formative Research Design

<http://pegasus.cc.ucf.edu/~ta773758/Home.htm>

Complete the survey

Now that you have completed the online lesson, please complete the formative evaluation using the attached document. In the evaluation document, scroll down to where the survey begins - Part 1: Your Experience. There are 8 evaluation sections.

Save your completed survey

When you have completed the evaluation form, please save the document in the form: FRM-Lesson Prototype - <your name>. (NOTE: FRM = Formative Research Methods).

Email completed survey

Please email your completed formative evaluation to the online prototype developer. Use the following email address:

gbradfor@mail.ucf.edu

Thank you

Thank you once again for participating in this evaluation.

Sincerely,

-The Team

(George Bradford, Taryn Hess, and Damon Regan)

Usability Survey

Part 1: Your Experience

- 1.1 How would you rate your general level of computer expertise?
- Novice*: I'm just learning how to use computers.
 - Knowledgeable*: I can use computers to accomplish my work.
 - Expert*: I can solve problems and help others use computers.
- 1.2 How would you rate your general experience with taking online courses?
- Inexperienced*: I'm just learning how to take courses online.
 - Some Experience*: I have had several online courses, and I feel comfortable taking them.
 - Very Experienced*: I have had many online courses, and I feel very comfortable taking them.
- 1.3 How familiar are you with the subject matter of research methodologies?
- Unfamiliar*: I don't really know much about the subject matter.
 - Familiar*: I am comfortable with the subject matter.
 - Very Familiar*: I am very comfortable with the subject matter.
- 1.4 How familiar are you with the subject matter of Formative Research methodologies?
- Unfamiliar*: I don't really know much about the subject matter.
 - Familiar*: I am comfortable with the subject matter.
 - Very Familiar*: I am very comfortable with the subject matter.

Part 2: The big picture

What is your overall reaction to this online lesson?

- | | | | | | | | |
|-----|---|----------------|---|---|---|---|-------------|
| 2.1 | How easy was it to learn to use the online lesson? | A struggle | | | | | A breeze |
| | | 1 | 2 | 3 | 4 | 5 | NA |
| 2.2 | How easy is it to navigate through this lesson? | Difficult | | | | | Easy |
| | | 1 | 2 | 3 | 4 | 5 | NA |
| 2.3 | What is your overall feeling when you take this lesson? | Frustrated | | | | | Satisfied |
| | | 1 | 2 | 3 | 4 | 5 | NA |
| 2.4 | If an instructional design course included this lesson, would you look forward to the experience? | No I would not | | | | | Yes I would |
| | | 1 | 2 | 3 | 4 | 5 | NA |
| 2.5 | Overall, do you find that the lesson would engage you in learning the topic? | No I would not | | | | | Yes I would |
| | | 1 | 2 | 3 | 4 | 5 | NA |

2.6 Overall, do you find sufficient evidence of compiled research to correctly develop this lesson?	No I do not				Yes I do	
	1	2	3	4	5	NA

Additional comments
Is there anything more you want to tell us about Part 2, the big picture?

Part 3: The Presentation Interface
How does information appear on your computer display?

3.1 What is your impression of the overall appearance of lesson web pages?	Unappealing				Appealing	
	1	2	3	4	5	NA
3.2 Amount of information on each lesson web page	Inadequate				Adequate	
	1	2	3	4	5	NA
3.3 How information is arranged on each lesson web page	Confusing				Clear	
	1	2	3	4	5	NA
3.4 Finding what information you need on a lesson web page	Difficult				Easy	
	1	2	3	4	5	NA
3.5 Number of clicks required to find the information I needed	Too few				Too many	
	1	2	3	4	5	NA
3.6 Use of color	Unpleasant				Pleasant	
	1	2	3	4	5	NA
3.7 Automatic color highlights as the cursor passes over an object	Unpleasant				Pleasant	
	1	2	3	4	5	NA
3.8 Use of text titles for each lesson web page	Confusing				Clear	
	1	2	3	4	5	NA
3.9 Design of graphic icons	Unappealing				Appealing	
	1	2	3	4	5	NA
3.10 Deciding what the different graphic icons mean	Puzzling				Easy	
	1	2	3	4	5	NA

Additional comments

Is there anything more you want to tell us about Part 3, the presentation interface?

Part 4: The Navigation Interface

How easy is it for you to move around the system?

