Information Anxiety from the Undergraduate Student Perspective: A Pilot Study of Second-semester Freshmen

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In early spring 2013, a pilot study was conducted at a major public university in Ohio to explore elements of information anxiety (defined herein as a combination of library anxiety and information technology anxiety) among second-semester freshmen enrolled in all iterations of both a traditional and a remedial first-year English course. The Information Anxiety Scale (an adaptation of Sharon Bostick's 1992 'Library Anxiety Scale') was the pilot study's primary measure. Study researchers wanted to examine which information anxiety elements registered the most statistical significance for respondents. Analysis of results revealed statistically significant findings between elements in the scale and previous research and library experience, sex, and race/ethnicity. This pilot study experience will aid the study's researchers in revising their version of the Information Anxiety Scale for a larger study on information anxiety, toward understanding specific information anxiety triggers for undergraduate students and informing future information literacy instruction practices.

Keywords: library anxiety, information technology anxiety, information anxiety, information literacy, quantitative analysis, Kruskal-Wallis test

Introduction

Many researchers in the field of library and information science in education have explored different ways that undergraduate students experience the information seeking process (Belkin, 1980; Dervin, 1999; Jiao, Onwuegbuzie, & Lichtenstein, 1996; Kuhlthau, 1991; Williamson, 2005). Most particularly, many of these researchers have endeavored to understand more about information seeking from the undergraduate student perspective, such as when searches relate to specific information needs (e.g. looking for information to write an academic paper). Of the literature available on information seeking and undergraduate students, something appears to be fairly consistent in the findings, particularly in recent research: undergraduate

students experience a great deal of information anxiety when seeking information in a formal (i.e. library) setting, particularly if the process relates to an academic need (Becker, 2003; Gross & Latham, 2007; Gross & Latham, 2009; Kuhlthau, 1991; Van Kampen, 2004). Researchers in library and information science have discovered that such anxiety can be deleterious to both information-seeking and the academic performance of undergraduate students in the long run (Kuhlthau, 1991; Kwon, 2008; Kwon, Onwuegbuzie, & Alexander, 2007; Nicholas, Huntington, Jamali, Rowlands & Fieldhouse, 2009; O'Brien, & Symons, 2007).

Despite scholarly awareness of the situation described above, little is known about triggers for such anxiety, or specific areas within the concept of information

anxiety that are experienced most strongly by undergraduate students. Therefore, there is a need to understand more about specific elements within information anxiety that have an effect on undergraduate students so that academic librarians may be more effective in addressing these effects in working with undergraduate students, particularly in terms of information literacy instruction. This pilot study aimed to build a foundation for further study in the area of specific triggers of information anxiety from the undergraduate student perspective.

Study Background and Purpose

One of the authors became interested in the role of information anxiety on student performance with information literacy tasks when teaching freshmen students in an orientation class at a four-year state university. It was observed that many students became anxious about the library orientation portion of the class, and some of the reasons they gave for such nervousness had to do with not understanding how the library and research tools work. Research into the literature on the topic revealed the Library Anxiety Scale, developed initially by Sharon Bostick in 1992 and further validated by Onwuegbuzie, Jiao, and Bostick in 2004. The Library Anxiety Scale has 43 statements about library usage and emotion that are meant to assess which areas of the library (e.g. staff, resources, tools, etc.) cause respondents the most anxiety (Onwuegbuzie *et al.*, 2004). Based on previous adaptations of this measure by other researchers in library and information science (Jerabek *et al.*, 2001; Kalbach, 2006; Kwon, 2008; Kwon *et al.*, 2007; Van Kampen, 2004), it became apparent that the potential existed to adapt the measure to be more reflective of information anxiety by including items related to information technology (which students in the author's courses had explained were sources of anxiety for them when performing research tasks). The measure

could then be used to study information anxiety as a whole among undergraduate students. The Information Anxiety Scale (Appendix I) contains 12 additional items reflecting the broader area of information anxiety.

