

Beyond Face Value

Evaluating Research Consultations from the Student Perspective

In this study, the authors examined the value of research consultations, an important component of reference services. Previous research explored the sustainability and scalability of a large-scale research consultation project from the librarian perspective. Through survey responses from the perspectives of more than 1,500 students, the authors gathered evidence on the impact of research consultations on student confidence and their perceptions of the approachability and helpfulness of library personnel.

Librarians understand that the disciplinary information environment is difficult for the novice user to navigate, and as such may be particularly anxiety-inducing for those new to academic research. To address these concerns and build student confidence and knowledge of the available research resources and services, Penn State's Schreyer Business Library personnel and a Smeal College of Business faculty member established a multi-year collaboration to familiarize entry-to-discipline students with foundational business concepts and core business research skills.

Management 301 (MGMT 301), Basic Management Concepts, is a required course for acceptance into the Smeal College of Business. Enrollment

is primarily comprised of first- and second-year students. The faculty member, Professor Ronald Johnson, strongly considers MGMT 301 the course in which students begin to learn the "language of business," and establish foundational business acumen and literacy. In MGMT 301, students are required to complete a research assignment and to meet with business library personnel for a research consultation. Known to students as "research consultants," full-time business librarians and staff, and part-time student peer educators contribute to the staffing model. At this meeting, MGMT 301 students have the opportunity to ask research consultants questions on completing company and industry research. The research consultation also provides an opportunity for the student to develop a positive perception of library personnel as helpful and approachable, and establish a connection and rapport that encourages future interactions.

The consultations take place in a one-on-one or small-group setting, a unique learning environment for students in a high-enrollment course. In the fall semester, the class enrollment is approximately 300 students, composed of mostly of second-year students. In the spring semester, the class enrollment size is approximately 1,600

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students, composed of mostly of first-year students. As a result of this collaboration, the majority of students enrolled in the Smeal College of Business have directly engaged with business library personnel, resources, and services through research consultations.

Reiter and Huffman published a paper evaluating participation data and examining the logistics of offering research consultations for this high-enrollment course.¹ While the article showed that the large-scale reference project was scalable and sustainable from the library perspective, questions remained on if the research consultation model was meeting the intended aims of helping students feel comfortable and confident using library resources and working with library personnel. Through survey research, we aim to evaluate the project from the student perspective, building on the previous research addressing the library's perspective on the research consultation model.

LITERATURE REVIEW

Library anxiety has been widely observed and extensively studied in library science since Constance Mellon identified and named the phenomenon.² Since, librarians have attempted myriad approaches in reference and instruction to mitigate the effects of anxiety. Additionally, through open houses, improved signage, and more welcoming services, librarians have sought ways to help students feel more comfortable and confident navigating the library. Although underexplored in the literature, research consultations are another approach to helping students gain confidence in conducting research and relieving library anxiety, as noted by participants in a study by Magi and Mardeusz.³

Exposure to library resources and services through research consultations demonstrates to students that librarians are approachable and helpful, while also correcting any misperceptions that may increase anxiety. Studies have examined perceptions of librarians from a variety of angles: What positive or negative perceptions do students have about librarians? What perceptions have they formed from outside influences? What misconceptions do students have about librarians and their roles?

Occupational stereotypes may form the foundation of negative impressions, and student perceptions of librarians have been examined through this lens. Although not directly focused on academic librarianship, Seale determined that mass media depictions of librarians generally fall into five distinct categories, and that these stereotypical representations may have an effect on the public's perceptions of librarians.⁴ Using Seale's and additional categorizations, Attebury analyzed 100 YouTube videos created by both librarians and non-librarians for stereotypical representations.⁵ Not surprisingly, librarians overwhelmingly tended to portray themselves as hero/ines or as fun/positive compared to depictions in non-librarian produced videos. Jennings provided a review of the literature on librarian stereotypes and

concluded that *any* profession will have persons fitting that profession's stereotypes.⁶ While research has shown that librarian stereotypes persist and awareness may be helpful, Jennings stressed the importance of moving beyond the preoccupation with combating stereotypes and focusing on the public-facing services provided.

