Information Literacy:

Does the Mode of Delivery Play a Factor in Student Success and Satisfaction?

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Research Methods: LS5752-20

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December 10, 2009
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Being able to provide quality customer service to patrons served is essential to becoming a successful librarian. This research proposal on information literacy was created December 10, 2009 for Research Methods (LS5752). Information literacy is an imperative role that librarians employ. As with any service provided by a library, it is important that what we are doing is actually working for patrons and also seek ways to improve the service to better serve the community. While working on this project, I gained the knowledge of how to properly develop a research study and execute it, collaborate with faculty, and analyze the data.
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Introduction:

Information literacy instruction sessions play an important role in how successful a student is throughout his/her educational career. It not only builds important skills to help students be successful in school, it teaches life skills that will be carried into future careers. As a librarian in an academic setting, one of the duties performed instruction in information literacy. In order to meet the needs of both the faculty and students, we need to ensure that what and how the information is taught is as effective and efficient as it can be.

At Montana State University Great Falls-College of Technology (MSUGF-CoT), a research assignment that requires utilizing library resources is built into each section of College Writing I (WRIT 101). A lesser research component is built into the remedial writing courses as both Building Basic Writing Skills (WRIT 080) and Developmental Writing (095). These two courses are designed to build quality grammar and prepare the students for higher writing courses. Although the research assignment varies within each course, the Information Literacy Outcomes Assessments are the same. At the end of each semester, each student should be able to: “Conduct a search in an interdisciplinary database (e.g. Expanded Academic ASAP) using Boolean operators; limit searches in databases and the Library’s online catalog, (e.g. publication date range, full-text); identify and search within relevant subject databases (e.g. JSTOR); use database features to mark/save/print/email citations; and use interlibrary loan services as needed.” (English Faculty, 2009)

Typically a librarian will visit the class face-to-face and provide an information literacy session which on average covers two 50-minute class periods. Because of staff shortages in the library in the fall 2009 semester, faculty members used varying delivery methods when delivering an information literacy session. Three faculty members chosen to have a librarian
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visit their classroom and provide a face-to-face group session and two faculty members utilized online literacy sessions provided by another librarian within the consortium.

Because we know that information literacy sessions are successful, this study will be focusing on if the student was satisfied with the instruction he/she had, the mode of delivery in which the session was presented and if the mode of delivery plays a role in the students success and satisfaction in completing research assignments required in college writing courses.

Literature Review:

For years academic libraries have provided information literacy skill sessions to undergraduates at various levels. As technology evolves and a greater number of students take advantage of distance education, we as librarians need to determine if how we are delivering the information literacy sessions are as resourceful as possible. Several studies have been conducted in recent years to analyze if there is an obvious benefit to receiving the information literacy sessions face-to-face or in an online “virtual” session as well as if the students are satisfied with receiving their session in a particular manner.

In 2002, University of Melbourne conducted that focused on three main objectives. They wanted to know if learning outcomes were achieved as a result of information literacy sessions, evaluate if a specific delivery mode was more successful, and develop efficiency of the arts information literacy program. (Salisbury, 2003) According to this study, the mode of delivery did not play a benefiting factor in student’s success. (Salisbury, 2003)

State University of New York (SUNY) at Oswego conducted a study to evaluate if their students were able to learn and show a higher satisfaction with information literacy instruction sessions using different delivery modes. (Nichols, 2003) Again there was no significant indication that the mode of delivery played a factor in the success of students who were tested
prior to receiving information literacy instructions and again after receiving instruction. (Nichols, 2003) It was stated however, that some faculty members chose not to use online tutorials as their only method of library instruction. Nichols and Ellis share the same belief as faculty members in that “students will lose contact with librarians; lose the contact with physical and social space of the library; and inexperience of adjunct English faculty with changing library resources.” (Nichols, 2003) Of the five faculty members that were evaluated in this particular study at MSUGF-CoT, three of them are adjunct faculty members from surrounding areas so this is indeed an important factor to assess.