Literature detailing undergraduate experiences with introductory research confirms that anxiety plays a role in how students feel about the process. In a four-year national study, Project Information Literacy (2012) discovered that adjectives used frequently to describe the research process by undergraduate students included "fear, angst, tired, dread, excited, anxious, annoyed, stressed, disgusted, intrigued, confused, and overwhelmed." The study's researchers believe an appropriate term to summarize these adjectives is 'information anxiety,' defined here with input from research in the area as a combination of the anxiety a person experiences while using a library and its resources, and the anxiety a person experiences when using information technology to complete a task, particularly if that task relates to information seeking (Becker, 2003; Jerabek, Meyer & Kordinak, 2001; Jiao & Onwuegbuzie, 2004; Johnston & Webber, 2003; Nicholas *et al.*, 2009). This definition is consistent with concepts put forth by Wurman, Leifer, Sume, and Whitehouse (2001) in their work exploring the impact of digital technologies, the Internet, and other 21st Century advancements on the information behavior of people in general, but adds specific concerns (detailed below) experienced by undergraduate students in relation to libraries and information technologies used in pursuit of academic goals.

Originally, focus in library and information science was on "library anxiety," a term brought to the fore in library and information science literature by researchers like Constance Mellon in the late 1980s (Kwon *et al.*, 2007). Followed up on by Bostick (1992) and others since then (Gross *et al.*, 2009; Kwon, 2008; Kwon *et al.*, 2007; Onwuegbuzie *et al.*, 2004; Van Kampen, 2004), library anxiety as a term

is best described as the range of anxiety (fear, nervousness, confusion, etc.) someone experiences when attempting to identify, define, and satisfy an information need, especially when that person must use the library and/or its resources (such as reference services) to satisfy that need (Gross *et al.*, 2000; Gross *et al.*, 2007; Onwuegbuzie, Jiao & Bostick, 2009; Van Kampen, 2004). Based on late 20th/early 21st century additions of information technology to libraries, it is a logical step to include the impact of information technology (from the use of word processing software, to learning how to use academic research databases) on library anxiety in undergraduate students. The combination of information technology and library anxiety in undergraduate students has been studied specifically by Kwon *et al.* (2007) and Van Kampen (2004), as well as generally by Becker (2003), Jerabek *et al.* (2001), Jiao *et al.* (2004), and Kalbach (2006).

However, despite numerous adaptations and additions to Bostick's original Library Anxiety Scale (1992; Jiao *et al.*, 2005; Onwuegbuzie *et al.*, 2004) to include information technology components and concerns in relation to information anxiety in undergraduate students (detailed above), very few of these studies explain appropriately where in their information seeking students believe they feel higher levels of information anxiety, or how they believe this anxiety impacts them during their information search process primarily, and in regard to their academic performance, overall. Previous research in this area puts forth that a link exists between heightened information anxiety and decreased academic performance (Gross *et al.*, 2007; Gross *et al.*, 2009; Kuhlthau, 1991; Kwon, 2008; Kwon *et al.*, 2007; Nicholas *et al.*, 2009; O'Brien *et al.*, 2007; Roselle, 2009), but what specifically incites or heightens such anxiety is understudied.

As was mentioned earlier, the Library Anxiety Scale has been adapted previously by other researchers examining various facets of 21st century information-seeking (computer usage, multimodal research, etc.). For this pilot study, the adaptation added elements related specifically to information technology (both hardware such as computers, and software such as online research databases) and information seeking in general, and made sure these elements were consistently worded with the rest of the scale. The purpose of this pilot study was to preliminarily test the adapted scale with a select group of respondents (i.e. all second-semester freshmen in all iterations of a traditional and a remedial first-year English course at a major public university in Ohio) to aid the researchers in exploring ways to strengthen the scale for a larger study in the future. Additionally, the researchers examined where statistical significance registered in the pilot study's findings, to inform future research in the area of information anxiety in undergraduate students.

