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To cite this article: Bethany Simunich, David B. Robins & Valerie Kelly (2015) The Impact of Findability on Student Motivation, Self-Efficacy, and Perceptions of Online Course Quality, American Journal of Distance Education, 29:3, 174-185, DOI: [10.1080/08923647.2015.1058604](https://doi.org/10.1080/08923647.2015.1058604)

To link to this article: <http://dx.doi.org/10.1080/08923647.2015.1058604>



Published online: 18 Sep 2015.



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The Impact of Findability on Student Motivation, Self-Efficacy, and Perceptions of Online Course Quality

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This study investigated whether “findability,” an aspect of usability, is an important component in student perceptions of/satisfaction with online courses and, as such, should be considered more heavily in online course design. Using standard usability testing measures, such as eye-tracking, time-on-task, and think-alouds, participants were asked to find essential course components in either a course with high findability or a modified version of the course with low findability in order to determine the impact on student perceptions of course quality and experience. Participants rated those courses with high findability as a better overall experience (based on five dimensions). Additionally, this study was intended to begin the process of linking findability to student achievement of learning outcomes by using pre- and posttest measures of motivation and self-efficacy and evaluating how they are affected by findability. Students reported lower levels of self-efficacy and motivation after interacting with courses rated low in findability. Additionally, a negative, linear relationship was found between findability and both self-efficacy and motivation. The researchers believe this study to be the first in a series of studies that will eventually lead to determining if findability and/or usability have a direct impact on student learning outcomes and, if so, what the standards are in these areas that should be set forth for online courses.

Findability, as defined by Peter Morville (2005), is “the degree to which a particular object is easy to discover or locate, [as well as] the degree to which a system or environment supports navigation and retrieval” (3). Or, as his more colloquial catchphrase puts it, “you can’t use what you can’t find” (3). Findability is present in the concept of usability—the idea that when something is truly usable, “the user can do what he or she wants to do the way he or she expects to be able to do it, without hindrance, hesitation, or questions” (Rubin, Chisnell, and Spool 2008, 4). For online students, findability is paramount—if they cannot find important course components, they cannot “use” them; having to search for assignment instructions or a course introduction may likely result in frustration, lowered motivation, and decreased self-efficacy—all of which could impact both student learning and course attrition. Both self-efficacy and motivation have been shown to have an effect on student success in online courses (Irizarry 2002).

There are several important course components that are imperative for students to locate early on in the course, such as instructions for getting started, the learning objectives of the course, and the grading policy. All of these components may be present and written in a clear manner, but

are they easily findable? This project is a first step in determining whether this “search time,” or ease of findability, impacts student learning. For example, if students need to search for course essentials, how does their frustration level impact their motivation? At what point do they stop searching? Further, if “essential items” that students need early on in a course, such as the syllabus, are hard to find, how does that influence student perception of course or instructor quality? It is important to investigate the potential barrier it poses to students if they have to spend time interpreting the learning environment. Logically, if students need to spend time finding essential course components, this may result in spending less time learning the course content or engaging in peer interaction. Perhaps more notably, low findability and the frustration that accompanies it may impact not only student learning but also course attrition.

Unfortunately, as noted by Fisher and Wright (2010), “there is little research regarding the implementation of usability testing in academia, especially in online course development” (228). Although past research has shown a direct effect of “system usability”—that is, learning management system software usability—on student performance (Tselios et al. 2001), there is a paucity of research on the effect of usability in the e-learning environment and apparently no research on findability specifically. This study attempts to address that gap and to investigate findability and its relation to student perception of course quality and overall experience. The opportunity to improve online learning with such a study is substantial, as there is the opportunity to discern if best practices in user-centered design, such as findability, are specifically correlated with increased student learning.

THE STUDY

This exploratory, theory-building study attempted to address the following research questions:

- RQ1: Do courses that have higher quality course design and meet navigation standards have higher findability than courses that do not?
- RQ2: Do students report lower levels of self-efficacy and motivation after interacting with courses that have findability and navigation issues?
- RQ3: Do students’ overall impressions of an online course differ between courses that have high findability and those that do not?
- RQ4: Is findability a predictor of self-efficacy or motivation in online courses?

