

## ***Library Research Instruction for Doctor of Ministry Students: Outcomes of Instruction Provided by a Theological Librarian and by a Program Faculty Member***

by Charles D. Kamilos and Rodney Birch

### **Abstract**

At some seminaries the question of who is more effective teaching library research is an open question. There are two camps of thought: (1) that the program faculty member is more effective in providing library research instruction as he or she is intimately engaged in the subject of the course(s), or 2) that the theological librarian is more effective in providing library research instruction as he or she is more familiar with the scope of resources that are available, as well as how to obtain “hard to get” resources.

What began as a librarian’s interest in determining the extent to which Doctor of Ministry (DMin) students begin their research using Google resulted in the development of a survey. Given the interesting results returned from the first survey in fall of 2008, the survey was conducted again in the fall of 2011. The results of the comparative data led to the discovery of some useful data that will be used to adjust future instruction sessions for DMin students. The results of the surveys indicated that the instruction provided by the theological librarian was more effective as students were more prepared to obtain and use resources most likely to provide the best information for course projects. Additionally, following the instruction of library research skills by the librarian (2011 survey), DMin students were more likely to begin the search process for information resources using university-provided catalogs and databases than what was reported in the 2008 survey. The responses to the two surveys piqued interest regarding both e-book use during the research process and the reduction of research frustration to be addressed in a follow-up survey to be given in 2014, results of which we hope to report in a future article.

### **Objective**

In 2008 the DMin students at George Fox Evangelical Seminary received library instruction from a member of the program faculty. A theological librarian was hired to serve the research needs of the seminary faculty and students. Additionally, the theological librarian assumed the responsibility of providing both a general orientation to the library resources and services and library instruction in various courses. The librarian perceived that the DMin students began their research using Internet search engines, such as Google, rather than the library’s catalog and other research databases. This perception led to the development of a survey and served as the basis for this study. Two groups of students were surveyed. The first group was surveyed in the fall of 2008 and received library research instruction from a program faculty member. The second group was surveyed in the fall of 2011 and received library instruction from a theological librarian (four hours, one time) during the program orientation. The library research instruction by the theological librarian focused on enhancing the students’ research behavior by directing them to the library’s research databases. The main purpose of the three-year comparative study was to investigate whether/how the research behavior of DMin students varied depending on whether they received library instruction from either a program faculty member or a librarian. Additionally, the study was used to identify areas for improvement in the instruction.

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## Methodology

Two cohorts of students in the DMin program were involved in the study. A 32-item Likert-scale-style survey was administered to students using SurveyMonkey (see Appendix 1). The survey questions covered the following areas: (1) general research-related topics, (2) searching for books, and (3) searching for journal articles. The survey was designed to be completed in ten minutes or less. A random sampling of completed surveys indicated that the average response time was eight minutes. The survey was administered during the first module of the DMin program.

The 2008 cohort received library research instruction from a program faculty member, and, the 2011 cohort received library research instruction from a theological librarian. The faculty member was intentional about the instruction he gave to these students but the content of that instruction was based on personal knowledge (i.e., his own personal approach to research) rather than a standardized approach to providing students with information about library research databases and techniques for searching these resources. The instruction sessions were given during the first research-based course in the program, *Introduction to Research and Resources*. The faculty member addressed elements of library research throughout the duration of the program while the librarian presented the content during a single four-hour block of time within the course.

There were 127 students in the DMin program in 2008. Thirty-three students (26 percent) participated in the 2008 survey: 6 (18 percent) female and 27 (82 percent) male. There were 121 students in the DMin program in 2011. Fifty-two (43 percent) students participated in the 2011 survey: 17 (33 percent) female and 35 (67 percent) male.