Literature Review

For those who study the information seeking processes of undergraduate students in the United States, it has been discovered repeatedly that uncertainty and anxiety are common factors in the process, as was discussed earlier. It has also been established that when uncertainty and anxiety are heightened (either through frustration or lack of ability in this area), information seekers either "satisfice" in their information seeking (i.e. claim satisfaction with minimal or poor resources), or abandon a search for information altogether (Becker, 2003; Gross *et al.*, 2007; Gross *et al.*, 2009; Kalbach, 2006; O'Brien *et al.*, 2007; Prabha *et al.*, 2007). Indeed, anxiety in general is something that has been identified by seminal researchers in the field of the information seeking process as being the biggest impediment to successful completion of information tasks (Belkin, 1980; Dervin, 1999; Kuhlthau, 1991).

In terms of the necessary information literacy and critical thinking skills required

for undergraduate students to succeed academically (ALA, 2000), satisficing in information seeking and information search abandonment has been shown to produce negative effects on undergraduate student performance in the short term, and can contribute significantly to poor overall academic performance in the long term, affecting chances of degree completion (Becker, 2003; Gross *et al.*, 2007; Gross *et al.*, 2009; Kwon, 2008; Kwon *et al.*, 2007; Nicholas *et al.*, 2009; Van Kampen, 2004). This is particularly true of undergraduate students enrolled in remedial coursework (Bettinger & Long, 2005; Fields & Holland, 1998; Roselle, 2009).

Previously, the information search process for students in higher education and the anxiety surrounding the process has been studied from the perspective of domestic students entering higher education immediately after high school (Becker, 2003; Gross *et al.*, 2007; Gross *et al.*, 2009; Van Kampen, 2004), the perspective of graduate students (Jerabek *et al.*, 2001; Jiao *et al.*, 2004), and the perspective of international students (Nicholas *et al.*, 2009). In these studies, information anxiety is a key theme that emerges time and again. Although lead researchers in this field (such as Belkin, 1980; Dervin, 1999; Kuhlthau, 1991; and Williamson, 2005), not all of whom agree, have given various reasons why information seekers like undergraduate students experience anxiety or uncertainty in an information search, very little research examines specific factors that either increase or decrease anxiety or uncertainty during the information seeking process. One thing these cited researchers do agree on is that one of the best ways to aid students' academic success is through limiting their various anxieties during the information seeking process. The pilot study described herein forms a foundation for further research in the area of limiting information anxiety specifically by increasing understanding of specific causes for information anxiety among undergraduate students in general.

Methods

Consistent with traditional methods of survey data analysis (particularly in relation to the Library Anxiety Index), a quantitative approach was taken in analyzing the data collected during this pilot study (Babbie, 1990; Babbie, 2011; Kerlinger et al., 2000). As noted previously, the researchers adapted the "Information Anxiety Scale" (found in Appendix I) from the "Library Anxiety Scale" (Bostick, 1992; Onwuegbuzie *et al.*, 2004) to include items in the scale that deal directly with information technology and general information seeking. Adaptation of the scale was done in consideration of academic advances made between the scale's original creation in 1992 and now, as well as accounting for the role that information technology (e.g. academic research databases) plays in the 21st century undergraduate student's research endeavors, particularly when using an academic library. As much as possible, items added to the scale conformed to language already established in the scale, as it was the wish of these researchers to maintain the high reliability and validity with which the original scale measured elements of anxiety (Onwuegbuzie *et al.*, 2004). Added items in the scale are marked with an asterisk.

Additionally, where it made sense to amend items to be consistent with what the average academic library undergraduate student will encounter, these amendments were made as minimally as possible. Amended items are marked with a cross. It is worth noting that some previous adaptations of the Library Anxiety Scale changed only those items relating to mechanical barriers (such as the item asking students about use of copiers in the library) to account for information technology anxiety (Kwon, 2008, Kwon *et al.*, 2007; Van Kampen, 2004). The adaptation for this pilot study chose to add elements dealing with information technology specifically, and left most of the "mechanical barriers" questions originally written by Bostick (1992) intact to retain as much as

possible the high validity and reliability with which the original scale measured (Onwuegbuzie *et al.*, 2004).

