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Academic Librarians have been creating research guides since the 1950s. These resources were design to help patrons become familiar with the basics of a subject or discipline. Research guides evolved into course pages, which provide resources related to a single course. This study considers students' perceptions, and how that effects their intent to use the course page in the future. The study seeks to answer the question, does students' perception of usefulness, interactivity, ease-of-use, attitude, and satisfaction effect their intention to use course pages?

The method used for this study is adapted from the Technology Acceptance Model which looks for correlations between perceived usefulness, interactivity, ease-of-use, attitude, satisfaction, and intention to use. 47 undergraduate students from the University of North Carolina, Chapel Hill, responded to an online survey. These findings will help determine if student perceptions match the findings from previous studies regarding the usability and implementation of course pages.

Headings:

Web applications in libraries

User Education

Information Needs

ARE COURSE PAGES USEFUL? GETTING BEYOND IMPLEMENTATION AND
USABILITY

by
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Introduction

Academic Librarians have been creating research guides since the 1950s (Vileno, 2007, p. 434). Originally a paper handout, these resources were design to help patrons become familiar with the basics of a topic, subject or discipline (Giullian and Zitser, 2015, p.171). Today, research guides are published to library websites as either a subject guide or as a course page. A subject guide provides resources related to a broad subject area, while a course page provides resources that are specific to a single course. Course pages were developed due to research which revealed that subject guides were too broad to be relevant to students' information needs (Baker, 2014, 110). Course pages which could have a narrower focus, seemed to be the solution to this issue (Leighton and May, 2013, p. 127). Studies tend to focus on either the usability (Slemons, 2013) (Carrillo, 2012) or implementation (Leighton and May, 2013) of the course page. This study, however considers students' perceptions and how that effects their intent to use the course page in the future.

This study seeks to answer the following question: Does students' perception of usefulness, interactivity, ease-of-use, attitude, and satisfaction affect their intention to use course pages. These are variables which can be used to determine the value course pages provide to undergraduate students. To answer this question, this study looked at the course pages used at the University of North Carolina, Chapel Hill. At UNC, course pages are published via SpringShare's LibGuides, a Software-as-a-Service platform. Data was collected using a survey regarding student perceptions of usefulness,

interactivity, ease of use, attitude, satisfaction, and intention to use. The survey was distributed to undergraduate students who use course pages.

47 Undergraduate students responded to the survey. They were recruited through their course instructors or through recruitment posters displayed around campus. This data was analyzed using the Technology Acceptance Model (TAM) which looks for a correlation between user perceptions and intention to use (Davis, 1989, p. 319). Each of the statements within the self-reporting survey address different aspects of the definition for usefulness outlined in the literature review section of this study.

Literature Review

Intent to use is closely connected to usefulness since people tend to use technologies that are useful to them (Davis, 1989) (Park, 2009) (Yoon, 2016). Before intent to use can be measured, usefulness must be defined. Within the field of user experience, usefulness is defined as “the degree to which a product enables a user to achieve his or her goals, and it is an assessment of the user’s willingness to use the product at all” (Rubin and Chisnall, 2008, p. 4). A study by Francois Aubin, Hasmik Atoyan, Jean-Marc Robert, and Tigran Atoyan (2012), and the TAM method developed by Fred Davis (1989) both define usefulness. Both the definitions provided by Audin, et al. and Davis agree with the definition by Rubin and Chrisnall, that usefulness is essentially about enabling the user. However, Aubin et al. and Davis provide more detail about what this means and how this can be measured (Aubin; Atoyan, H.; Robert; and Atoyan, T., 2012, p. 5267-5268) (Davis, 1989, 320).

Aubin, et al. used Maslow’s hierarchy of needs to define usefulness (2012, p. 5267). According to Maslow’s hierarchy, there are five levels of need, and any activity that we do is in response to one of these needs (Aubin; Atoyan, H.; Robert; and Atoyan, T., 2012, p. 5267). This includes an individual’s use of technology. For example, Aubin et al. explains that “the search for information can satisfy the need for food (e.g. where to buy food) and safety (e.g. how to build a safe house, etc.)” (2012, p. 5267). Using this premise, Aubin et al. conclude that usefulness is determined by the following measurements: functionality, context of use, quality of outcome, safety, and saving

energy and time (2012, p. 5267-5268). These categories can be applied to the case of the library course page and give insight into the context in which a student uses a course page. The Technology Acceptance Method used in this study, similarly addresses these areas of usefulness. Below I have outlined how the different aspects of usefulness apply to course pages.

The questions in this survey were developed from the Technology Acceptance Model (TAM) which professes a correlation between perceived usefulness, ease of use and intent to use. This model was developed by Fred D. Davis in 1989 as a means to predict technology adoption by looking at correlations between user-perceptions and intent to use (Davis, 1989, p. 319). This model

is built on the theory of reasoned action (TRA), which suggests that an individual's behavior is initiated by his or her behavioral intention.... According to the TRA, the intention to act directly determines behavior because people generally behave as they intend to (Yoon, 2016, p. 688).

To measure this correlation, Davis developed a twelve-question survey. For this survey, a statement is made, and the participant is asked to indicate their level of agreement on the seven point Likert scale which goes from likely to unlikely (Davis, 1989, p. 340). Since Davis first introduced this model, modifications have been made it, including changes to the variables (Choi, Chung, 2013) (Doll and Deng, 1998) (Yoon, 2016).

By applying the definition of usefulness by Aubin et al to TAM provides further insight into what can influence a user's intent to use a piece of technology. Since this study is concerned with the undergraduate perception and future use of library course pages, the undergraduate student is kept central to the discussion. For this reason, usefulness is explored within the context of the undergraduate's research experience. Below this discussion is divided by each of the aspects of usefulness that Aubin et al

identifies, then by its relationship to TAM and the undergraduate's research experience. By examining the different aspects of usefulness, I hope to compare how librarians' intentions for course pages match student perceptions.

Functionality

Aubin et al. defines functionality in terms of the user's needs: "[P]roducts with features that better satisfy consumers' basic needs, also have better long term survival rates" (2012, p. 5268). In other words, if something is functional than it is more likely to be used. Functionality can also be understood in terms of perceived ease-of-use and interactivity. Ease-of-use refers to a freedom from effort (Davis, 1989, 320), and interactivity regards the responsiveness, personalization, and connectedness of the application (Yoon, 2016, p. 689).