4.1	Do you find that you get “lost” in the lesson?	Frequently					Rarely
		1	2	3	4	5	NA
4.2	Figuring out the navigation path is...	Puzzling					Obvious
		1	2	3	4	5	NA
4.3	Getting to where you want to go is...	Confusing					Clear
		1	2	3	4	5	NA
4.4	Getting back to where you were is...	Difficult					Easy
		1	2	3	4	5	NA
4.5	Getting back to the top of the page is...	Difficult					Easy
		1	2	3	4	5	NA
4.6	How the website responds to your actions is...	Unpredictable					Predictable
		1	2	3	4	5	NA
4.7	Availability of shortcuts to move around quickly	Inadequate					Adequate
		1	2	3	4	5	NA
4.8	Moving among multiple lesson web pages	Puzzling					Obvious
		1	2	3	4	5	NA
4.9	Using scroll bars is to see the whole page is...	Irritating					Ok
		1	2	3	4	5	NA

Additional comments

Is there anything more you want to tell us about Part 4, the navigation interface?

Part 5: The Explanation Interface
Does the system help you when you need it?

5.1	How easy is it to use the directions or instructions in the lesson?	Complicated	1	2	3	4	5	NA	Simple
5.2	How helpful is the information in the directions and instructions?	Inadequate	1	2	3	4	5	NA	Adequate
5.3	How easy is it to use the resources in the lesson?	Complicated	1	2	3	4	5	NA	Simple
5.4	How helpful is the resource information?	Inadequate	1	2	3	4	5	NA	Adequate
5.5	How easy is it to understand the navigation-flow graphics?	Complicated	1	2	3	4	5	NA	Simple
5.6	How helpful are the navigation-flow graphics?	Inadequate	1	2	3	4	5	NA	Adequate
5.7	How easy is it to understand the assignment instructions?	Complicated	1	2	3	4	5	NA	Simple

Additional comments
Is there anything more you want to tell us about Part 5, the explanation interface?

Part 6: Instructional Objectives
What is their clarity, utility, and reasonableness?

6.1	The objectives in this lesson are designed for graduate level college students who would learn an alternative research methodology. Do you find that these objectives are appropriate for this target audience?	Not Appropriate	1	2	3	4	Appropriate	5	NA
6.2	Do you feel that the lesson objectives are clearly stated?	Very Unclear	1	2	3	4	Very Clear	5	NA
6.3	Do you understand what is expected of a student taking this lesson from the objectives?	No I do not	1	2	3	4	Yes I do	5	NA
6.4	Do you find the objectives to be too wordy or to the point?	Very Wordy	1	2	3	4	To the Point	5	NA
6.5	Do you believe that learning this topic could be useful in your job or career?	No I do not	1	2	3	4	Yes I do	5	NA
6.6	Do you believe that fulfilling the objectives would result in a rewarding experience for you?	No I do not	1	2	3	4	Yes I do	5	NA
6.7	If you fulfilled the objectives, how soon do you believe you could apply what you learned?	No Idea	1	2	3	4	Right Away	5	NA
6.8	Do you believe that the objectives are easy or difficult?	Very Easy	1	2	3	4	Very Difficult	5	NA
6.9	Do you believe that the objectives are reasonable given the amount of time for the lesson?	Unreasonable	1	2	3	4	Reasonable	5	NA
6.10	Do you believe the objectives to be reasonable to learn the topic?	Unreasonable	1	2	3	4	Reasonable	5	NA

Additional comments
Is there anything more you want to tell us about Part 6, the instructional objectives?

Part 7: Instructional Strategies
How do you find the supporting text content, activities (not graded), exercises (graded), instructional sequence, learner feedback opportunities, and/or other media used?

7.1	Generally speaking, what do you believe about the number of activities and exercises in the lesson to learn the topic?	Not Enough						Too Many
		1	2	3	4	5	NA	
7.2	Do you find the activities and exercises helpful in learning the topic?	Not Helpful						Helpful
		1	2	3	4	5	NA	
7.3	Do you find the activities and exercises appropriate to learn the topic?	Not Appropriate						Appropriate
		1	2	3	4	5	NA	
7.4	Do you find the activities and exercises appropriate for the intended audience?	Not Appropriate						Appropriate
		1	2	3	4	5	NA	
7.5	If you could, would you change the activities and exercises?	Yes I would						No I would not
		1	2	3	4	5	NA	
7.6	How do you find the activities and exercises to be?	Complicated						Simple
		1	2	3	4	5	NA	
7.7	Do you find the activities and exercises support the instructional objectives?	No I do not						Yes I do
		1	2	3	4	5	NA	
7.8	How do you find the supporting textual content?	Inadequate						Adequate
		1	2	3	4	5	NA	
7.9	Referring to the instructions to complete the activities and exercises, how do you find the supporting text?	Not Supportive						Supportive
		1	2	3	4	5	NA	
7.10	How do you find the supporting text in general?	Weak						Strong
		1	2	3	4	5	NA	