The adapted scale was created online for web distribution using Qualtrics survey creation software. A link to complete the "Information Anxiety Scale" was sent via university email accounts to all second-semester freshmen at the main campus of a major public university in Ohio, enrolled in (1) College Writing I (traditional first-year English course), and (2) Introduction to College Writing Stretch (remedial first-year English course) during the Spring 2013 academic semester. IRB approval for the pilot study was awarded in January 2013. In line with the research parameters of this pilot study, the university's Office of the Registrar provided the pilot study researchers with the university email addresses for 845 potential respondents (815 in College Writing I, 30 in Introduction to College Writing Stretch), and respondents were targeted via four BCC emails over the course of 10 weeks. No incentive to complete the survey was provided, and participation was voluntary. All respondents were anonymous. These researchers acknowledge that lack of incentive to participate in this pilot study may have contributed to the relatively low response rate (125 total responses, with only approximately 96 fully completed surveys—a total response rate of 15% and a viable response rate of around 11%). Future studies shall seek ways to overcome this pilot study's limitations in terms of low response rate (e.g. targeting larger populations, offering incentives to participate, etc.).

Through the data collected, two research questions were addressed: (1) Which of the independent variables in the pilot study (i.e. two pre-survey questions and demographic questions), if any, affect information anxiety, and (2) If there is an effect with any of the independent variables; what elements of information anxiety are affected?

The next section details findings from the data collected from the survey.

Findings

As has already been noted, only about 15% of those targeted for the pilot study responded to the survey, with a viable response rate of approximately 11% (based on wholly completed surveys). The confidence interval for the total number of respondents to this pilot study was calculated to be 5.75 so, in order to yield a 95% level of confidence in the pilot study, approximately 216 responses would have been required (Creative Research Systems Sample Size Calculator, 2012). However, despite a lower level of confidence for this pilot study, numerous items in the scale still registered with strong levels of statistical significance, providing guidance for pilot study researchers in areas ripe for future exploration with a larger sample base, and indicating that the statistical significance of these items was beyond that which may have occurred by chance alone (Vaughan, 2001).

Because the data were distributed non-normally, and especially because the vast majority of the pilot study's variables were ordinal, non-parametric inferential tests were used throughout analysis. Consequently, the median becomes the primary measure of central tendency as is recommended when conducting non-parametric analysis (Vaughan, 2001). Ideally, representative samples from both traditional undergraduate students and undergraduates in remedial coursework would have allowed for comparison between the two student groups. However, sufficient response rates from students in the remedial English course were not obtained. Alternate means to gather data on information anxiety from these students, specifically, will be explored in future studies.

To analyze the data, the Kruskal-Wallis Test in SPSS was used (because variables in the data set were ordinal), and the necessary variable conditions to run a one-way analysis of variance (ANOVA) test were not met (i.e. the existence of a normal population distribution and continu-

ous variables [Vaughan, 2001]). Additionally, the Kruskal-Wallis test can compare three or more groups of data for statistically significant difference. As the pilot study researchers sought to investigate if any of the independent variables had an impact on specific elements within the scale, the Kruskal-Wallis test allowed for non-parametric, categorical investigation of multi-group variables (e.g. race/ethnicity) (Vaughan, 2001).