For a course page, the user (an undergraduate student) has the basic need to complete a class research assignment. To be functional, a course page must be both relevant to the course context (which is discussed further below) and it must be usable. Erin Carrillo (2012) conducted a usability evaluation which resulted in design recommendation. Similarly, Megan H. Slemons (2013) conducted a study which considered the effect of design on the usage of course pages. While these are aspects of usefulness, they are not the whole. Subject guides may meet all of these recommendations and still not receive a lot of traffic if they do not address an actual user need (Baker, 2014, 110).

Context of Use

Aubin et al explains that "when comparing the relative usefulness of two products, we need to first identify the target population's activities" (2012, 2568). This

relates to Davis' definition of perceived usefulness which describes it as the "degree to which a person believes that using a particular system would enhance his or her job performance" (1989, 320). An application cannot be designed to "enhance...job performance" (Davis, 1989, 320) unless the context of that job, goal, or, in this case, research project, is known. This fact is clearly evident by the evolution of the course page over the years.

In the 1950s, librarians started using Pathfinders which were genre specific recommended reading lists (Vileno, 2007, p. 434). Eventually, pathfinders evolved into research guides. These were also printed list of resource, but this time they were a resource to introduce patrons to resources within a specific subject area (Vileno, 2007, p. 434). Then, with the advent of the Web 2.0, Pathfinders and research guides, which patrons could pick up from the service desk, became online resources known as subject guides (Morris and Bosque, 2010, p. 179-180). By publishing research guides to the web, librarians suddenly had data from web analytics (Vileno, 2007, p. 442). Web analytics revealed that subject guides were not receiving much traffic from patrons (Gibbons and Reed, 2004, p. 124). This lead to further studies which found that most students did not use them as a starting place for their research despite the fact that librarians made them for this purpose (Mussell and Croft, 2013, p. 25). To increase the usage of the research guides, librarians started making them more specific by designing them for a single course (Gibbons and Reeb, 2004, p. 128) (Leighton and May, 2013, p. 128) (Vileno, 2007, p. 434). These were known as course pages (Vileno, 2007, p. 434). By doing this, librarians were specific to the course projects the students would be working on

throughout the semester (Alverson, J.; LeFager, J.; Schwartch, J.; and Brunskil, A, 2015, p. 131).

Librarians started utilizing course pages within their instruction sessions (Leighton and May, 2013, p. 135). By embedding the course pages within their instruction sessions librarians were able to market this service to the students and teach them how to use the course page in their research (Brecher, 2013, p.7). Leighton and May conducted a study in 2003, which found that, while students reported finding the course page helpful, “less than one in ten students actually used four or more resources” (Leighton and May, 2003, p. 132). Leighton and May concluded that in order to get the best return on investment, instruction session should include an introduction to the course page as well as instruction in how to use the course page (Leighton and May, 2013, p. 130). In other words, students must be instructed on the relevance and use of a course page in relationship to their research assignment before they can understand the value it can offer. They need to be integrated into activities and assignments. By matching the course page to the students to the students learning and research experiences they can become relevant.

Quality of Outcome

In general, individuals prefer to choose higher quality applications than those of lower quality (Aubin, et al., 2012, p. 5268). Today, this quality is often determined by whether an application matches the user’s experience on other similar applications. Today, Google is often the determinant of quality among undergraduate students (Cmor and Li, 2012, p. 451). Students conduct their research assignments in such a way as to receive a passing grade from their instructor. Undergraduates are often more concerned

with meeting the assignment parameters for source type and content, than for things such as source reliability, selection and evaluation (Kuhlthau, Heinstrom, and Todd; 2008; n.p.). The information resources they use are picked based off their effectiveness and ease of use so they can reach this desired outcome. Search results are relevant both to their topic, and to the requirements for the assignment (Alverson, et al., 2015, 131). For a course page, this means the listed resources must be relevant and accessible.

Ensure Safety

Safety is one of the basic levels of need as described by Maslow (Aubin, et al., 2012, p. 5267). In this study, this deals most closely with the students' attitude (negative or positive feelings) towards both the course page and to the research process in general (Yoon, 2012, p. 689). Kuhlthau has produced a comprehensive body of research regarding students' attitudes toward the research process. Familiarity with her research can provide insight into why students may have certain attitudes towards course pages.

Kuhlthau's model of Information Search Process (ISP) describes seven stages of the research process (Case, 2002, p. 145). In particular, she highlights the "feelings, thoughts, and actions" of the student (Case, 2002, p. 145). Kuhlthau acknowledges the role of emotions on the research process and emphasizes the negative emotions such as uncertainty and frustration, in the research process (Case, 2002, p. 146). But it's not just the process that can cause frustration. Research tools can also illicit negative emotional responses causing the student to feel insecure or unsafe. Studies show that students "find that traditional library systems...are disappointing, frustrating, illogical, counter-intuitive, and intimidating" (Bawden and Vilar, 2006, p. 349). Uncertainty, frustration, and intimidation can all add to library anxiety, which in-turn can create a feeling of unsafety.

If these feelings occur when using library services, such as course pages, then it will negatively influence the adaptation of these services by patrons (Aubin, et al, 2012, p. 5267-5271).

Cognitive load theory also highlights issues of safety that students may experience when researching. Little found that ‘technology-based research tools’ will help students in their research, but that these must be grounded in the context of a “coherent education” or else they will not help alleviate the confusion and stress students experience when conducting research (Leighton and May, 2010, p. 54). Little went on to conclude that if librarians used the cognitive load theory as a framework for developing course pages and for sharing them during an instruction session, the students would “learn ways to complete research assignments and become effective information users” (2010, p. 55). The cognitive load theory identifies three types of cognitive load: Intrinsic, Extraneous, and Germane (Little, 2010, p. 54-55).