In order to offer an effective information literacy session, the librarian needs to take into consideration where today’s students are. One study at the University of Canberra (UC) discovered they were offering several library tours and literacy instruction sessions throughout a semester, but students were attending in limited numbers. However, through surveying the patrons on how the library was doing, it was discovered that students felt they were not given enough assistance with “how to use the Library and how to find and use information effectively to support their studies.” (Crotty, 2007) It is not a question of “is information literacy necessary” but more of a question of how do we reach the students and where are our students spending their time studying.

While we can assume that today’s students are primarily interested in learning via the most updated technology of gizmos and gadgets, University of North Texas conducted a study in 2006 to evaluate the users’ preferences related to five communication media used to facilitate information literacy instruction. (Robertson, 2009) “The study used a rank-sum, circular-triad, and multidimensional preference mapping to graphically superimpose the affinity of specific participants with specific objects.” (Robertson, 2009) While researchers in this study assumed
that students would prefer a 3D graphical user interface for their information literacy sessions, the 2D webpage ranked higher than other communication media tested. (Robertson, 2009). This study shows that while we think we know where students are technology wise, we can never assume that the most up and coming technology is appealing in all aspects.

**Research Question:**

One of the questions resulting from the student portion of the study is, “do students have a higher success and satisfaction rate in their research assignments when literacy instruction sessions are part of their coursework?” The second portion of this study is, “did the delivery method of instruction play a factor in the student’s success and satisfaction rate?” This study will be answered by both quantitative and qualitative methods. Quantitative methods will be used to administer a pre-test prior to receiving any information literacy instruction and testing the same group of students after receiving instruction. Faculty will also evaluate each student based on their set criteria on how they define if a student is successful in information literacy. Qualitative methods will be used conduct in-person interviews with a select group of students in order to get a better idea on their satisfaction and/or frustrations levels, their comfort levels with technology and their overall opinion of the information literacy instruction they received and thoughts on how to improve in the future.

**Hypotheses:**

From the two research questions above, the following hypotheses are considered for this study:

**H1** - Students are able to retain more information from an information literacy instruction session that is delivered in the face-to-face format (either small group or individual session) than in an online-mode.
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**H2** - Students who receive face-to-face instruction express a greater perception of satisfaction in the ability to use library resources than students who receive on-line instruction.

**Methodology:**

The sample design includes students who are currently registered in a writing course in the English Department at MSUGF-CoT and the faculty teaching these writing courses. The courses range from basic remedial writing skills to college writing. For the fall 2009 semester, there are twelve sections (three different courses) that would be included in the target sample. Within these twenty sections, there are five faculty members and 220 students eligible to participate in this study.

Each of the three courses has a different purpose and function for the students enrolled in them. Building Basic Writing Skills (WRIT 080) and Developmental Writing (WRIT 095) are both remedial writing courses that help prepare students to a full admission into college-level reading and composition. College Writing I (WRIT 101) is the college level writing course required for all programs of study offered at the MSU-Great Falls campus. Faculty and student needs and expectations both need to be considered in this study. With the faculty members’ assistance, we will be able to identify what the definition of a successful student is.

In order to measure the student success rate (DV-H1)

1, a pretest will be given prior to the information literacy instruction session and a follow-up test with the same questions will be given after the student has participated in an information literacy instruction session either online or face-to-face (IV-H1)

2 and completed the research component of the course in which they were registered. An example of the test given is available in Appendix I.

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1 Dependent variable for H1
2 Independent variable for H1
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The five faculty members (IV- H1) that have participated in the study, by providing information literacy sessions to their students regardless of the delivery method used, will evaluate each student that participated in the study individually. According to the English department, a successful student will be able to locate appropriate library resources, use a variety of appropriate sources and have the ability to cite the materials in the appropriate manner. By utilizing these three criteria and the assistance of the faculty members, we should be able to evaluate if the student was indeed successful in the Information Literacy Outcomes Assessment and know if the mode of delivery played had an impact in this success.