Stereotypes, among other factors, can inform whether or not a student regards a librarian as approachable. To evaluate perceptions of librarian approachability, Bonnet and McAlexander used the visual cues of age, gender, and race in an image-rating survey.⁷ In a later study, Bonnet and McAlexander performed a similar image-rating survey, but used the visual cues of affect and attire to assess librarian approachability.⁸ Langridge, Riggi, and Schultz assessed students' perceptions of librarians, including approachability, also using an image-rating component and questions about media portrayals of librarians.⁹ The three studies similarly found that demographic characteristics and appearance affected the perceived approachability of the librarian. Because negative perceptions of librarian approachability may prevent students from using the library, librarians have devised strategies for addressing this problem. For example, Muszkiewicz determined that the creation of a "Get to Know Your Librarian" orientation program for incoming students held at Valparaiso University's Christopher Center Library lessened student anxiety and increased feelings of approachability towards librarians.¹⁰

Other studies have examined the perceived helpfulness of librarians. Fagan conducted a survey to examine students' perceptions of academic librarians and provided thoughts on what librarians may do to address misconceptions including librarians' willingness to help students.¹¹ Encouragingly, 88 percent of the survey respondents disagreed with the statement that librarians were too busy to help students, but were less positive when rating "librarians' willingness to change their services to meet their patrons' needs."¹² Vinyard, Mullally, and Colvin explored how students search for information, as well as what prompted students to seek help from a librarian.¹³ Through one-on-one interviews, the authors determined that students preferred searching for information independently, and would seek assistance only when frustrated by the amount of time it took to perform research. Once connected with a librarian for assistance, all of the study participants stated that they found the librarians to be helpful and would ask for research assistance in the future. Brenza, Kowalsky, and Brush surveyed student reference assistants about their perceptions of the library.¹⁴ Although none of the survey questions specifically focused on how the reference assistants perceived librarians, one student, when asked, "What is the most important thing students need to know about the library?" offered commentary about the librarians: "They [the librarians] can help you find anything you need and will do it so happily."¹⁵ These findings suggest that when students *can* connect with librarians earlier in the research process, they avoid frustration and have improved perceptions of librarians' helpfulness. Research

consultations present an opportunity to reinforce perceptions of librarians as helpful and approachable.

Library literature includes numerous studies exploring research consultations from both the librarian and student perspective. Butler and Byrd investigated research consultations from both the librarian and student perspectives and identified where perceived values aligned.¹⁶ For example, the authors found that in 46 out of 80 (58 percent) research consultations they reviewed the librarian and student agreed that the session was “very useful.”¹⁷ Notably, there were also 23 cases in which the librarian underestimated how useful the student found the consultation, which Butler and Byrd pointed to as evidence of “provider pessimism” or the phenomenon of the librarian not feeling like they met the student’s need.¹⁸ In such cases, even though the student may have found the research consultation useful, the librarian may be left wondering if the session was worth their or the student’s time.

Providing in-depth attention to an individual student or student team involves the time commitment of the appointment, as well as any time spent by the librarian preparing for the meeting. Several studies evaluated time spent by librarians on research consultations.¹⁹ Other research discussed the need to evaluate research consultations to ensure that the time spent matches the benefit to the populations served.²⁰ Discussions and findings tended to show that while research consultations do require a time investment, the time is well spent. Yi suggested research consultations were valuable as a supplement to library instruction in the classroom.²¹ Librarians spent 32 percent of their teaching time on research consultations. Notably, in this example, research consultations were assessed as part of library instruction rather than reference or another area of service.

In addition to supplementing information literacy instruction, the literature identifies other types of value provided by research consultations, including the relationship-building potential of the interaction. For example, Savage discussed research consultations as a unique opportunity for student engagement analogous to a professor’s office hours.²² Similarly, but from the student perspective, Watts and Mahfood reported that students in their study saw librarians as equivalent to their professors after their research consultations, appreciated the individualized attention, and acknowledged the librarian’s expertise.²³ Studies by Magi and Mardeusz, and Rogers and Carrier also singled out librarian’s focused attention and their subject knowledge as important benefits of research consultations from the student perspective.²⁴ Magi and Mardeusz specifically discussed how students valued focused time with the librarian and that they had the opportunity to ask questions of someone with experience and expertise. Rogers and Carrier labeled undivided attention and the subject expertise of the librarian as two of four main aspects of a research consultation valued by students.²⁵ The other two benefits the authors identified were the high level of interaction and engagement, and the chance to meet in an environment that facilitated the other three valued

aspects of a research consultation service. Studies examining research consultations have found students value the content and attention received, all of which inform and aid in enhancing positive perceptions of librarians.