Intrinsic cognitive load is the “amount of cognitive processing required to learn the basics of the material and depends on the complexity of the material presented” (p. 54-55). Extraneous cognitive load happens when the “amount of cognitive processing is overtaxed and the information presented is disorganized or not relevant to the task at hand” (Little, 2010, p. 54-55). And finally, Germane cognitive load “occurs when learners effectively organize and integrate the new material into their working knowledge” (Little, 2010, p. 54-55). If course pages are not affectively grounded by context, then the course page will create an extraneous cognitive load. In this way, the course page could fail to help students navigate the large amounts of data available to them through a university library.

Librarians also need to be aware that undergraduates view themselves as being alone in their research process. This can also cause extraneous cognitive load. In 2009, Melissa Gross and Don Latham conducted a study to understand how undergraduate students perceived their own information literacy skills. They found that students perceived themselves to be self-taught researchers (Gross, M. and Latham, D., 2009, p. 344), and were successful because of their own curiosity, ability to synthesize information, and perseverance (Gross, M. and Latham, D., 2009, p.341). Students also reported that they did not view librarians as someone they could ask for help, since that would be the same as admitting to failure (Valentine, 1993, p. 303). Other traits that students exhibit while doing research include wanting to take the path of least resistance (Kuhlthau, Heinstrom, and Todd, 2008, n.p.), working for a deadline instead of until the project is complete (Kuhlthau, Heinstrom, and Todd, 20008, n.p.), and a preference for using Google to other search tools (Cmor and Li, 2012, p. 451)(He, D., Wu, D., Yue, Z., Fu, A. and Thein Vo, K., 2012, p. 618). Course pages can combat feelings of anxiety by providing students with an obviously finite list of resources. This study should help determine if this is true based on whether or not a significant relationship is found between student perceptions and their intent to use.

Save Energy and Time

Aubin et al. explains that “Humans are constantly adapting to expend the least energy possible to achieve their objective” (2012, p. 5267). This includes the undergraduate student, which has been proven by research regarding undergraduate study habits. For the undergraduate student, they are often required to work with multiple deadlines looming (Kuhlthau, Heinstrom, and Todd; 2008; n.p.). The tool that is most

often used by undergraduates is Google (Cmor and Li, 2012, p. 451) While some researchers have found that library resources could compete with Google (Joint, 2010, p. 246), others reported that students almost entirely prefer Google over the library web site for all of their assignments (He, D., Wu, D., Yue, Z., Fu, A. and Thien Vo, K.; 2012, p. 618).

In her 2008 re-evaluation of the ISP, Kuhlthau explains the influence that the internet and digital resources have had on student's expectations about how and where they are able to access information:

Research suggests that the Internet's readily available information has change students' conceptions of the research process, in that they expect to find information quickly and without effort and where choice of topic is guided by an estimate of easy availability of information (Kuhlthau, Heinstrom, and Todd; 2008, n.p.).

Students will also gravitate towards tools they are familiar with (Valentine, 1993, p. 303). This includes going to familiar individuals for help, for example students will go to a friend first, then the course instructor or a librarian (Valentine,1993, p. 303-304). In order for course pages to provide value to undergraduate students in their research, and to be perceived as useful, they must save time and energy for the student.

Intention to use will be influenced by the usefulness, or value, that a service can provide. To be seen as useful to a student, course pages should be designed for: functionality, context of use, quality of outcome, safety, and saving energy and time (Aubin, et al., 2012, p. 5267-5268).

Method

This study was a summative usability study conducted with the purpose of gathering more information on student perception of the usefulness of course pages in correlation to their intent to use the course page in their research. The information gathered from this survey has the potential to reveal whether or not the library course pages are meeting their intended objectives.

Fifty-four undergraduate students participated in the study. Of these fifty-four, forty-seven completed the survey. The ones that did not complete the survey were removed from the final results so they would not skew the results. These participants were recruited through this study via their course instructors, and through recruitment posters posted in various undergraduate academic buildings. The intention for recruiting this way was to get participants who were actively required to use course pages in their class, and those who may have serendipitously used a course page but were not necessarily directed by their instructor to do so.

Students were asked to identify the course in which they used a library course page. I was able to match this information with correspondence from course instructors to determine the number of participants recruited in the classroom versus those recruited from the posters. 35 of the 47 participants were recruited during their class to take the survey. Of these classes, all had active course pages. The remaining 12 participants were recruited from the posters displayed in various academic buildings. Since 74% of the

results came from students who were actively using a course page within their course, the results may be biased to reflect that student population, instead of being representative of students who may not have been told about a corresponding course page by their instructor. However, these findings can still be useful as they show the potential for how course pages can be perceived when embedded into a lesson plan or course assignment.

The TAM method was used to analyze the data in this study. In 2016, Hye-Young Yoon adapted TAM for a study regarding library applications (2016). Yoon's survey has been modified to match the needs of this study. The survey contains six different variables: perceived ease of use, perceived interactivity, perceived usefulness, attitude, satisfaction, and intent to use (Yoon, 2016, p. 690) (see Table 1). In each section, three different statements were made to capture different aspects of each variable. For example, usefulness involves both a sense that it will help with a class assignment and that it will save time. All the statements in the survey were positive (again see Table 1). For each of these statements, the students were asked to indicate their level of agreement on a seven point Likert scale (1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neutral, 5=somewhat agree, 6=agree, 7=strongly agree) (See Appendix for full survey). The findings from this survey were then analyzed both for their trends in responses to each statement, the mean and standard deviation, and for correlations between various sections state. Our hypothesis is as follows:

- Undergraduate university student's intention to use course pages is affected by perceived usefulness, perceived interactivity, perceived ease-of-use, their attitude, and their satisfaction.

At the end of the survey, participants were also given the opportunity provide feedback about course pages. This qualitative data provided insight into why certain trends may have been happening as they explained further the student's perceptions.

Table 1.

Questionnaire items from survey.