Process and Procedures

For purposes of the study, two courses were selected for the control group. Both courses were English writing courses to minimize the possible confounding variable of course discipline. Both courses underwent Quality MattersTM review by four independent Certified Peer Reviewers and met Quality Matters Rubric^{TM1} standards. Quality Matters (QM) is a faculty-centered, peer-review process that focuses on the design of online and hybrid courses and is intended to certify

¹The QM Rubrics have been developed and regularly updated through a rigorous process that examines relevant research, data, and practitioner perspectives. They consist of Standards supported by detailed Annotations explaining the application of the Standards and are intended to support the continuous improvement of courses with constructive feedback provided by trained and Certified Peer Reviewers using a specific review protocol.

their quality. The process utilizes an extensive rubric, organized under eight general standards and forty-three specific standards; the review is conducted by three Certified Peer Reviewers. The researchers used QM as a baseline indication of course quality, as it is a nationally recognized evaluative measure for online courses.

The two control courses, collectively labeled “Course Type 1,” were then altered in an attempt to not meet Standard 6.3 of the Quality Matters Fourth Edition rubric, which is concerned with ease of navigation and overall findability. Standard 6.3 states, “Navigation throughout the online components of the course is logical, consistent, and efficient” (Quality Matters™ Higher Education Rubric: 2011–2013 n.d.).² All content in the course remained the same; the only difference was the layout/navigation of the course. Navigation was altered in two distinctly different ways for each course, and each type of alteration was based on violating usability standards and on actual course layout/design issues as experienced by one of the researchers in her role as a Certified Peer Reviewer for Quality Matters.

For the first course, the navigation was altered such that all material originated from one central folder, labeled “Content,” on the Course Home Page. To find important items (such as the syllabus) in the course, one would have to “click in” anywhere from three to five levels. Additionally, although all folders and items were named in such a way that related to their content, the names and locations were not necessarily intuitive. For example, the syllabus was found in the folder “Information.” No item, however, was intentionally mislabeled or labeled something that did not pertain in some way to its content. Further, although the location of items may not have been intuitive, no items were placed in an entirely illogical place (i.e., the syllabus was not placed in a folder labeled “Media” or “Course Calendar”).

For the second course, the navigation was altered so that all material appeared in an icon and text list on the Course Home Page. Anyone in the course would have to scroll to find items, and some files were placed in folders in a nonintuitive or illogical way. For example, the Course Schedule was in an item labeled “Assignments.” The four Certified Peer Reviewers reviewed these two courses, collectively labeled Course Type 2, and all independently reported that Standard 6.3 was not met in either course. Therefore, a total of four courses were used for the study: two courses that met QM standards and versions of those same two courses where the only alteration made was that the courses did not meet Standard 6.3.

The study was conducted as a lab session, not during a semester offering of the full course. Students were randomly assigned to either the eye-tracking group or the focus group and were also randomly assigned one of the four courses. In the eye-tracking group, students used a computer with special eye-tracking software/capabilities. They were instructed to think aloud (i.e., talk out loud about their thoughts while trying to find items in the course). Students in the focus group did not do the think-aloud portion but did participate in a group discussion held after the session. Prior to beginning the study, students were told that they would be looking at an online course and that the researchers might consider the course to either be well designed or have some design issues.

Students were told that the researchers were interested in student feedback about the design of online courses and that they should actually put themselves in the scenario that the course they

²The concept of Standard 6.3 in the 2011–2013 Rubric was rolled into Standard 8.1 in the current 2014 Rubric. That standard reads, “Course navigation facilitates ease of use.” The wording was changed to broaden the concept, although the expression “logical, consistent, and efficient” appears in the first paragraph of Standard 8.1 annotation.

would be looking at was one they had signed up for and paid for and that it is the first day of the online class. Participants first completed a pretest measure composed of demographic questions, experience with technology/online courses, and feelings of self-efficacy and motivation in online courses in general. The self-efficacy (seven items) and motivation (eight items) questions were gleaned from the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. (1991). The MSLQ is a comprehensive, eighty-one-item questionnaire that examines college students' motivational orientations. All eight items specifically targeting self-efficacy were used; the seven motivation items were gathered from the twenty-three remaining motivation questions, including intrinsic and extrinsic goal motivation (see Appendix A for a list of the selected questions). Responses were given on a four-point Likert-type scale (1 = *not true at all*, 4 = *very true*).