Exploring Responses to Research Question 1

The demographic variables which accounted for the most statistically significant differences in terms of individual items in the "Information Anxiety Scale" were sex and race/ethnicity. Other variables from the scale registering statistically significant differences in terms of individual items were preliminary questions Q1 *(Before attending [major public university in Ohio], I used the Internet to find information for an academic assignment),* and Q2 *(Before attending [major public university in Ohio], I visited a library to find information for an academic assignment).*

Exploring Responses to Research Question 2

Statistical analysis for preliminary question 1 revealed that those who had used the Internet to find information for an academic assignment prior to attending a major public university in Ohio were significantly more likely to respond that instructions for using the major public university library's online resources (e.g. academic research databases) were clear, than those who had not ($X^2(1, n = 94) = 4.10, p = 0.043$). For preliminary question 2, those who had visited a library to find information for an academic assignment prior to attending a major public university in Ohio were more likely to respond (a) that they could not get help in the li-

brary at times they needed it ($X^2(1, n = 95) = 3.94, p = 0.047$); (b) they were 'not unsure' about how to begin a search for information in general ($X^2(1, n = 91) = 3.97, p = .046$); and (c) that they were comfortable using the library ($X^2(1, n = 92) = 4.23, p = 0.040$).

For sex, females were more likely than males to (a) believe reference librarians are unhelpful; (b) be unsure about how to begin their research; and (c) get confused trying to find their way around the library; whereas males were more likely than females to (a) feel comfortable using the library and (b) believe good instructions for using the library's computers are available. Specific scores are displayed in Table 1.

For race/ethnicity, statistically significant difference was revealed between race/ethnicity groups in (a) believing there is often no one available in the library to help; (b) how comfortable race/ethnicity groups feel searching for information; (c) how race/ethnicity groups feel about the library as an important part of their school; (d) how race/ethnicity groups feel about computers in the library being occupied by others; (e) regarding whether or not the instructions for using the library's computers are clear; and (f) regarding how safe a place they perceive the library to be. Specific scores are displayed in Table 2. Tentative examination of the mean ranks between the race/ethnicity groups of statistically significant items revealed (a) Caucasians were the most likely to believe there is often no one available in the library to help them, (b) Hispanic-Americans felt the most comfortable searching for information, (c) African-Americans were the most likely to agree that the library is an important part of their school, (d) Caucasians were the most likely to believe computers in the library are usually occupied by others, (e) Caucasians were the most likely to believe the instructions for using the library's computers are not clear, and (f) Hispanic-Americans were the most likely to believe the library is a

Table 1. Statistical Significance Between Items in the Scale and Variable "Sex".

| | Gender | | | | |
| | Male Mean | Female Mean | | | |
Statistically Significant Items	Male Mean	Female Mean	X^2	Df	N
5: The reference librarians are unhelpful.	35.63	52.04	**7.78****	1	94
10: I am unsure about how to begin my research.	35.27	50.46	**6.13***	1	92
12: I get confused trying to find my way around the library.	34.32	51.04	**7.71****	1	92
21: I feel comfortable using the library.	55.38	42.45	**5.04***	1	91
43: Good instructions for using the library's computers are available (e.g. how to access computer programs).	57.98	42.90	**6.47***	1	93

*p > .05.

**p > .01.

safe place. Further analysis by the authors will explore specifically where differences in these results lie between the identified race groups in the pilot study (Caucasians, African-Americans, Hispanic-Americans, and Other race/ethnicity background) to inform future research.

Discussion

It is interesting to note the particular difference between items on the scale and sex. Specifically, findings indicating that females in the pilot study appeared to find reference librarians more unhelpful, registered more confusion navigating the library itself, and be less sure about how to begin a research endeavor (as opposed to males in the pilot study), were particularly noteworthy to the authors. Future information anxiety research that examines sex specifically may determine if these differences exist between the sexes for most incoming undergraduate students, and

Table 2. Statistical Significance Between Items in the Scale and Variable "Race/Ethnicity."

| | Race/Ethnicity Mean Ranks | | | | | | |
Statistically Significant Items	Caucasian	African-American	Hispanic-American	Other	X^2	Df	N
20: There is often no one available in the library to help me.	51.22	33.46	21.75	17.00	**12.22****	3	93
22: I feel comfortable searching for information.	43.23	64.73	74.75	38.33	**10.70***	3	93
38: The library is an important part of my school.	43.23	64.08	5.75	25.00	**8.88***	3	92
41: Computers in the library are usually occupied by others.	49.63	43.27	5.75	25.00	**8.58***	3	93
49: The instructions for using the library's computers (e.g. how to access computer programs) are not clear.	48.99	36.27	4.50	43.17	**8.74***	3	91
53: The library is a safe place.	42.90	60.25	78.00	44.17	**8.73***	3	91

*p > .05.