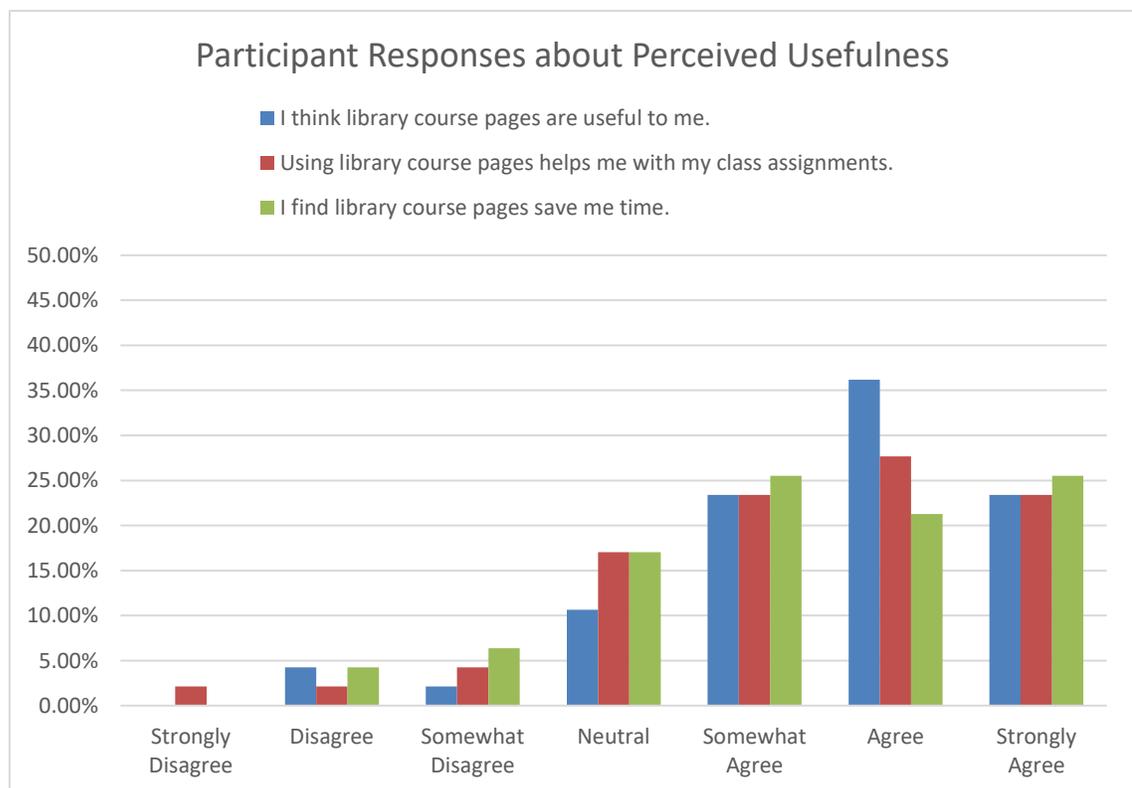
Construct	Statement and Identifier
Perceived Usefulness	<ul style="list-style-type: none"> • I think library course pages are useful to me. (Q6_1) • Using library course pages helps me with my class assignments. (Q6_2) • I find library course pages save me time. (Q6_3)
Perceived Interactivity	<ul style="list-style-type: none"> • I think the library course pages' content is relevant to me. (Q12_4) • It is convenient to use library course pages to access resources. (Q12_5) • The links on library course pages work reliably. (Q12_6)
Perceived ease of use	<ul style="list-style-type: none"> • I find library course pages are easy to navigate. (Q13_7) • I understand the content on library course pages. (Q13_8) • Overall, I think library course pages are easy to use. (Q13_9)
Attitude toward library course pages	<ul style="list-style-type: none"> • It would be a wonderful idea to use library course pages. (Q14_10) • I have positive feelings for library course pages in general. (Q14_11) • It is better for me to use library course pages as compared to the main library search bar. (Q14_12)
Satisfaction with library course pages	<ul style="list-style-type: none"> • Overall, I am satisfied with the library course pages. (Q15_13) • The library course pages meet my expectations. (Q15_14) • The library course pages are a beneficial tool in improving life. (Q15_15)
Intent to use library course pages	<ul style="list-style-type: none"> • I intend to use library course pages whenever possible. (Q16_16) • I intend to use a course page again in the future. (Q16_17) • I recommend library course pages to my friends. Q16_18)

Results

The data was analyzed for general trends including the percentages of the responses, the mean response and the standard deviation, and finally for correlation between different categories in order to determine relationships between the variables. The percentages are out of the 47 participants who fully completed the survey.

Perceived Usefulness

Figure 1. Participant responses about perceived usefulness



Overall, students tended to agree with statements regarding the usefulness of the course page (See *Figure 1*). The following are comments from the participants regarding their perception of the course page's usefulness:

- “While I find them helpful to a specific course's material, it would also be helpful to have instructions as to how to search using other UNC search directories and a list of directories relevant to course content.”
- “They are very useful, and our librarians are awesome.”
- “Great resource, makes research a tinge easier, which is great when time is limited for us students!”

A significant correlation was also found between perceived usefulness and intent to use, which is shown in Table 2.

Table 2.