Qualitative data will be gathered by conducting in-person interviews of twenty-four students (two students from each section). The students interviewed will purposely be chosen by age (IV- H2)\(^3\) and the course/section (IV- H2) in which they are registered. The age variable will be determined by selecting a student who is under the age of thirty and selecting a student who is over the age of thirty.

In each student interview, the study will include asking questions to: (I) gauge the level of satisfaction (DV- H2)\(^4\) with the information literacy session that was presented, (II) the satisfaction in his/her ability to use library resources after the instruction session, (III) what frustrations the student experienced, (IV) the comfort level with using a computer to find information, (V) how would the student typically find information when in need (ie. Using a telephone book vs. the Internet when needing an address or phone number), and (VI) what recommendations the student might have for further literacy sessions taught.

\(^3\) Independent variable for H2
\(^4\) Dependent variable for H2
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Data Analysis:

Analyzing Quantitative Data:

The purpose of testing the students prior to the information literacy session and again after the research assignment is complete is to be able to identify how we as librarians are doing at getting our knowledge across to the student. By separating the students into those that participated in face-to-face and those that participated in online information literacy sessions, we will be able to identify if each librarian is teaching at the appropriate level in order for the student to be successful. In order to analyze the data, we need to identify the percentage of correct answers for each group in both the pre-test and post-test. Compare results and identify any significant differences between the two groups of students, did the percentage of correct answers improve between the two tests, and are we able to detect a difference between online versus face-to-face literacy sessions. If no key indicators can be identified between online versus face-to-face, it can be assumed that our H1 is invalid and that the mode of delivery does not have any impact on the student’s success rate.

According to the test results we also want to know if the level of information literacy being taught is appropriate for the student’s coursework. For example, WRIT 085 students may need to start at a more basic level of knowledge, while students in WRIT 101 it is assumed that these students have a basic understanding of information literacy so there is no need to repeat this information but rather build on their knowledge base.

In order for this study to determine if the student is successful with knowing the knowledge, we also need to know that they are successful in applying this knowledge to the research assignment. The five faculty members will evaluate each student by the three criteria they use to identify if the student is successful. See Appendix II for further information.
Analyzing Qualitative Data:

The twenty-four interview results will be categorized in four basic groups. Students that are over the age of thirty that received their information literacy instruction session online or those that received their session face-to-face and those students under the age of thirty that received their information literacy instruction session online or those that received their session face-to-face. After summarizing and listing the responses from each student, we would utilize the case-oriented understanding process to assess responses and evaluate questions one through three to identify if a trend of satisfaction or frustration is present. The study will utilize questions four and five to identify the confidence level each student displays using library resources and/or technology as a whole. Question six will be used primarily by the librarian to modify and improve information literacy sessions being taught.

Limitations and Future Study:

MSUGF-CoT caters to a wide range of students varying in age, experience, ethnical and cultural backgrounds. In the past, the college has experienced a high rate of students dropping their coursework throughout the semester for a variety of reasons. The limiting factors for this study is the students that took the pre-test may have dropped the course prior to the post-test given out. The faculty member (if willing to participate) should still be able to evaluate from their grading rubric if the student was successful in the Information Literacy Outcomes Assessment without actually finishing the class.

Future studies would include continuing to assess student satisfaction and success so that teaching can be refined and continue to provide an effective tool for students to use. This particular study was focused only on English courses taught in the fall 2009 semester, however, future studies could include tracking the students who participated in the qualitative
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measurement and interview them periodically to see if their satisfaction and/or frustrations have improved and if any further information literacy courses were attended by the students in other areas of their course work. We as librarians need to continue to build the students’ comfort level by using the library resources and support the students’ ability to conduct research independently.
References:

Crotty, A. (2007). Learner-centered planning redefines approach to information. inCite, 28(8), 11.

English Department Faculty. (2009). Information Literacy Outcomes Assessments. Great Falls, MT: Montana State University Great Falls-College of Technology.