## Literature Review

A number of studies have been published on the information-seeking behavior (ISB) and information source preferences of graduate students. Earp found that students prefer journals that were “electronically available,” “easy to understand,” and had a strong reputation. Additionally, doctoral students regarded interdisciplinary resources, subject-specific resources, and the library catalog as important sources of information whereas Master’s students determined that Internet search engines, subject-related databases, and interdisciplinary research databases were important sources of information.<sup>1</sup> George et al. indicated that many factors influence the information-seeking behavior of graduate students, including academic staff, fellow students, librarians, faculty, and persons outside the library. Graduate students indicated a preference for online resources because of the convenience of access to these on the Internet.<sup>2</sup> Kumar and Ochoa discussed the topics addressed during a one-hour online instruction session related to doctoral students. The topics included “off-campus access to the library, library services for distance learners, and an introduction to library catalogs and databases used to locate books and peer-reviewed materials.” It was further determined that a pre-instruction assessment on the research skill level of the doctoral students is necessary to find out what the students already know.<sup>3</sup> Lipton and Nyrose noted that since students are using Google more it is becoming increasingly necessary for librarians to point out more academic options such as the *ATLA Religion Database*<sup>®</sup> to locate resources for their course assignments.<sup>4</sup> Senior et al. indicated that over 50 percent of the Business students participating in their study did not use the library’s catalog and were ignorant of what the catalog was. Further, it was reported that the business-related databases were underused resources by students in Business programs.<sup>5</sup> Finally, Wallach determined that graduate students are often

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<sup>1</sup> Vanessa J. Earp, “Information Source Preferences of Education Graduate Students,” *Behavioral & Social Sciences Librarian* 27 (2008): 77, 81-82.

<sup>2</sup> Carol George, Alice Bright, Terry Hurlburt, Erica C. Linke, Gloriana St. Clair, and Joan Stein, “Scholarly Use of Information: Graduate Students’ Information Seeking Behavior,” *Information Research* 11 (2005/2006), <http://InformationR.net/ir/11-4/paper272.html>.

<sup>3</sup> Swapna Kumar and Marilyn Ochoa, “Program-Integrated Information Literacy Instruction for Online Graduate Students,” *Journal of Library & Information Services in Distance Learning* 6 (2012): 70.

<sup>4</sup> Saura Lipton and Eric Nyrose, “Study of the Information Seeking Behavior of Theology and Religious Studies Students,” *American Theological Library Association Summary of Proceedings* 65 (2011): 293

<sup>5</sup> Heidi Senior, Kerry Wu, Diane M. Martin, and Margaret Mellinger, “Three Times a Study: Business Students and the Library,” *Journal of Business and Finance Librarianship* 14 (2009): 208, 209.

unable to identify disciplinary resources needed to validate their research, and that they have difficulty identifying the terminology outside of keywords, which makes searching Google and other databases an integral part of the research process. Students tend to begin their research with Google or other resources they have utilized in the past.<sup>6</sup> However, few studies broach the topic as it relates to DMin students or graduate students in theological studies. Brunton concluded that user-education for graduate students should have a component that emphasizes the idea of bibliographic awareness. Graduate students need to be shown how a variety of resources and source types can be used through the research process to obtain the kinds of information needed, and not to rely on any single source type.<sup>7</sup> Another study concluded that the searching skills of seminary students are often not as great as the students believe them to be.<sup>8</sup>

Although the authors were not able to locate studies comparing the effectiveness of library research instruction provided by a faculty member versus a librarian, a number of articles reporting studies and *best practices* related to faculty-librarian collaboration were located. Historically, teaching faculty have resisted the idea of librarians providing instruction in their courses. The reasons for this are many and varied, including (a) faculty perception that librarians lack the disciplinary training to effectively instruct students on the search for and location of valid resources, (b) librarians lack instructional effectiveness, (c) faculty don't want to share their class time with the librarians, and (d) faculty are not aware that librarians provide this type of instruction.<sup>9</sup> On the other hand, Manuel et al. provided a summary of reasons why some faculty do ask librarians to provide information literacy instruction for their courses, or why the faculty believe the partnering with librarians to provide library research instruction is important: (a) students lack the necessary research skills to complete the course requirements, (b) all students, not just those preparing for graduate school, need to know how to use the library, (c) students may not be aware of the research methods or resources related to the discipline, and (d) students lack the skills of evaluating and using information effectively.<sup>10</sup> Mounce provided a review of the literature discussing faculty-librarian collaboration, as instruction transitions from purely bibliographic research to information literacy.<sup>11</sup> Finally, Teske addressed the need of theological studies programs to incorporate the Association of College and Research Libraries' (ACRL) information literacy standards into the curricula, and what that means for theological librarians and seminary faculty. Teske further discussed the results of a program developed to incorporate the information literacy standards into the curriculum of a theological school.<sup>12</sup>