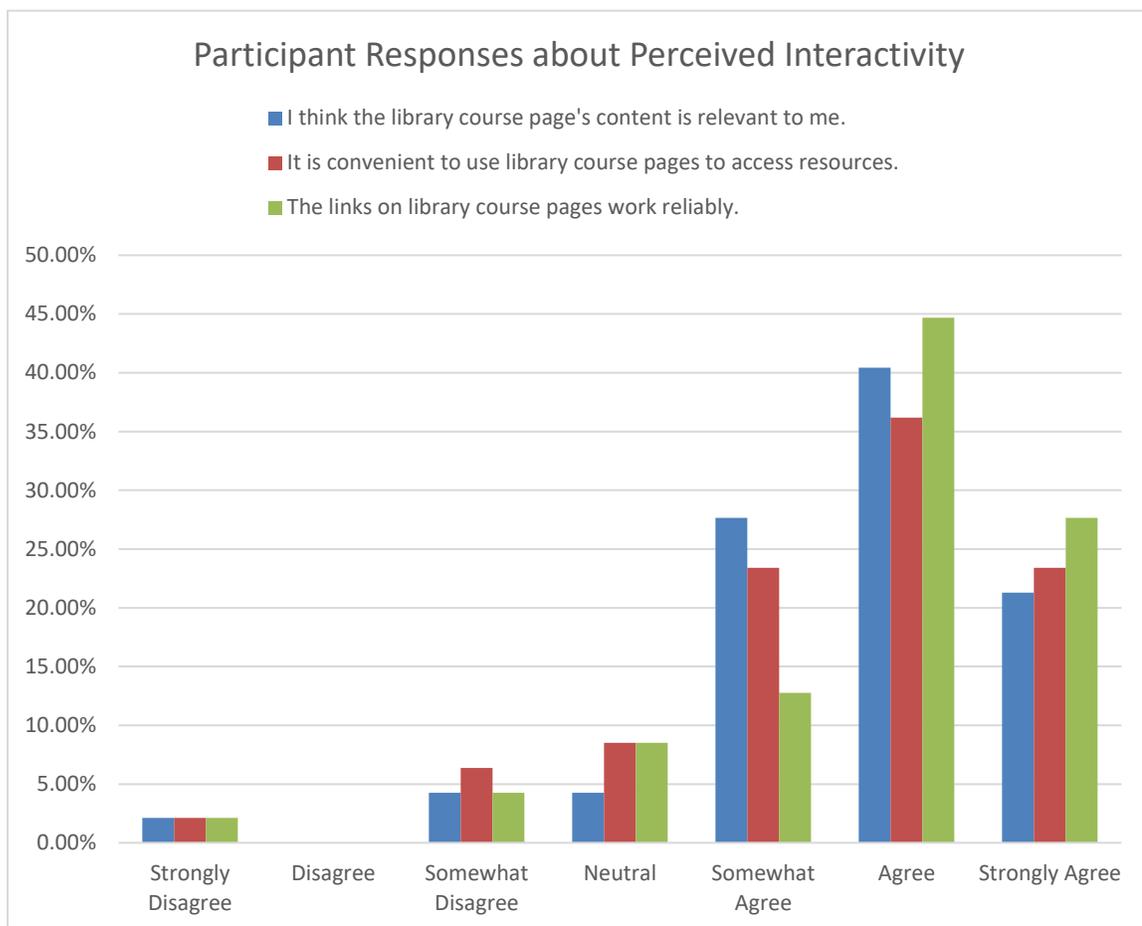
Correlation between usefulness and intent to use.

Correlation between Usefulness and Intent to use			
		Q6_2	Q16_17
Q6_2	Pearson Correlation	1	.380*
	Sig. (2-tailed)		.008
	N	47	47
Q16_17	Pearson Correlation	.380*	1
	Sig. (2-tailed)	.008	
	N	47	47

** . Correlation is significant at the 0.01 level (2-tailed).

Perceived Interactivity

Figure 2. Participant responses about perceived interactivity.



For statements regarding perceived interactivity, participants again tended to agree (as seen in *Figure 2* above). Participants made the following comments regarding the perceived interactivity of course pages:

- “Sometimes links are dead”
- “Sometimes they’re too busy and have so much going on it can feel overwhelming and hard to navigate”
- “Very nicely put together.”

A significant correlation was also found between perceived interactivity and intent to use as shown in Table 3 below:

Table 3.

Correlation between perceived interactivity and intent to use.

Correlation between Perceived Interactivity and Intent to use			
		Q12_4	Q16_18
Q12_4	Pearson Correlation	1	.604**
	Sig. (2-tailed)		.000
	N	47	47
Q16_18	Pearson Correlation	.604**	1
	Sig. (2-tailed)	.000	
	N	47	47

** . Correlation is significant at the 0.01 level (2-tailed).

Perceived Ease-of-use

Figure 3. Participant responses to perceived ease-of-use.

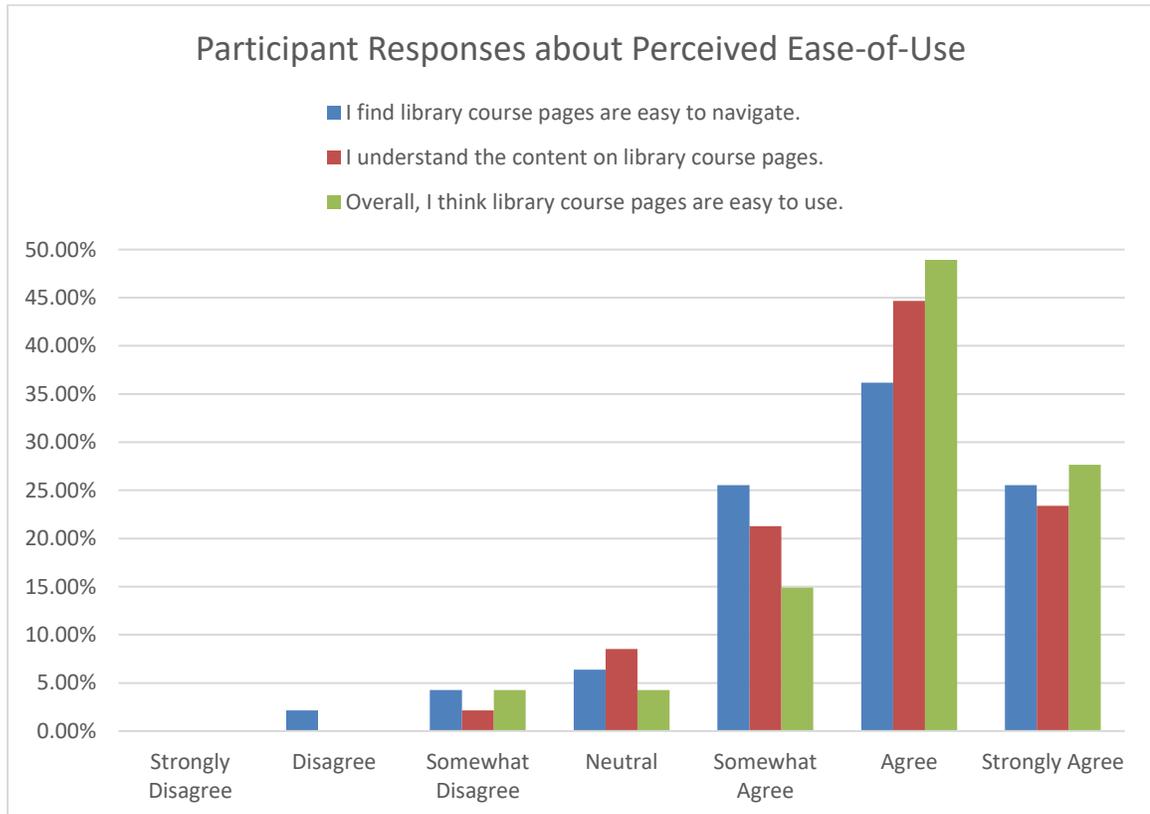


Figure 3 shows that most participant responses ranged from somewhat agree to strongly agree. One participant commented regarding perceived Ease-of-Use:

- “Find a way to combine with Sakai”

A significant correlation was also found between perceived ease-of-use and intent to use.