**p > .01.

if so, what can be done to minimize the difference. Additionally, as stated, future analysis within the race/ethnicity category will establish the exact nature of the differences expressed between race groups to inform future study directions for this variable.

In addition to the inferential findings presented above, analysis of the pilot study's descriptive statistics revealed that although 50% of respondents were mostly sure about how to begin a general search for information, 47.8% respondents agreed or strongly agreed they were unsure about how to begin their research, 62.5% of respondents feel uncomfortable searching for information, and 67% of respondents do not want to learn how to do their own research. This means that researchers in the area of information anxiety in undergraduate students should look at both the ramifications of information anxiety on information behavior and the role of motivation and willingness to learn in how undergraduates conduct academic research. Indeed, motivation and willingness to learn in terms of conducting research may be an area rife with research possibilities, particularly regarding incoming undergraduate students, and students progressing through their degree programs. It is speculated by these researchers that lack of motivation decreases for most undergraduate students once they begin focusing on specific research areas within their academic majors. Only further analysis in this field will determine whether or not this is actually the case.

Conclusion

These researchers believe there is great potential for research in the area of information anxiety between (a) undergraduates who have had previous experience with both libraries and the Internet for research and those who have not, (b) sex, and (c) race /ethnicity. Each of these three variables have many opportunities for further exploration in terms of informa-

tion anxiety and specific elements within that could potentially reduce information anxiety as a whole if treated with targeted instruction, both in the library and in classrooms. Additionally, as the quoted descriptive statistics bear out, understanding the role of motivation and willingness to learn in the research process as a whole for undergraduate students is worthy of further investigation, toward improving future information literacy instruction that can focus on specific information needs of undergraduate students, particularly first-year undergraduate students.

In terms of information anxiety differences between those with previous research experience and those without, librarians may be able to do more to differentiate between student abilities (based on whether or not students have previous research experience with libraries and/or the Internet) and thereby cater information literacy and research sessions accordingly, based on the specific information anxiety experienced by both groups. In terms of information anxiety differences between sex, future research could examine whether females in future, similar studies report significantly higher anxiety than males, especially in terms of library and information technology usage overall. This will allow librarians to explore ways to limit such anxiety differences between the sexes through experimentation with different techniques in instruction. In terms of information anxiety differences between race/ethnicity, future research could examine ways to minimize information anxiety for all races, particularly in the area of library and information technology usage and understanding, with specific methods developed to aid race/ethnicity groups that experience particular types of information anxiety that may not be felt as highly as other race/ethnicity groups (as evidenced in this pilot study's findings).

Finally, the authors note that the measure itself may have been problematic for respondents in this pilot study. Although Bostick's (1992) measure tests highly in

terms of both validity and reliability (On-wuegbuzie *et al.*, 2004), adding items that relate to information technology increased the length of the survey and may have contributed to many respondents (excluded from analysis) not completing the survey. As a larger, more comprehensive study is planned beyond this pilot study, a revision of the Information Anxiety Scale may become appropriate or, as was discussed previously, larger populations targeted and/or incentives given for completion. However, despite lower than expected response rates, that numerous items within the scale still registered as statistically significant is encouraging, and provides pilot study researchers with a solid foundation for future research in the area of information anxiety.

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Appendix A: Information Anxiety Scale

Please answer the following preliminary questions[1] before continuing to the next page.