Some research has been done on the effectiveness of DMin faculty in the teaching of research methods, especially methods used in the Social Sciences, but there is no research on DMin faculty providing library research methods instruction. Lincoln found that program directors rated theological faculty as having "average" skills to teach research methods, especially as the methods related to the Social Sciences.<sup>13</sup> Finally, a few studies discuss faculty perception of library research instruction (or, information literacy instruction), and the need for it. Overall, faculty may be receptive to the

<sup>6</sup> Ruth Wallach, "From Google Books to Library Catalogs: A Consumerist Exploration of Information Literacy for Graduate Students in Slavic Studies," *Slavic & East European Information Resources* 10 (2009): 224, 230.

<sup>7</sup> Christine Brunton, "The Effects of Library User-Education Programmes on the Information-Seeking Behaviour of Brisbane College of Theology Students: An Australian Case Study," *Journal of Religious & Theological Information* 7 (2005): 63.

<sup>8</sup> Timothy D. Lincoln, "When I Get Stuck, I Ask a Professional: How People Assist Theological Students in Doing Research Papers," *American Theological Library Association Summary of Proceedings* 65 (2011): 349-361.

<sup>9</sup> Kate Manuel, Susan E. Beck, and Molly Molloy, "An Ethnographic Study of Attitudes Influencing Faculty Collaboration in Library Instruction," *Reference Librarian* 43 (2005): 145; Laura McNamara Morrison, "Faculty Motivations: An Exploratory Study of Motivational Factors of Faculty to Assist Students' Research Skills Development," *Partnership: The Canadian Journal of Library and Information Practice and Research* 2 (2007): 9-16.

<sup>10</sup> Manuel et al., "An Ethnographic Study of Attitudes," 147-149.

<sup>11</sup> Michael Mounce, "Working Together: Academic Librarians and Faculty Collaborating to Improve Students' Information Literacy Skills: A Literature Review 2000-2009," *Reference Librarian* 51 (2010): 300-20.

<sup>12</sup> Boris Teske, "Introducing ACRL: Information Literacy Competency Standards to Graduate Schools of Theology," *Journal of Religious & Theological Information* 5 (2002): 29-57.

<sup>13</sup> Timothy D. Lincoln, "The Quality of Doctor of Ministry Education in 2002: What Program Directors Think," *Theological Education* 39 (2003): 137-148; Lincoln, "Reviewing Faculty Competency and Educational Outcomes: The Case of Doctor of Ministry Education," *Teaching Theology and Religion* 7 (2004): 13-19.

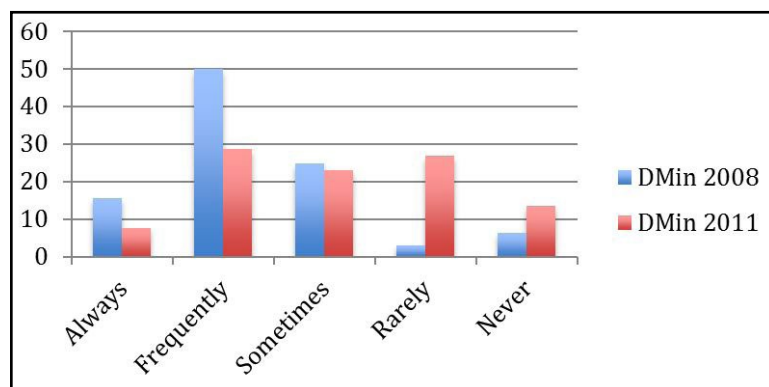
idea of information literacy, but are slow to incorporate it into their courses or programs.<sup>14</sup> Faculty, especially graduate faculty, indicated that their students possess the skills necessary to do the research required by the program, thus making library instruction a non-issue.<sup>15</sup> Finally, Gonzalez found that faculty were not confident in the students' research skills, except when it came to searching for information on the Internet. However, faculty confidence in students' research abilities increased as students progressed through the academic program.<sup>16</sup>

To sum up, while there has been some standard research done on the information-seeking behavior of students as well as on the instructional collaboration between faculty and librarians, there has been little to no research investigating the difference between the information-seeking behavior of students when library research instruction, or information literacy instruction, has been presented solely by faculty member versus that presented by a librarian.