Table 4 shows these results.

Table 4.

Correlation between perceived ease-of-use and intent to use.

Correlation between Perceived Ease-of-use And Intent to use			
		Q13_9	Q16_16
Q13_9	Pearson Correlation	1	.629**
	Sig. (2-tailed)		.000
	N	47	47
Q16_16	Pearson Correlation	.629**	1
	Sig. (2-tailed)	.000	
	N	47	47
**. Correlation is significant at the 0.01 level (2-tailed).			

Attitude

Figure 4. Participant responses about attitude toward course pages.

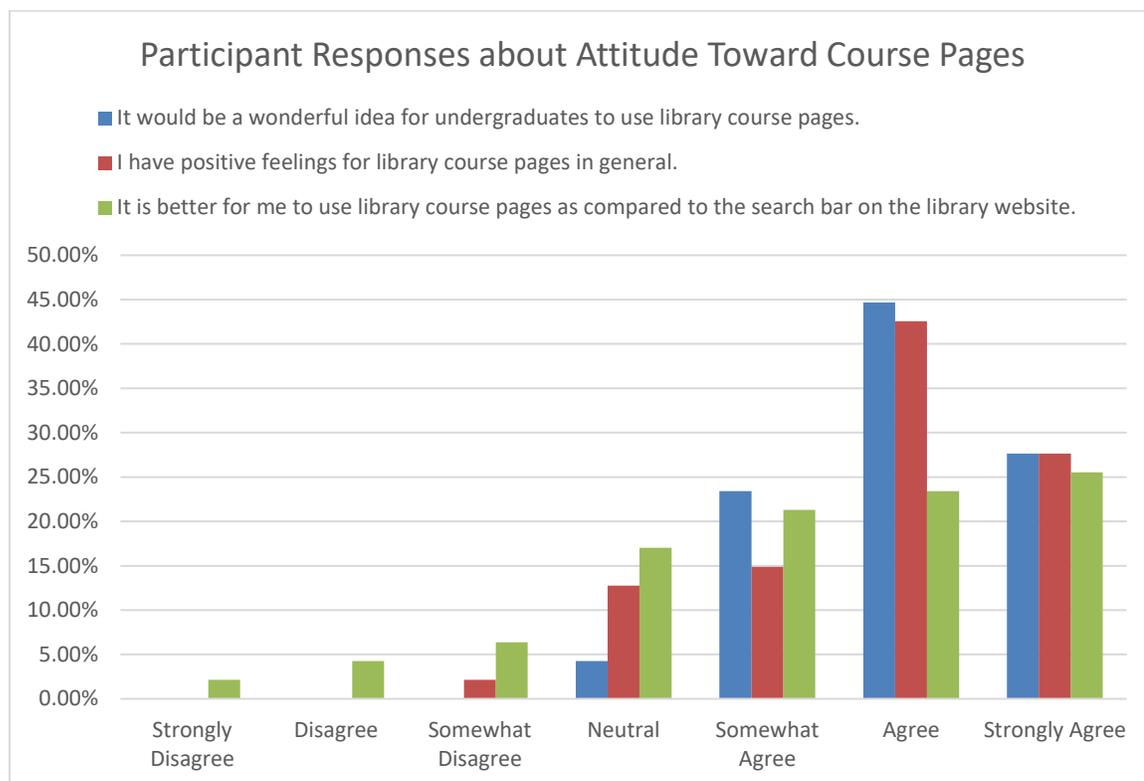


Figure 4, above, shows the response results for the statements regarding Attitude toward the course pages. For these responses, the participants tended to agree to these statements. One participant commented:

- “They’re great!”

As was the case with the other categories, a correlation between attitude toward and intent to use was found to be significant. These results are revealed in Table 5.

Table 5.

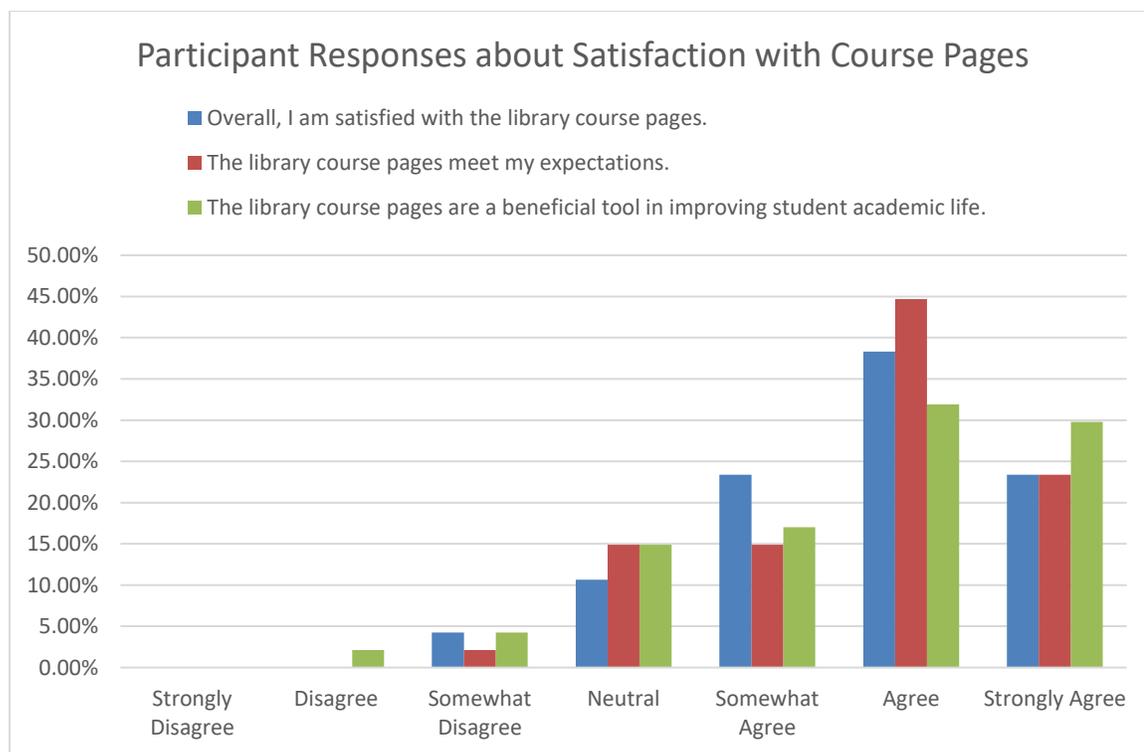
Correlation between attitude toward and intent to use.