Then, students completed a list of seven “tasks,” each task asking them to find one to two items in the online course. The tasks were scenario based and items that students were asked to find were based on items that most students would be looking for in the first few days of an online course, such as the grading policy and syllabus (see Appendix B for the complete task list). Students were asked to highlight the item after they found it, so researchers could compare if what they found was actually the item the task was asking them to find. After each task, students were asked three questions: (1) Did you find the item? (2) How difficult was it to find the item? and (3) How frustrated were you when trying to find the item? Students were told in the introductory script that they were to give each task an honest effort but that they could choose to move on to the next item or task if they truly felt that they could not find the item and/or would stop looking at this point if they were actually a student in the course. After completing the task list, students were asked five questions related to student perceptions of course quality and overall experience. For those in the focus group, a focus group discussion was held after all students completed the task list and answered the five “experience” questions. Finally, students completed a posttest measure composed of the same self-efficacy and motivation questions prefaced with a scenario that asked them to think of the questions in relation to the course they just interacted with, not with online courses in general.

FINDINGS

Participants were undergraduate and graduate students from a midsize university in the midwestern United States, and they were recruited from a variety of classes and majors. Students received extra credit from their professor in exchange for their participation. Data were collected from eighty-one participants—forty combined for the two courses in Course Type 1 (high findability) and forty-one combined for the two courses in Course Type 2 (low findability). Fifty-seven percent of participants were either juniors (27%) or seniors (30%), and the rest were fairly equally distributed between freshman (12%), sophomores (16%), and graduate students (15%). Most (72%) were between eighteen and twenty-two years old, although older/adult students were represented as well. Most (77%) had a Grade Point Average (GPA) above 3.0, and most (92%) either agreed or strongly agreed that they were comfortable using a computer.

RQ1: Do courses that have higher quality course design and meet navigation standards have higher findability than courses that do not?

TABLE 1
Time on Task

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Course Type 1, Task 1	71.40	67.05	-3.49	.001*
Course Type 2	144.78	107.59		
Course Type 1, Task 2	87.94	56.69	-4.45	.000*
Course Type 2	171.86	98.72		
Course Type 1, Task 3	45.57	32.07	-4.91	.000*
Course Type 2	102.68	62.63		
Course Type 1, Task 4	36.80	37.82	-2.07	.042*
Course Type 2	54.16	33.26		
Course Type 1, Task 5	74.60	47.84	-1.95	.050*
Course Type 2	100.62	63.88		
Course Type 1, Task 6	64.91	41.89	-2.82	.007*
Course Type 2	102.43	68.61		
Course Type 1, Task 7	54.56	51.56	-4.21	.000*
Course Type 2	128.38	92.13		

*Significant *p* value at $\alpha = .05$.

First, the researchers wanted to see if students confirmed what the Certified Peer Reviewers felt: that the Course Type 2 courses had lower findability than Course Type 1. An independent samples *t* test was conducted to compare time-on-task for Course Type 1 and Course Type 2, as time-on-task is one measure of findability. Time-on-task is quantified as the total number of seconds it took the participant to find the item. Time-on-task for all seven tasks was higher for Course Type 2. Additionally, there was a statistically significant difference between the two course types for all seven tasks. An alpha level of .05 was used for all statistical tests (see Table 1).