7.11	Would you rewrite the supporting text?	Yes 1	2	Somewhat 3	4	No 5	NA
7.12	Would you rewrite the activities and exercises?	Yes 1	2	Somewhat 3	4	No 5	NA
7.13	Do you find that the supporting text and the activities reasonably support you in the task of completing the exercises?	No I do not 1	2	3	4	Yes I do 5	NA
7.14	How do you find the sequence of supporting text, activities, and exercises?	Weak 1	2	3	4	Strong 5	NA
7.15	Do you believe the sequence needs to be changed?	Yes 1	2	3	4	No 5	NA
7.16	If you believe the lesson sequence needs to be changed, would you suggest a complete re-sequencing or minor adjustment?	Re-Sequence 1	2	Some Adj. 3	4	No Adjustment 5	NA
7.17	Do you believe that feedback strategies are important to the designs of online courses?	Not Important 1	2	3	4	Very Important 5	NA
7.18	Other than an instructor responding to learner questions through email or message boards, do you believe that this lesson requires additional feedback strategies?	Yes it does 1	2	3	4	No it does not 5	NA
7.19	How do you find the exercises for learning the topic?	Irrelevant 1	2	3	4	Relevant 5	NA
7.20	Considering the time frame for completing the lesson (i.e., 1-2 weeks), how reasonable do you find the exercises?	Unreasonable 1	2	3	4	Reasonable 5	NA
7.21	Considering the complexity of the lesson topic, do you find the exercises sufficient to meet the objectives?	Insufficient 1	2	3	4	Sufficient 5	NA
7.22	Do you find the text content to be free of errors?	No I do not 1	2	3	4	Yes I do 5	NA
7.23	In terms of supporting the instructional strategies, how do you find the “other” media (i.e., still images, video, and audio)?	Not supportive 1	2	3	4	Supportive 5	NA
7.24	Do you find that any of the “other” media (i.e., still images, video, and audio) needs to be removed or changed?	Yes I do 1	2	3	4	No I do not 5	NA

7.25 Do you find the content to be engaging?	No I do not	1	2	3	4	Yes I do	5	NA
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Additional comments
Is there anything more you want to tell us about Part 7, the instructional strategies?

Part 8: Assessment Strategies
Are they appropriate, effective, logical, varied, and relevant?

8.1 Generally speaking, do you find the assessment strategies support the instructional objectives?	No I do not	1	2	3	4	Yes I do	5	NA
8.2 Do you find the assessment strategies appropriate for the lesson topic?	Inappropriate	1	2	3	4	Appropriate	5	NA
8.3 Do you find the assessment strategies appropriate for the target audience?	Inappropriate	1	2	3	4	Appropriate	5	NA
8.4 How do you find the quiz?	Inappropriate	1	2	3	4	Appropriate	5	NA
8.5 For the writing assignments, how do you find the rubrics?	Inadequate	1	2	3	4	Adequate	5	NA
8.6 Do you find that the combination of quiz and writing assignments to be effective for assessing your learning of this topic?	No I do not	1	2	3	4	Yes I do	5	NA
8.7 Would you change the assessment strategies?	Yes I would	1	2	3	4	No I would not	5	NA
8.8 Do you find the assessment strategies to be relevant to learning this topic?	No I do not	1	2	3	4	Yes I do	5	NA

8.9	Do you find the assessment strategies to be reasonable?	No	I do not					Yes	I do	
		1	2	3	4	5	NA			
8.10	Do you find the assessment strategies vary enough to keep the lesson interesting?	No	I do not					Yes	I do	
		1	2	3	4	5	NA			
8.11	Overall, do you find evidence that enough research was conducted to correctly develop this lesson?	No	I do not					Yes	I do	
		1	2	3	4	5	NA			

Additional comments
Is there anything more you want to tell us about Part 8, assessment strategies?

The Team (George Bradford, Taryn Hess, and Damon Regan)

Observation Evaluation Strategy will not be used.



Observer Instructions

Usability Test Proctor/Observer Instructions

- 1 Welcome all reviewers to the session.
Provide an agenda for the session:
 - Review Background Material
 - Explain session objectives
 - Explain your role
 - Provide review instructions
- 2 Review Background Material
- 3 Explain session objectives:
 - Gather individuals representing the end-user audience and present them with an opportunity to interact with the Online Learning Lesson prototype
 - Capture end-user representatives' concerns, ideas, and impressions of the Online Learning Lesson through observation and completing a Usability Survey
- 4 Explain your role:
 - Proctor the session
 - Observe generalized participant interactions with the system and take notes of concerns participants present verbally
- 5 Provide review instructions:
 - Distribute and have participants read silently
 - Instructions – questions and answers
 - Start browser
 - Open appropriate URL
 - Complete lesson review
 - Complete the survey
 - Return the survey to Proctor/Observer
- 6 Wrap up:
 - Thank participants for their assistance and time

Observation notes

Evaluators' Commentary

The following are the responses evaluators provided within the open-ended questions that followed each evaluation section.