Correlation between Attitude toward and Intent to use			
		Q14_10	Q16_17
Q14_10	Pearson Correlation	1	.691**
	Sig. (2-tailed)		.000
	N	47	47
Q16_17	Pearson Correlation	.691**	1
	Sig. (2-tailed)	.000	
	N	47	47

** . Correlation is significant at the 0.01 level (2-tailed).

Satisfaction

Figure 5. Participant response about satisfaction with course pages.



Similar to the other categories, the majority of participant responses to questions regarding to satisfaction ranged from somewhat agree to agree (see *Figure 5*). Comments from the participants were as follows:

- “Yes, Although I have had positive experiences in the 2 classes (AAAD214 and PSYC514) I have used them in, I have not heard much about them. I think it would be a great resource for all classes to use!”
- “They really do Provide a great starting point for research!”

The correlation between satisfaction and intent to use was tested and found to be significant. These results are shown in Table 6, below.

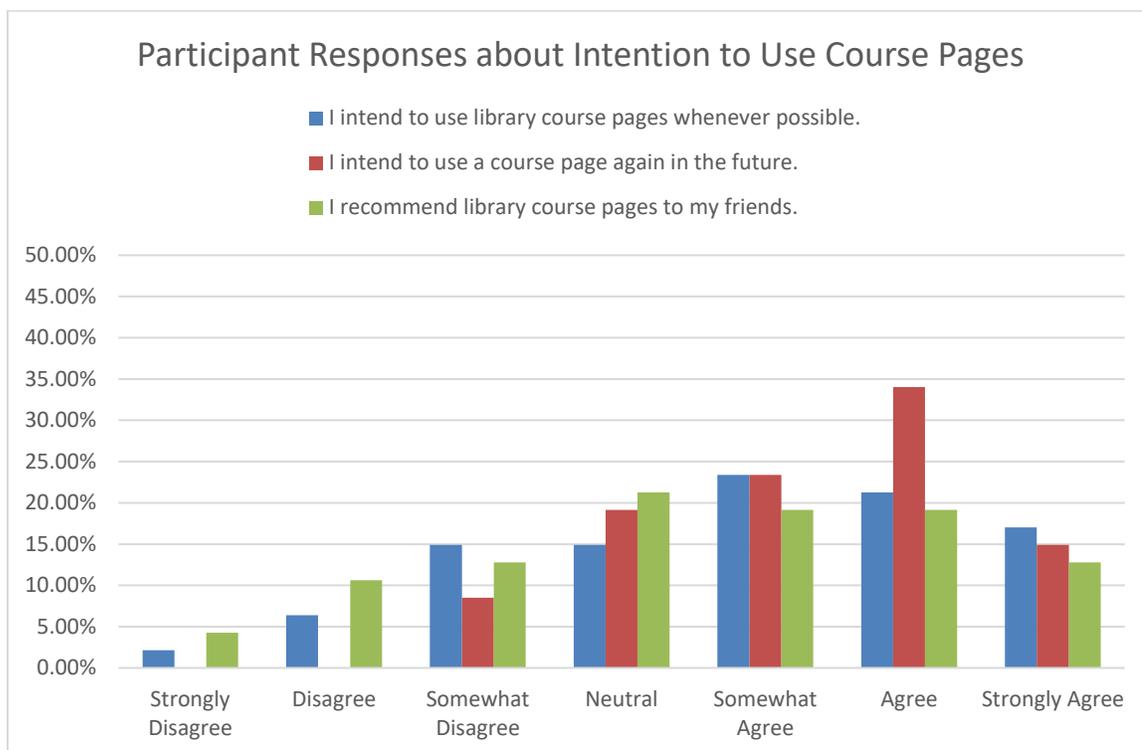
Table 6.

Correlation between satisfaction and intent to use.

Correlation between Satisfaction and Intent to use			
		Q15_14	Q16_18
Q15_14	Pearson Correlation	1	.600**
	Sig. (2-tailed)		.000
	N	47	47
Q16_18	Pearson Correlation	.600**	1
	Sig. (2-tailed)	.000	
	N	47	47
** . Correlation is significant at the 0.01 level (2-tailed).			

Intention to use

Figure 6. Participant responses about intent to use course pages.



Participant responses to Intent to use were more varied than their responses to statements in the other categories (see *Figure 6*). Here the majority of responses ranged from neutral to strongly agree. One participant commented regarding their intent to use library course pages:

- “I find them somewhat helpful, but often, I end up finding the sources I need on my own.”

As mentioned in previously, intention to use was found to have significant correlations with each of the other categories.

Mean

The mean of each statement was also calculated. These results are shown in Table 7 and Table 8. The means range from 4.49 to 5.96. Since the survey was on an ordinal

scale, with 1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neutral, 5=somewhat agree, 6=agree, 7=strongly agree, the average response seems to fall between the neutral (4) to agree (6) range. However, due to outlying responses of either strongly disagree or strongly agree, the standard deviation was also calculated. The higher the deviation, the more spread out the responses tended to be, this seems to be especially the case for Q16_16, and Q16_18 which were statements about intent to use.

Table 7.

Mean of participant responses to each statement.