## Results and Discussion

In this section, we will present data gathered in the responses to selected questions on the survey (see the appendix for the full survey) followed by discussion of the results. Several of the survey questions had no bearing on the issue of the effectiveness of library instruction given by a librarian as opposed to a faculty member. We will report data from and discuss only those survey questions relevant to that issue in this article. These questions concerned three aspects of research and the role of library resources in that search. First, how did the students begin the process of research; did they tend to begin by using library-based resources or did they begin elsewhere? Second, how did the students proceed when trying to locate books? Third, how did the students proceed when trying to locate journal articles? Each of these aspects will be discussed in turn below.

### Starting Research (Tables 1-2, Survey Questions 5-6)



n=33 (2008); n=52 (2011)

Table 1. When I Need To Do Research for a Class, I Begin with Google or Google Scholar.

In 2008, 66 percent (21) of participants indicated they *always* or *frequently* start the research process by searching Google or Google Scholar. Several studies support this result, indicating that students primarily begin their research endeavors using Internet search engines (i.e., Google, Bing, etc.).<sup>17</sup> However, in 2011 the number of participants who *always* or *frequently* started their research using Google decreased to 37 percent (19) (see table 1). The clear difference in results may be attributed to the librarian providing instruction on library research databases better suited for academic research.

When asked whether they start their research at the George Fox University website, 47 percent

<sup>14</sup> Jacqui Weetman DaCosta, "Is there an Information Literacy Skills Gap to be Bridged? An Examination of Faculty Perceptions and Activities Relating to Information Literacy in the United States and England," *College & Research Libraries* 71 (2010): 203-22; Paul Hyrcaj and Michael Russo, "Reflections on surveys of faculty attitudes toward collaboration with librarians," *The Journal of Academic Librarianship* 33: 694, 695.

<sup>15</sup> Annmarie B. Singh, "A Report on Faculty Perceptions of Students' Information Literacy Competencies in Journalism and Mass Communication Programs: the ACEJMC Survey," *College and Research Libraries* 66 (2005): 301, 302.

<sup>16</sup> Rhonda Gonzalez, "Opinions and Experiences of University Faculty Regarding Library Research Instruction: Results of Web-based Survey at the University of Southern Colorado," *Research Strategies* 18 (2001): 196, 197.

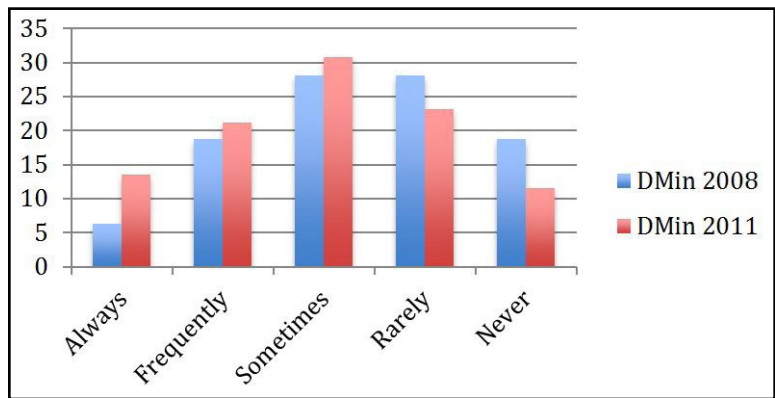
<sup>17</sup> George et al., "Scholarly Use of Information: Graduate Students' Information Seeking Behavior;" Lipton and Nyrose, "Study of the Information Seeking Behavior of Theology and Religious Studies Students," 292; Wallach, "From Google Books to Library Catalogs," 224, 230.

(15) of participants indicated *rarely* or *never* in 2008, and 35 percent (18) indicated the same preference in 2011 (see table 2). Previous studies have found that students primarily begin their research using Internet search engines, such as Google.<sup>18</sup> Additionally, students may start with Internet search engines because they are unfamiliar with the resources available through the university library.<sup>19</sup> Further, 10 percent more participants in 2011 indicated they *always* or *frequently* started research at the university library's website than did the 2008 participants (see table 2). Based on anecdotal evidence, the authors believe that while Google may not produce the best results, students utilize Google because of their familiarity with it, especially if they are constrained by time during the research process.