Appendix I: Pre/Post Test on Information Literacy

Student Name: 
Instructor’s Name: 
Course Name: 

1. Have you used an online catalog prior to today?  
   a. Yes 
   b. No 

2. Which is NOT a way to search an online catalog? 
   a. Author 
   b. Title 
   c. Subject 
   d. Copyright Date 

3. What does a NetLibrary account allow you to do? 
   a. Access indexes and databases 
   b. Access any book in the library’s collection 
   c. Access EBooks (electronic versions) from home 
   d. Access online reference sources 
   e. Read course reserves 

4. The most efficient way to find magazine and journal articles on a specific subject you are researching is to? 
   a. Browse periodical shelves 
   b. Conduct a Google search 
   c. Search the online computer catalog 
   d. Search an online periodical index for your topic 

5. You are looking for articles on fishing in Montana. The most appropriate Boolean search to utilize is: 
   a. Fishing NOT Montana 
   b. Fishing IN Montana 
   c. Fishing OR Montana 
   d. Fishing AND Montana 

6. Which of the following is a characteristic of scholarly journals? 
   a. Contains glossy pictures and advertisements 
   b. Reports news events in a timely manner 
   c. Contains a literature review within the articles 
   d. Provides an author’s opinion about a controversial event 

7. Rate your level of confidence utilizing library resources before/after your research assignment. 
   Excellent Good Adequate Knew Little Knew Nothing
### Appendix II: Faculty evaluation for each student

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>Low 1</th>
<th>2</th>
<th>Average 3</th>
<th>4</th>
<th>Exceptional 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to locate library resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Demonstrate using a variety of appropriate sources</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to properly cite sources according to MLA guidelines</td>
<td></td>
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</tbody>
</table>
Sit back and identify what does success mean to you? Is it good grades, securing the first position in academics, or excelling in sports or extra-curricular activities? If you are a parent who is reading this, sit back and ponder over this â€“ what is your child really good at, besides academics? Success should be felt from within â€“ it is something that gives you a sense of achievement â€“ whether excelling in academics or extra-curricular activities. Here are 9 important factors that will guide you in being successful as a student: 1. Family.

Continue Reading. Well, this comes as no surprise. You How Grades Play a Role in Shaping Success. In a recent online discussion at a student-support Web site, a college freshman posted the following concern about how serious he should be about getting good grades: As a first semester freshman, I really have taken my education seriously. I've studied and done my homework nightly and have read all of the assignments. So far, I have all A's in my classes, including calculus and programming. Learning communities are programs that enroll groups of students in a common set of courses. The effects of learning communities are greatest for first-year students. Students report gains in personal and social development, competence, and satisfaction with the undergraduate college experience. Student Success Initiatives. What factors influence success in online learning? How can student success in online learning be promoted? Online Learning Survey Conclusion.

Study 4: Information literacy lesson taught to students in an undergraduate psychology class Taught both online and in-person Compared rates of improvement between the pretest and posttest Results: No significant difference in student performance between the two modes Silver S, Nickel L. Are online tutorials effective? 45 Student & Instructor Strategy Both play a role in helping students to become more motivated to learn in online classes. Secondly, success factors in Business Statistics are examined among the three delivery methods. A separate regression model is run for each data set - traditional classroom, online class, and ITV class - to determine which independent variables are significantly related to the dependent variable Y Final Average. The problem solving nature of the course adds to its complexity. Research into student characteristics and success factors in Business Statistics may not transfer to other disciplines just as research from other fields may not generalize to Business Statistics. REFERENCES Allen, I.E. and Seaman, J Making the Grade: Online Education in the United States. effect among delivery modes regarding student interaction. and course satisfaction, but further, what triggers this differ. ence, and ultimately, what we can do as faculty members. Fall 2014 229. to leverage it. and online both tend to view access to the instructor as an. important factor in facilitating a positive learning experi. ence (Corston and Coleman 1996; Gefen and Straub 1997; Marks, Sibley, and Arbaugh 2005; Sweeney and Ingram.