Mean of participant responses to each statement 1									
	Q6_1	Q6_2	Q6_3	Q12_4	Q12_5	Q12_6	Q13_7	Q13_8	Q13_9
Mean	5.55	5.34	5.30	5.62	5.53	5.74	5.66	5.79	5.91
N	47	47	47	47	47	47	47	47	47
Std. Deviation	1.265	1.418	1.413	1.208	1.316	1.276	1.185	.977	.996

Table 8.

Mean of participant responses to each statement.

Mean of participant responses to each statement 2									
	Q14_10	Q14_11	Q14_12	Q15_13	Q15_14	Q15_15	Q16_16	Q16_17	Q16_18
Mean	5.96	5.81	5.23	5.66	5.72	5.62	4.83	5.28	4.49
N	47	47	47	47	47	47	47	47	47
Std. Deviation	.833	1.056	1.549	1.089	1.057	1.295	1.606	1.192	1.692

Discussion and Conclusion

This study focused on whether or not undergraduates' intention to use library course pages was affected by perceived usefulness, perceived interactivity, perceived ease-of-use, their attitude, and their satisfaction. From the study's findings, these variables were found to have a significant correlation to the participants' intent to use, support the study hypothesis. These findings also supported previous studies, such as Alverson et al., which use structured interview consisting of four different parts (research habit interview, unguided research task, research task using a research guide, and an exit interview) (2015, p. 126). In this study, they found that research guides should be used within a course and paired with library instruction (Alverson, et al., 2015, 131). Due to the recruitment method of this study, we know that most the participants used a library course page for a class assignment. Since these participants reported out that they had positive reactions to the course page, this study verifies the findings from previous studies which used different methods.

What is not known, is whether or not students used any of the resources or links on the course page. One respondent commented: "They really do provide a great starting point for research!" This could be said to suggest that the student did use the resources available through the course page. However, this would be an inference from the comment and cannot be said with any level of certainty. Contrary to this participant's statement, another commented: "I find them somewhat helpful, but often, I end up

finding the sources I need on my own.” These contrary responses open up questions of how these course pages are used by students and their instructors. In the future, studies should be conducted to see if student usage matches the student’s self-reported perception of the course pages.

Student comments also implied a need to evaluate the interactivity of the course pages. Two students made comments regarding issues with the course page functionality and design:

- “Sometimes they’re too busy and have so much going on it can feel overwhelming and hard to navigate.”
- “Sometimes the links are dead.”

One previous study (Slemons, 2013, p. 31) found that too many words on a course page may deter student usage. The first student comment mentioned above seems to support this claim. An evaluation of the style and functionality of course pages may be a beneficial direction for future studies, especially to see if 1) librarians adhere to current best practices for publishing to the web, and 2) if those best practices match current user expectations.

Most of the course pages reviewed in this study were mostly used by undergraduates within their classrooms. When the results of this study are considered alongside other research findings regarding course page usage within a classroom, it seems to suggest that course pages should be thought of as learning objects rather than as reference guides. Situating course pages as learning objects within a classroom provides this resource with a context relevant to the students, this can then provide insight to the

librarian into how to make it functional, how to ease student frustration and anxiety (safety), save students time and energy, and match the expected quality of the outcome.

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Appendix: Survey

Are Course Pages Useful?

Q12 About the Study: You are being asked to participate in a study conducted by Grace Sharrar, a UNC Master's in Library Science student. The purpose of this study is to learn more about what undergraduates think of library course pages.

Your Participation: In order to be entered into the drawing for the \$40 Amazon gift card, you must complete the entire survey and provide your email at the end. Your participation in this survey is completely voluntary.

Risks and Benefits: We do not anticipate risk beyond that which you encounter in day-to-day life. There may be no direct benefit to you for participating in this study.

Your Privacy: Your email will not be associated with the data collected through this survey. Instead, data will be stored using a random identifier. Your survey will not be shared outside of the research project. In any publication that comes out of this study, you will not be personally identified. The data collected through this will be kept on UNC's OneDrive storage or temporarily on an approved computer. The recordings and data collected will be kept until the project is completed, and then they will be deleted. This will take place no later than June 2017.

If you have Questions: If you have any questions after the interview has taken place you can contact me at stempfle@live.unc.edu. If you have any questions or concerns about your rights as a study participant, you can contact the UNC Institutional Review Board (IRB) at 919-966-3113. Once you have finished reading the terms for participating in this study, please indicate below whether or not you agree to participate.

- I have read the terms above and agree to participate in this survey. (1)
- I do not wish to participate. (2)

Display This Question:

If About the Study: You are being asked to participate in a study that is being conducted by Grace S... I do not wish to participate. Is Selected

Q11 Thank you for your time and have a great day!

Condition: Thank you for your time and... Is Displayed. Skip To: End of Survey.

Q15 Are you an undergraduate student at UNC?

- Yes (1)
- No (2)

Display This Question:

If Are you an undergraduate student at UNC? No Is Selected

Q17 Unfortunately you do not meet the requirements to complete the survey. Thank you for your willingness to participate.

Condition: Unfortunately you do not me... Is Displayed. Skip To: End of Survey.

Q18 How many years have you been at UNC?

Q6 Have you ever used a library course page? (Some examples of library course pages are shown below).

- Yes (1)
- No (2)

Display This Question:

If Have you ever used a library course page? No Is Selected

Q7 Unfortunately you do not meet the requirements to complete the survey. Thank you for your willingness to participate.

Condition: Unfortunately you do not me... Is Displayed. Skip To: End of Survey.

Q8 Which UNC class (or classes) did you use a library course page for? For each course please provide the official course title and separate them with a comma (e.g. INLS 502: User Education, ENGL 105, and SOCI 422).

Q7 Do you have any other comments about library course pages?

Q18 Would you be willing to participate in a follow-up interview?

Yes (1)

No (2)

Q8 Thank you for your participation. In order to be eligible for a chance to win the \$40 Amazon gift card, you will need to provide your email address below. If you have any questions about this survey you can contact me at stempfle@live.unc.edu. If you have any questions or concerns about your rights as a study participant, you can contact the UNC Institutional Review Board (IRB) at 919-966-3113.