Findability was also measured using the questions that participants answered after each task, including (1) How easy was it to find the items you were looking for in this task? (three-point Likert scale item, 1 = *easy*, 2 = *neither difficult nor easy*, 3 = *difficult*) and (2) How frustrated were you when trying to find the items in this task? (five-point Likert scale item, 1 = *not at all frustrating*, 5 = *very frustrating*). Independent samples *t* tests were conducted to compare difficulty level and frustration level for the two course types. For each question, students in Course Type 2 reported greater difficulty and higher frustration in finding the items for all seven tasks. Results were statistically significant for all tasks except Task #5 (see Tables 2 and 3). In sum, results show that the Course Type 1 (QM-recognized) courses did indeed show higher findability (in terms of time-on-task, degree of difficulty in finding items, and degree of frustration in finding items) than Course Type 2 (did not meet QM standards, including Standard 6.3).

RQ2: Do students report lower levels of self-efficacy and motivation after interacting with courses that have findability and navigation issues?

A paired samples *t* test was conducted to compare pre- and posttest self-efficacy and motivation aggregated scores for both course types. Self-efficacy and motivation items were aggregated from questions in the pre- and posttest survey, selected from the MSLQ (seven questions total related to self-efficacy and eight questions total related to motivation). Responses used a four-point Likert-type scale (1 = *not true at all*, 4 = *very true*). Therefore, for aggregated

TABLE 2
Degree of Difficulty

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Course Type 1, Task 1	1.37	.646	-4.04	.000*
Course Type 2	2.03	.726		
Course Type 1, Task 2	1.17	.514	-4.59	.000*
Course Type 2	1.95	.880		
Course Type 1, Task 3	1.38	.697	-3.92	.000*
Course Type 2	2.08	.795		
Course Type 1, Task 4	1.23	.426	-2.29	.025*
Course Type 2	1.54	.691		
Course Type 1, Task 5	1.60	.695	-1.07	.285
Course Type 2	1.78	.750		
Course Type 1, Task 6	1.46	.701	-2.73	.020*
Course Type 2	1.89	.843		
Course Type 1, Task 7	1.47	.706	-3.99	.000*
Course Type 2	2.22	.854		

*Significant *p* value at $\alpha = .05$.

TABLE 3
Degree of Frustration

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Course Type 1, Task 1	1.83	1.18	-3.03	.003*
Course Type 2	2.70	1.23		
Course Type 1, Task 2	1.40	1.01	-3.75	.000*
Course Type 2	2.62	1.69		
Course Type 1, Task 3	1.41	.857	-5.69	.000*
Course Type 2	2.92	1.34		
Course Type 1, Task 4	1.23	.646	-2.80	.007*
Course Type 2	1.81	1.08		
Course Type 1, Task 5	1.94	1.06	- .835	.407
Course Type 2	2.16	1.17		
Course Type 1, Task 6	1.80	1.02	-2.63	.011*
Course Type 2	2.51	1.26		
Course Type 1, Task 7	1.59	.957	-6.07	.000*
Course Type 2	3.30	1.40		

*Significant *p* value at $\alpha = .05$.

responses, the highest self-efficacy “score” would be 28, whereas the highest motivation “score” would be 32.

For Course Type 1 (QM-recognized courses), there was no significant difference in the pretest self-efficacy scores ($M = 23.32$, $SD = 2.63$) and the posttest self-efficacy scores ($M = 23.59$, $SD = 2.56$); $t(33) = -.801$, $p = .429$. Likewise, there was no significant difference in the pretest motivation scores ($M = 24.88$, $SD = 3.36$) and the posttest motivation scores ($M = 24.79$, $SD = 3.17$); $t(33) = .146$, $p = .885$.

However, there was a significant difference in pre- and posttest scores for Course Type 2 (QM Standard 6.3 not met). There was a significant difference in the pretest self-efficacy scores ($M = 24.08$, $SD = 2.78$) and the posttest self-efficacy scores ($M = 20.63$, $SD = 5.04$); $t(37) = 3.62$, $p = .001$. Also, there was a significant difference in the pretest motivation scores ($M = 24.41$, $SD = 3.68$) and the posttest motivation scores ($M = 21.86$, $SD = 4.39$); $t(36) = 2.71$, $p = .010$. In both cases, aggregated self-efficacy and motivation scores decreased after students completed the tasks.