This is an anonymous survey. Please answer each statement honestly.

Before attending Kent State, I used the Internet to find information for an academic assignment.

1. Yes
2. No

[1]Please note: Preliminary questions were not included in Bostick's (1992) original Library Anxiety scale.

Before attending Kent State, I visited a library to find information for an academic assignment.

1. Yes
2. No

If you answered "1. Yes" to the previous question, please select which kind of library you visited from the following options. Select all that apply.

1. Public library
2. School library
3. College/university library
4. Other library

If you answered "4. Other library" in any way to the previous question, please type in the box the kind of library you visited.

_____
_____

("Information Anxiety" survey continued on the next page)

Survey Instructions: You are being asked to respond to statements concerning your feelings toward both college or university libraries and information technologies such as computers, computer software, the Internet, etc. On a scale of "1-Strongly disagree" to "5-Strongly agree," please select the option that best reflects your answer to each question. This is an anonymous survey. Please answer each statement honestly.

(*Scale:* 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly agree – the format for the electronic survey will repeat this scale with every question)

1. I am embarrassed that I don't know how to use the library.

   __1-SD __2-D __3-N __4-A __5-SA

2. I am embarrassed that I don't know how to use online library resources (e.g. an academic research database).*

   __1-SD __2-D __3-N __4-A __5-SA

3. A lot of the university is confusing to me.

   __1-SD __2-D __3-N __4-A __5-SA

4. The librarians are unapproachable.

   __1-SD __2-D __3-N __4-A __5-SA

5. The reference librarians are unhelpful.

   __1-SD __2-D __3-N __4-A __5-SA

6. The librarians don't have time to help me because they're always busy with other tasks (on the phone, on the computer, etc.).†

   __1-SD __2-D __3-N __4-A __5-SA

7. I can't get help in the library at the times I need it.

   __1-SD __2-D __3-N __4-A __5-SA

8. Library clerks/staff don't have time to help me.†

   __1-SD __2-D __3-N __4-A __5-SA

9. The reference librarians don't have time to help me because they're always busy doing something else.

   __1-SD __2-D __3-N __4-A __5-SA

10. I am unsure about how to begin my research.

    __1-SD __2-D __3-N __4-A __5-SA

11. I am unsure about how to begin a search for information in general.*

    __1-SD __2-D __3-N __4-A __5-SA

12. I get confused trying to find my way around the library.

    __1-SD __2-D __3-N __4-A __5-SA

13. I get confused trying to use the library's website.*

    __1-SD __2-D __3-N __4-A __5-SA

14. I don't know what to do next when the information I need is not readily available (e.g. cannot find information online, etc.). †

    __1-SD __2-D __3-N __4-A __5-SA

15. The reference librarians are not approachable.

    __1-SD __2-D __3-N __4-A __5-SA

16. I enjoy learning new things about the library.

    __1-SD __2-D __3-N __4-A __5-SA

17. I enjoy learning new things about finding information.*

    __1-SD __2-D __3-N __4-A __5-SA

18. I enjoy learning new things about using technology (e.g. computers).*.

    __1-SD __2-D __3-N __4-A __5-SA

19. If I can't find the information I need the library staff will help me. †

    __1-SD __2-D __3-N __4-A __5-SA

20. There is often no one available in the library to help me.

    __1-SD __2-D __3-N __4-A __5-SA

21. I feel comfortable using the library.

    __1-SD __2-D __3-N __4-A __5-SA

22. I feel comfortable searching for information.*

    __1-SD __2-D __3-N __4-A __5-SA

23. In general, I feel comfortable using technology (e.g. computers).*

    __1-SD __2-D __3-N __4-A __5-SA

24. I feel like I am bothering the reference librarian if I ask a question.

    __1-SD __2-D __3-N __4-A __5-SA

25. I feel safe in the library.

   __1-SD __2-D __3-N __4-A __5-SA

26. I feel comfortable in the library.

   __1-SD __2-D __3-N __4-A __5-SA

27. The reference librarians are unfriendly.

   __1-SD __2-D __3-N __4-A __5-SA

28. I can always ask a librarian if I don't know how to use a piece of non-computer equipment in the library (e.g. a copy machine, a change machine, etc.). †