### Locating Books (Tables 3-4, Questions 18,16)

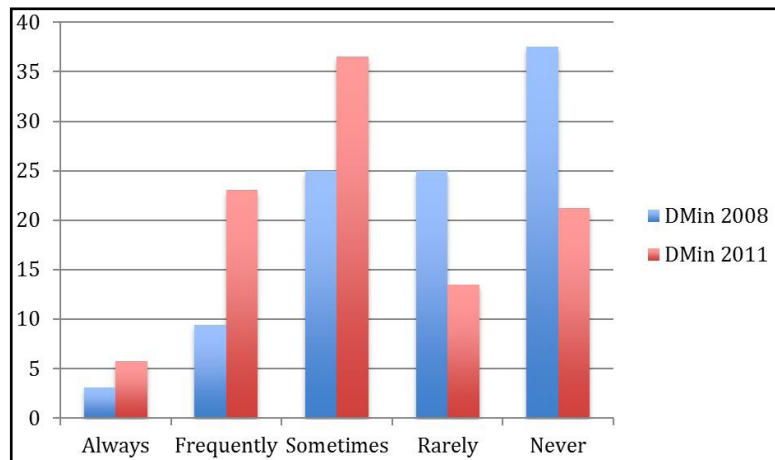
Questions 15-19 of the survey addressed various ways of finding books for research and the frequency with which each of these ways is used. In particular, question 18 inquired about the frequency of usage of the library catalog (all the other questions concerned non-library sources). In every case where a degree of significant usage of FoxTrax (George Fox University's library catalog) occurs (i.e., *always*, *frequently*, or *sometimes*), the percentages are substantially higher for the 2011 cohort, i.e., following the instruction received from the librarian. Conversely, for the low usage categories (*rarely*, *never*), there was a substantial decrease for the 2011 cohort (see table 3). These results demonstrate that the 2008 cohort exhibited typical behavior as determined by Earp who found that students were more likely to consult other sources prior to searching the library's catalog during the information-seeking process.<sup>20</sup> The difference between the groups may be attributed to the 2011 cohort receiving instruction from the librarian, who would demonstrate the library's catalog as a viable academic resource.

When asked about their use of Google Books, the 2011 respondents did not differ greatly from the 2008 respondents with the exception of the somewhat higher proportion never using Google Books in 2011 (see table 4). The librarian-led instruction session may account for more students in the 2011 cohort marking the *never* response on the survey. The



n=33 (2008); n=52 (2011)

Table 2. When I Need To Do Research For a Class, I Begin with the George Fox University Library Website.



n=33 (2008); n=52 (2011)

Table 3. When I Need to Find Books for Research, I Begin with FoxTrax.

<sup>18</sup> George et al., "Scholarly Use of Information: Graduate Students' Information Seeking Behavior; Lipton and Nyrose, "Study of the Information Seeking Behavior of Theology and Religious Studies Students," 292, 293; Wallach, "From Google Books to Library Catalogs," 230.

<sup>19</sup> Earp, "Information Source Preferences of Education Graduate Students," 77, 78; Senior et al., "Three Times a Study: Business Students and the Library," 208, 209.

<sup>20</sup> Earp, "Information Source Preferences of Education Graduate Students," 81, 82.

generally high proportion (well over half in both cases) of respondents who *never* or *rarely* use Google Books in both cohorts may simply suggest ignorance of this source rather than any information literacy-based preference for a resource provided by the library. For those who *are* aware of Google Books, Wallach suggests that librarians may use Google Books as an effective instructional tool to lead students to the library's catalog as a means to demonstrate the library's holdings in a specific subject area.<sup>21</sup>

Table 4. When I Need to Find Books for Research, I Begin with Google Books.

Year	<i>Always</i>	<i>Frequently</i>	<i>Sometimes</i>	<i>Rarely</i>	<i>Never</i>
2008	1 (3%)	4 (13%)	6 (19%)	13 (41%)	8 (25%)
2011	1 (2%)	3 (6%)	9 (17%)	21 (40%)	18 (35%)

n=33 (2008); n=52 (2011)

### Locating Articles (Tables 5-11, Survey Questions 21, 22, 20, 23, 24, 26, 27)

Students were asked a series of questions (questions 21-26) related to how and where they obtain the journal articles they need for course research projects. The following discussion highlights the responses to these questions.