In sum, results show that students do report lower levels of self-efficacy and motivation after interacting with courses that do not have high findability (QM Standard 6.3.)

RQ3: Do students' overall impressions of an online course differ between courses that meet Standard 6.3 and those that do not?

There were five additional items included in the posttest survey that were not included in the pretest survey; these items were designed to gain an overall impression of the participants' experience, looking at five facets. The items used a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) and were as follows: (1) It was easy to find items in this course, (2) I enjoyed my experience using this course, (3) I would recommend a course like this to my friends, (4) I feel like the instructor in this course would be a good one, and (5) I think this would be a frustrating course to take for an entire semester.

Independent samples t tests were conducted to compare these five "experience" questions for Course Type 1 and Course Type 2. Results show that students interacting with Course Type 1 had a better "experience" (for all five "facets"). Additionally, there was a statistically significant difference between the two course types for all five facets (see Table 4).

In sum, students in Course Type 1 reported that items in the course were easier to find, they enjoyed their experience more than participants in Course Type 2, and they were more likely to recommend the course to their friends. Additionally, students in Course Type 1 reported higher agreement that the course instructor would be good and reported lower agreement that the course would be frustrating to take for an entire semester.

RQ4: Is findability a predictor of self-efficacy or motivation in online courses?

TABLE 4
Five Facets of Experience

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Course Type 1, "Easy to Find Items"	4.10	.871	6.08	.000*
Course Type 2	2.66	1.24		
Course Type 1, "Enjoyed the Experience"	3.75	.809	5.50	.000*
Course Type 2	2.61	1.05		
Course Type 1, "Would Recommend Course to Friends"	3.80	1.02	5.70	.000*
Course Type 2	2.49	1.05		
Course Type 1, "Course Instructor Would Be Good"	3.88	.911	5.23	.000*
Course Type 2	2.80	.928		
Course Type 1, "Course Would Be Frustrating to Take"	2.28	1.01	-4.49	.000*
Course Type 2	3.44	1.31		

*Significant p value at $\alpha = .05$.

To address this research question, a “findability score” was calculated for each respondent based on a combination of self-reported difficulty level in finding the items, self-reported frustration level in finding the items, and the objectively measured time-on-task for items (calculated in seconds). Students received a low, medium, or high findability factor after the aforementioned items were recoded into low, medium, or high values. Overall findability scores ranged from 21 (lowest possible) to 58 (highest possible was 63).³

Results show that findability was a significant predictor of both self-efficacy and motivation and that there was a negative, linear correlation for each. Findability significantly predicted self-efficacy scores $b = -.564$, $t(58) = -5.29$, $p = .000$. Findability also explained a significant proportion of variance in self-efficacy scores, $R^2 = .318$, $F(1, 58) = 28.00$, $p = .000$. Findability also significantly predicted motivation scores $b = -.231$, $t(58) = -4.27$, $p = .000$. Findability also explained a significant proportion of variance in motivation scores, $R^2 = .228$, $F(1, 58) = 17.70$, $p = .000$.

The researchers also considered whether self-reported difficulty level and frustration level on their own would be significant predictors of findability. After all, time-on-task, although an accepted measurement in usability research, could have inaccurate moments if, in fact, a participant stopped to read something while not continuing their “finding” or search for task-list items. Therefore, linear regression was also run using only these two factors (difficulty and frustration) only as the “findability score.” Results show that findability was a significant predictor of both self-efficacy and motivation and that there was a negative, linear correlation for each. Findability significantly predicted self-efficacy scores $b = -.438$, $t(58) = -6.48$, $p = .000$. Findability also explained a significant proportion of variance in self-efficacy scores, $R^2 = .412$, $F(1, 58) = 42.04$, $p = .000$. Findability also significantly predicted motivation scores $b = -.331$, $t(58) = -4.63$, $p = .000$. Findability also explained a significant proportion of variance in motivation scores, $R^2 = .264$, $F(1, 58) = 21.51$, $p = .000$.