Big Picture, Part 2

Person 1: Experienced Instructional Designer

"My knowledge of subject matter is comfortable but by no means an expert. If I truly read the textbook resources provided I am sure I would feel better successfully completing the objectives."

Person 2: Experienced Instructional Designer

"The lesson is fundamentally sound and makes good use of existing research. Please see my comments in the next section about navigation."

Person 3: Experienced Instructional Designer

"I found the course design to be understandable and concise for the most part. However, I found the Camtasia lecture to be difficult to follow and incorporate into my understanding due to variances in audio and general concept discussion. The graph of the subject/activities could not be seen on one screen, making it difficult to comprehend at first. Also, some of the type formats was difficult to read (a lot of bold on white background)."

Presentation Interface, Part 3

Person 1: Experienced Instructional Designer

"I clicked on a few items and was annoyed when they opened in same browser window and I had to use browser back button. I also wish there was more numbering along the way or a Table of Contents so I knew how far along I was in the module. I was afraid to go to the map on the first page in fear that I would not be able to get back to the page I was on."

Person 2: Experienced Instructional Designer

"The color scheme was bland. It didn't take anything away from the presentation of the material but it didn't add anything either. The name Main Menu is somewhat misused.

I would recommend using a word like start lesson or begin.

I became confused on what to click on to proceed. My confusion came whether I should click on the images or text to proceed. I would recommend deleting the next link on the main menu page and just have them click on the start here graphic. On the Challenge1.htm page I would recommend having the different stages on the left hand side hyperlinked instead of clicking next."

Person 3: Experienced Instructional Designer

"Though the initial color scheme of the course was soothing, it quickly became somewhat boring as it was mostly B/W, with shades of gray. Links were easy to see though."

Navigation Interface, Part 4

Person 1: Experienced Instructional Designer

"I guess my comments earlier are just as relevant here:

I clicked on a few items and was annoyed when they opened in same browser window and I had to use browser back button. I also wish there was more numbering along the way or a Table of Contents so I knew how far along I was in the module. I was afraid to go to the map on the first page in fear that I would not be able to get back to the page I was on.”

Person 2: Experienced Instructional Designer

No feedback provided.

Person 3: Experienced Instructional Designer

No feedback provided.

Explanation Interface, Part 5

Person 1: Experienced Instructional Designer

“5.6... I would have liked numbers in the Navigation Flow Graphic that were also attached to the module files to again help me know where I was in the path.

5.7... There seemed to be a lot of posting to a discussion board. I would like to have had the name of the discussion board as to know where to place my thoughts. There were several requests to post and I would hate to have all students dumping great thoughts into one pool that will overwhelm at least me as a student!”

Person 2: Experienced Instructional Designer

No feedback provided.

Person 3: Experienced Instructional Designer

No feedback provided.

Instructional Objectives, Part 6

Person 1: Experienced Instructional Designer

“6.8 challenging. Not too easy not too hard. Definitely a time commitment!

6.9 Seems like a lot of work to do!”

Person 2: Experienced Instructional Designer

“It took me awhile to find where the objectives were. I would recommend placing the objectives on the front page instead of the 3th or 4th page in.”

Person 3: Experienced Instructional Designer

No feedback provided.

Instructional Strategies, Part 7

Person 1: Experienced Instructional Designer

“Spelling error on first page was reported and corrected already ☺ [Smiley Face]

I guess my online learning experience sways feedback. I kind of got sick of the discussion/forum tool after weeks and weeks of course tasks sending me there to collaborate. Maybe mix up some of the activities and have them do something else.

I did like the videos! That broke up the reading!”

Person 2: Experienced Instructional Designer

“It would be cool if you could make the process image into an interactive component which they could click on for a brief overview of each step.”

Person 3: Experienced Instructional Designer

No feedback provided.

Assessment Strategies, Part 8

Person 1: Experienced Instructional Designer

“I couldn’t get quiz/self assessment to submit but questions seemed OK. Rubric was good, but again would like it to open in a new window. I guess 8.10 gets same feedback... too many discussion posting requirements”

Person 2: Experienced Instructional Designer

“Well Done. No changes recommended”

Person 3: Experienced Instructional Designer

“Assessments will differ depending upon the nature of learning desired. Collaboration in discussion forums and groups will enhance student-student learning, but does not necessarily engage instructor-student learning. It was difficult to answer these questions adequately when not fully immersed in the subject matter, or knowing what type of learning was desired (i.e., learning as it relates to discussion and reflection with a subjective outcome, or learning as it relates to critical analysis with an objective outcome).”

References

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- Weiss, E. (1994). *Making computers people-literate* (1st ed.) Jossey-Bass Inc.