When asked about their use of the databases provided by the George Fox University Library, the percentage of respondents stating that they *always*, *frequently*, or *sometimes* make use of these resources was virtually the same for both groups (81 percent vs. 82 percent). There was, however, a substantial percentage change in the number of those indicating they *always* use such resources (16 percent vs. 32 percent). Including those who make frequent use of such resources, the data still show a significant increase (47 percent vs. 66 percent). It is reasonable to attribute these increases in the 2011 group to instruction received from the librarian as students became aware of the research resources available to them through the university library, as Senior et al. concluded that students' use of the Internet was based, in part, on their lack of awareness of the library's resources.<sup>22</sup>

Table 5. When I Need to Find Articles for Research, I Begin with a George Fox University Library Provided Database.

Year	<i>Always</i>	<i>Frequently</i>	<i>Sometimes</i>	<i>Rarely</i>	<i>Never</i>
2008	5 (16%)	10 (31%)	11 (34%)	3 (9%)	3 (9%)
2011	16 (32%)	17 (34%)	8 (16%)	6 (12%)	3 (6%)

n=33 (2008); n=52 (2011)

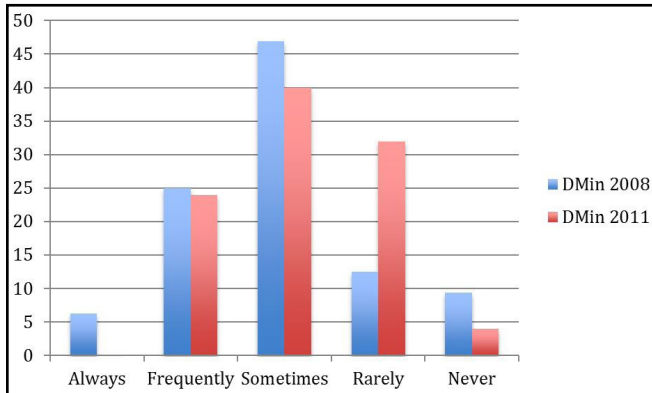
In general, a smaller proportion of respondents in 2011 indicated difficulty in finding articles (see table 6). By contrast with the 2008 group, there were no respondents in 2011 who *always* have trouble while a somewhat lower percentage reported *never* having trouble. Those *rarely* having difficulty increased significantly (13 percent vs. 32). George et al. found that students tend to consult librarians for more technical aspects of the information-seeking process, which may involve just becoming aware of the resources available and how to effectively search the resources.<sup>23</sup>

The intent of this research project was to explore the extent to which students' information-seeking behavior was affected by library research instruction from a librarian versus that of a program faculty member. We wanted to know if instruction from a librarian had any impact or influenced the use of Google as a primary (or sole) research tool when students look for articles. When asked about their use of Google or Google Scholar when searching for articles, 53 percent of the 2008 respondents indicated they either *always* or *frequently* begin with Google, while in 2011 only 24 percent indicated the same preference. A significant difference occurred in the *rarely* or *never* responses between 2008 and the 2011. In 2008, 22 percent indicated *rarely* or *never* while 49 percent indicated the same preference in 2011 (see table 7). It is reasonable to attribute these shifts between the 2008 and 2011 surveys to instruction by a librarian as students are introduced

<sup>21</sup> Wallach, "From Google Books to Library Catalogs," 232, 233.

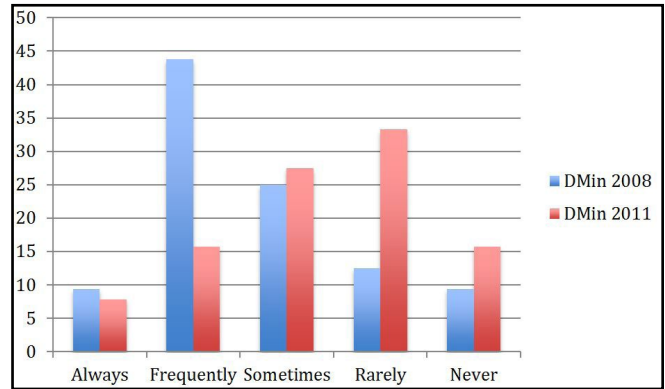
<sup>22</sup> Senior et al., "Three Times a Study: Business Students and the Library," 208, 209.