It should be noted that no other single variable was found to be a significant predictor of self-efficacy or motivation, including age, rank/year in school, GPA, or level of comfort with using a computer. However, adding the total number of online courses that a participant had taken to the equation was found to significantly predict additional variance in both self-efficacy and motivation.

In sum, there is a negative, linear relationship between findability and both self-efficacy and motivation; results show that findability was found to be a significant predictor of both self-efficacy and motivation in online courses.

Event Analysis Results

Participants were observed searching for items that, in the case of broken navigation, caused them much frustration. Besides the obvious factor of time-on-task (longer time, more frustration), participants could be observed moving their eyes across a page looking for a link. From the

³Difficulty level was already categorized as 1–3 (low–high). Frustration level was recoded from a five-point Likert scale to a three-point Likert scale. Time-on-task was visually binned into three groups, using equal percentiles as cut points. Because higher ratings in each of the three areas would indicate lower findability, the scores were then reverse-coded. A “findability score” was calculated for each task, and from that an overall findability score was calculated (the highest possible findability score would be 63, and the lowest would be 21). Overall findability scores ranged from 21 to 58.

eye-tracking data, gaze plots could be directly observed that showed participants actually fixating on links they needed to finish the task.

When the link was buried in a list of file names, however, participants had trouble distinguishing among the choices. The researchers observed fixations directly on the target link, and yet they still did not select it and would move on to another page. This problem highlights the importance of navigation design and visual design. Problems of this type may be caused by the following:

- Lack of chunking (the navigation items were not grouped into logical categories so that the user can more quickly jump to the appropriate links),
- Poor labeling (in some cases using file names as labels rather than specific language),
- Poor categorization (placing needed links in nonlogical locations),
- Deeply buried content (placing a syllabus, e.g., in a folder four levels deep), and
- Lack of visual contrast among page elements (if you want someone to see something, contrast it from the other content on a page, don't bury it visually).

LIMITATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

In considering the findings of our study we acknowledge the following limitations and make suggestions for further study:

Because we did not use the full eighty-one-item MSLQ but selected fifteen items to form our self-efficacy and motivation scales, further research might investigate the reliability and validity of these seven-item and eight-item scales for measuring self-efficacy and motivation. To take account of the finding in [Table 1](#) that the standard deviations are not much smaller than their corresponding means, instead of the *t* test further research might use a method that enables the comparison of time, such as a two-sample Weibull test or Poisson test. Further research might combine the seven tasks reported in [Tables 1, 2, and 3](#) into a single score for each respondent by taking either the sum or the average and perform only a single test for composite/average time-on-task, one for difficulty and one for frustration across all tasks. For results reported in [Tables 1](#) through 4, instead of relying completely on significance testing, research might examine effect size.

This exploratory study produced some interesting results that prompt further investigation into the connection between findability and self-efficacy and motivation. Future studies could focus on what design aspects most impact findability and whether findability is of greater impact for certain items in an online course. Additionally, longitudinal studies could attempt to determine the effects of findability issues in online courses over the duration of an entire semester. Future research could also look more closely at other factors that influence student feelings of self-efficacy and motivation in online courses as well as explore the linkages between these two factors and student learning. Research focused on the latter could serve to possibly link findability to student learning which, if found, would perhaps increase the importance of findability in online courses.

This project and its findings will be useful to both designers and reviewers of online courses and will additionally have broad implications for online students and online learning. Results of the study contribute to the currently small body of knowledge on findability, student motivation, and self-efficacy in online courses and are a significant step made toward determining both the effect of findability in online courses and minimum findability standards. This project could be replicated by any other institution offering courses that meet QM standards and would also be the

first step in possibly establishing a standard measure for findability in online courses. The ease with which this study could be replicated using the developed measure would further the validity and generalizability of the study results.