   __1-SD __2-D __3-N __4-A __5-SA

29. I can always ask a librarian if I don't know how to use an online library resource (e.g. an academic research database).*

   __1-SD __2-D __3-N __4-A __5-SA

30. The library is a comfortable place to study.

   __1-SD __2-D __3-N __4-A __5-SA

31. The library never has the materials I need.

   __1-SD __2-D __3-N __4-A __5-SA

32. The library never has the information I need.

   __1-SD __2-D __3-N __4-A __5-SA

33. I can never find things in the library.

   __1-SD __2-D __3-N __4-A __5-SA

34. I can never find information I need in the library.*

   __1-SD __2-D __3-N __4-A __5-SA

35. There is too much crime in the library.

   __1-SD __2-D __3-N __4-A __5-SA

36. The people who work at the main desk are helpful.†

   __1-SD __2-D __3-N __4-A __5-SA

37. The library staff doesn't care about students.

   __1-SD __2-D __3-N __4-A __5-SA

38. The library is an important part of my school.

   __1-SD __2-D __3-N __4-A __5-SA

39. I want to learn to do my own research.

   __1-SD __2-D __3-N __4-A __5-SA

40. Equipment like copy machines are usually out of order.†

   __1-SD __2-D __3-N __4-A __5-SA

41. Computers in the library are usually occupied by others.*

   __1-SD __2-D __3-N __4-A __5-SA

42. I don't understand the library's overdue fines.

   __1-SD __2-D __3-N __4-A __5-SA

43. Good instructions for using the library's computers are available (e.g. how to access computer programs).†

   __1-SD __2-D __3-N __4-A __5-SA

44. Good instructions for how to use online library resources (e.g. academic research databases) are available.*

   __1-SD __2-D __3-N __4-A __5-SA

45. Librarians don't have time to help me.

   __1-SD __2-D __3-N __4-A __5-SA

46. The library's rules are too restrictive.

   __1-SD __2-D __3-N __4-A __5-SA

47. I don't feel physically safe in the library.

    __1-SD __2-D __3-N __4-A __5-SA

48. The computer printers are often out of paper.

    __1-SD __2-D __3-N __4-A __5-SA

49. The instructions for using the library's computers (e.g. how to access computer programs) are not clear.†.

    __1-SD __2-D __3-N __4-A __5-SA

50. The instructions for using the library's online resources (e.g. academic research databases) are not clear.*

    __1-SD __2-D __3-N __4-A __5-SA

51. I don't know what resources are available in the library.

    __1-SD __2-D __3-N __4-A __5-SA

52. The library staff doesn't listen to students.

    __1-SD __2-D __3-N __4-A __5-SA

53. The library is a safe place.

    __1-SD __2-D __3-N __4-A __5-SA

54. The library won't let me check out as many items as I need.

    __1-SD __2-D __3-N __4-A __5-SA

55. I can't find enough space in the library to study.

    __1-SD __2-D __3-N __4-A __5-SA

Demographic information (final page of survey—*Please note:* Demographic questions were not included in original Library Anxiety scale, and were added to this study for analysis purposes)

Course: College Writing I

Introduction to College Writing Stretch

Gender:
    Male
    Female

Age:
    18–21
    22–25
    26–35
    36–45
    46–55
    over 55

Race:
    Caucasian
    African-American
    Native-American
    Hispanic-American
    Other: _____
    (Please type your race in the space provided)

Student Status:
    First time attending college
    Returning college student
    Transfer college student

Current Education Level:
    High school diploma
    GED Recipient
    Other: _____
    (Please write other education level here).

Citizenship:
    U.S. citizen or permanent resident
    International student