<sup>23</sup> George et al., "Scholarly Use of Information: Graduate Students' Information Seeking Behavior."



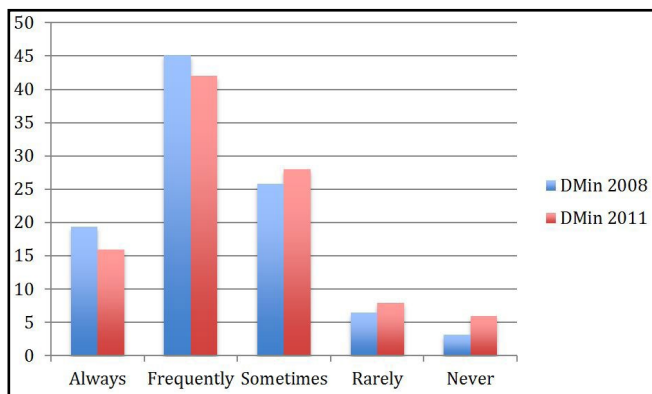
n=33 (2008); n=52 (2011)

Table 6. I Have Trouble Finding Articles About My Topic.



n=33 (2008); n=52 (2011)

Table 7. When I Need to Find Articles for Research, I Begin with Google or Google Scholar.



n=33 (2008); n=52 (2011)

Table 8. If an Article is Not Available Full Text Online, I Do Not Want It.

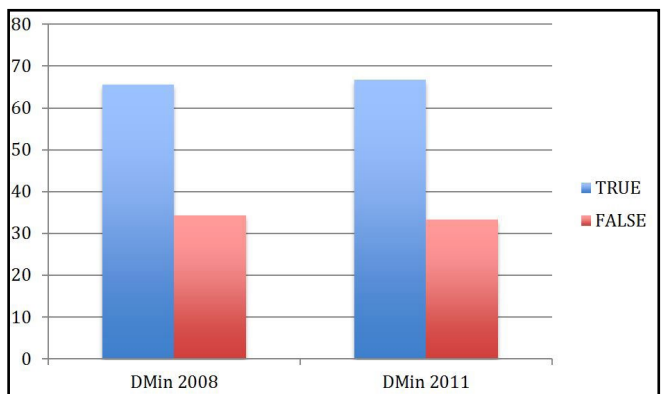


Table 9. I Know How to Get an Article Delivered to Me Through Interlibrary Loan.

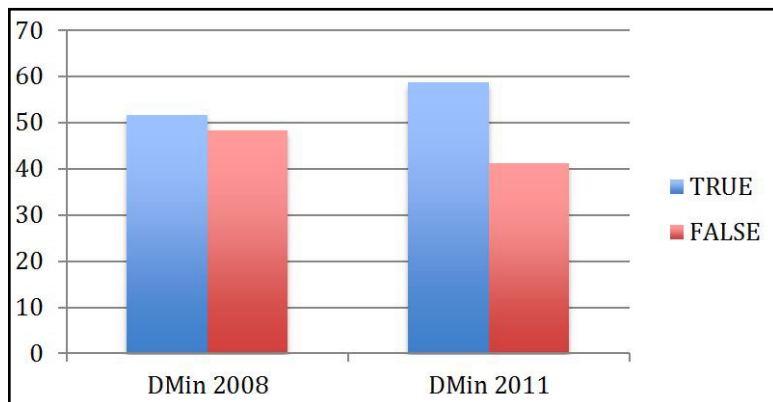
to library research databases and how to search them. The awareness of and familiarity with resources affects whether students use them during the research process.<sup>24</sup>

In 2008, 65 percent (20) of participants indicated they *always* or *frequently* do not want an article that is not full text online as compared to 58 percent (29) in 2011 (see table 8). This finding suggests that instruction by a librarian may account for the differences between the 2008 and 2011 responses as students became aware of the role of both non-full text resources (indexes), such as *The Christian Periodical Index* and full text databases, such as the *Religion and Philosophy Collection* through EBSCO® during the research process. However, the phrasing of the question may have caused some confusion and hindered how students may have responded to the question.<sup>25</sup>

In both the 2008 and 2011 cohorts, 33.9 percent of students indicated they did not know how to obtain articles through interlibrary loan (ILL) (see table 9). Similarly, the following question asked students about their ability to acquire articles otherwise not available online. Although a significant percentage of both groups appear not to know how to do this (nearly 50 percent in 2008, and slightly over 40 percent in 2011), there was a slight increase in the number of those knowledgeable about this process in 2011 (see table 10). Based on the authors' experience and observation, faculty at George Fox Evangelical Seminary have indicated that knowing how to obtain materials through interlibrary loan is a

<sup>24</sup> Lipton and Nyrose, "Study of the Information Seeking Behavior of Theology and Religious Studies Students," 292-293, 296.