For QM, however, this study lays the groundwork for demonstrating the importance of good navigation, which is currently addressed in Standard 8.1 of the QM Higher Education Rubric, Fifth Edition. This standard already has prominence and emphasis in the Quality Matters Rubric simply by its being an Essential Standard. However, given the condition that a course must meet a particular standard to the level of 85% or more, perhaps peer reviewer and designer attention should consider this standard in relation to what is not findable in a course, or what items are illogically placed, and so on. For example, if items reflected in other Essential Standards, such as the purpose and structure of the course, are not easily findable, is that fundamental enough of an issue for the faculty/course developer to address? In the end, this study was able to make some important first steps into looking specifically at the QM navigation standard as well as making groundwork in potentially linking navigation issues to student feelings of self-efficacy and motivation, both of which can impact student learning.

Further, the study provides information that could potentially inform future revisions of the Quality Matters Rubric. Considering how important findability may be for student learning, perhaps future annotations of the navigation standard could give some minimal guidelines to help peer reviewers determine findability of important items, especially those reflected in Essential Standards, such as Learning Objectives, Module Objectives, Course Structure, and Grading Policy. Considerations such as a “three-click” heuristic, or the number of minutes to find an item, could help peer reviewers note findability issues to faculty developers.

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APPENDIX A

Task List

Task 1: This is the first time you’ve ever logged into this course. You have no idea what to do, so you’re looking for clues. See if you can find these two items that can help you get started:

1. The video entitled, “How to navigate and interact with your course”
2. The course syllabus (just find it, don’t open)

Task 2: Now that you've had a little introduction to the course, you're looking for some more detailed information on what this course is all about. Find the following:

1. Course schedule
2. Instructor welcome

Task 3: You now have sort of a feel for what you'll be doing in this course. Now you want to know what you'll get out of this course. Find the following:

1. Learning outcomes

Task 4: Now you're ready to get started in the course. There are learning outcomes for each module in the course. Those outcomes tell you what you're supposed to have learned by the end of each module. Find the following:

1. Learning Outcomes for Module 1 of the course

Task 5: Module 1 Outcomes are spread out over three weeks. In looking at your schedule, you notice there's a great concert in New York City during the third week of the course you want to attend, so you want to get a head start. Find information on what you will be doing in Week 3 that supports the Module 1 Outcomes, specifically,

1. What you will be reading
2. What two assignments you will be completing

Task 6: Now that you've had a look at some of the assignments, you want to know what you have to focus on to get the grade you want. Find the following:

1. Course grading policy that also includes a list of projects/activities and their associated point values

Task 7: One of your friends just finished an online course and had some technical difficulties. Although you don't think there will be technical problems in this course, you might ask yourself, "What happens if there is one?" Find the following:

1. A link to technical support available to you
2. A phone number you would call in the event of a technical problem

APPENDIX B

Motivated Strategies for Learning Questionnaire (MSLQ) Self-Efficacy and Motivation Pre-Test/Post-Test

MSLQ Part A. questionnaire (using Qualtrics online survey tool)

Authors: Pintrich et al. (1991).

Items are scaled as follows:

1 = *Not true at all*, 2 = *Hardly ever true*, 3 = *Often true*, 4 = *Very true*

1. In a class like this, I prefer course material that challenges me so I can learn new things.
2. If I study in appropriate ways, then I will be able to learn the material for this course.
3. I believe I will get an excellent grade in this class.
4. I'm certain I can understand the most difficult material presented in the readings for this course.

5. I'm confident I can do an excellent job on the assignments and tests in this course.
6. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.
7. I'm confident I can learn the basic concepts taught in this course.
8. I am very interested in the content area of this course.
9. I expect to do well in this class.
10. The most satisfying thing for me is to try and understand the content in my courses as thoroughly as possible.
11. I like the subject matter of this course.
12. Understanding the subject matter of this course is very important to me.
13. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.
14. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.
15. I think the course material in this class is useful for me to learn.

Scenario for the POSTTEST MSLQ questionnaire:

Now that you have viewed the syllabus and some of the course materials for the class, please take a moment to think about your experience using the course system and seeing the materials and syllabus. With those thoughts and feelings in mind, please answer the following questions.