<sup>25</sup> Lipton and Nyrose, "Study of the Information Seeking Behavior of Theology and Religious Studies Students," 293.



n=33 (2008); n=52 (2011)

Table 10. I Know How to Get an Article If It Is Not Available Full Text Online.

of each cohort were able to identify a correct description of peer review. The percentage of those from the 2011 group, roughly equivalent to the 2008 group, demonstrating an incorrect understanding of peer review indicates that the librarian may need to spend more time explaining the peer-review process during the instruction session.

Table 11. “Peer Reviewed” means:

Year	One of My Classmates Reviewed My Bibliography	Article was Reviewed by Scholars before Publication	My Professor Approved the Bibliography	Article was Reviewed in a Publication like the New York Times	None of the Above
2008	4 (13%)	25 (78%)	0 (0%)	0 (0%)	3 (9%)
2011	1 (2%)	41 (82%)	2 (4%)	0 (0%)	6 (12%)

## Limitations and Recommendations for Further Study

The phrasing of survey question 6, *When I Need To Do Research For a Class, I Begin with the George Fox University Library Homepage*, may have been a limitation of the study. Since students are frequently directed throughout their academic career by various other university units to reference the “George Fox University homepage,” adding the phrase to Question 6 may have caused some students to misread the question as having nothing to do with the library. A more direct phrasing of survey question 6 to minimize confusion would be, “When I need to do research for a class, I begin with the library homepage” or “When I need to do research for a class, I begin with Foxtrax.” Another limitation was that the authors did not administer a pre-assessment as to what DMin students already know about the research process and how to access information using the university library’s databases. Kumar and Ochoa indicated that a pre-assessment should be done prior to instruction so that students are receiving instruction on meaningful content, and not just a review.<sup>26</sup> The library instruction provided by the librarian was a four-hour, “one-shot” session. The segment of the session covering *how to locate books and journals articles* occurred midmorning. It may be reasonable to conclude that some “instruction fatigue” or “information overload” played a role in the students’ understanding of the concepts and processes presented. To support this hypothesis, further research needs to be done to determine whether the length and type (face-to-face, online tutorial) of instruction have an impact on the learning outcomes and the retention of concepts presented during the library research instruction session. Additionally, further research needs to be done on whether librarian-led library research instructions have an impact on DMin students’ knowledge of both the discipline-specific

<sup>26</sup> Swapna Kumar and Marilyn Ochoa, “Program-Integrated Information Literacy Instruction for Online Graduate Students,” *Journal of Library & Information Services in Distance Learning* 6 (2012): 70.



and interdisciplinary databases, as well as how to search the databases using controlled vocabulary, Boolean operators, and truncated search strategies to locate topic-specific articles, and how this knowledge affects the information-seeking behavior of DMin students.

## **Conclusions**

Our study has shown some evidence to support the hypothesis that information-seeking behavior of DMin students does differ depending on whether students received library research instruction from a librarian versus a program faculty member. DMin students who received instruction from a librarian were more likely to start their research process using the university library's website as opposed to using general Internet search engines. Additionally, students receiving librarian-led instruction were more likely to search the library's catalog before searching other sources for books. Further, students were less likely to begin their search for journal articles using Google following a librarian-led instruction session. This may be attributed to students now being aware of what academic resources are available to them through the university's library. Finally, there were two areas that did not seem to reflect a difference depending on who offered the instruction. These two areas include (a) knowing what defines a "peer-reviewed" resource, and (b) how to obtain an article that is not available full text in one of the library's research databases. Overall, the research revealed some areas regarding both content and delivery method that need to be addressed for future instruction sessions by the librarian, including (a) length and type of session and (b) enhanced instruction on the process by which to obtain materials not full text online — including, but not limited to, interlibrary loan.