While studies have identified valued features of research consultations that may balance out the time spent, other aspects of research consultations, such as when students are introduced to the service during their college careers, have received limited attention in the literature. Faix, MacDonald, and Taxakis compared the effectiveness of research consultations for freshmen and senior undergraduate students, finding that upper-division students benefit more than lower-division students.²⁶ According to their study, freshmen quickly became overwhelmed by too many sources. The authors noted more research is needed on how to design research consultations for freshmen students.

Although significant research has been conducted on the value of research consultations from the student perspective, the number of students surveyed has been relatively small, ranging from 16 to 95 participants, according to a scoping review of research consultation assessment methods by Fournier and Sikora.²⁷ Research implies that the helpfulness and approachability of librarians are valued in research consultations; however, these aspects have not been the focus of extensive study. Furthermore, there is a lack of exploration into the impact of consultations on the confidence and comfort of students conducting research. In this study, we surveyed more than 1,500 students, focusing on student research confidence and their views of library personnel as helpful and approachable. Specifically, we investigated the following research questions:

- Did overall research confidence increase after having a research consultation?
- Are there differences in the research confidence level ratings of first- and second-year students?
- Did students perceive library personnel as helpful? Approachable?

We focused on confidence rating as an indicator of how students *felt* about their ability prior to and after research consultations. This study was not intended to evaluate research competence nor was the confidence rating used as an indicator of their research ability.

METHODOLOGY

We developed a survey instrument that the Institutional Review Board determined to be exempt from review. The survey was built using the Qualtrics software suite and featured a branching survey design to separate MGMT 301 students that had met with a research consultant from those that did not. The survey consisted of both quantitative and qualitative questions. Our study covers the quantitative analysis of the data collected. Because librarians, staff, and

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student peer educators were known to MGMT 301 students as “research consultants,” we chose to use this term in the survey instead of business library personnel.

For MGMT 301 students who met with a research consultant, four quantitative questions gauged the level of confidence about conducting research for their assignment *prior* to meeting with a research consultant, and the level of confidence *after* meeting with a research consultant, as well as the level of approachability and helpfulness of the research consultant. Students that did not have a consultation were directed to a qualitative question that asked about their choice for not meeting with a research consultant. Demographic information was also collected (see appendix A). Of the demographic information, only class standing was cross-tabulated with the quantitative survey questions as it was most relevant to our research questions.

MGMT 301 is offered in Fall and Spring semester of each academic year. To ensure all students had the opportunity to meet with a research consultant, we deployed the surveys near the end of the semester during Fall 2016 and Spring 2017. The faculty member promoted the survey to MGMT 301 students during class time and via email. Those who completed the anonymous survey received extra credit points towards their final grade in the course. The identifying information needed to record extra credit points was collected through a separate survey instrument.

In Fall 2016, the total population surveyed was 257. Of the 257 students surveyed, 251 responded. However, not all 251 respondents fully completed the survey. We removed 17 incomplete surveys in order to have consistent data for analysis. We received 234 complete responses, resulting in a response rate of 91 percent. In Spring 2017, the total population surveyed was 1,559 and 1,402 responded to the survey. Of the 1,402 responses, we removed 8 incomplete responses for data consistency. We received 1394 completed surveys, resulting in a response rate of 89 percent. For the Fall 2016 and Spring 2017 academic year, 1,628 of the 1,816 surveys taken were complete and used in the analysis.

DATA AND ANALYSIS

Population Breakdown

Of the 234 surveys analyzed from Fall 2016, 226 (97 percent) students met with a research consultant. In Spring 2017, 1,359 (97 percent) out of 1,394 students met with a research consultant. In total, 1,585 students opted to have a research consultation. Of the 43 remaining students that indicated they did not meet with a research consultant, 39 provided answers to the qualitative question asking them about their choice for not meeting with the consultant. Overwhelmingly, students noted time constraints and scheduling conflicts as their reason for not meeting with the consultant. Several students admitted to procrastinating and missing the opportunity for a meeting.

Table 1. Students Who Met With a Research Consultant by Class Standing in Fall 2016 and Spring 2017

Class Standing	Number of Students
First-year	1,273 (80%)
Second-year	296 (19%)
Other	16 (1%)
Total	1,585

Table 2. Confidence Rating: Before and After Research Consultations in Fall 2016 and Spring 2017

Confidence Rating	Before Research Consultation	After Research Consultation
Confident	484 (30%)	1,340 (84%)
Somewhat Confident	869 (55%)	235 (15%)
Not Confident	232 (15%)	10 (1%)
Total Students	1,585	1,585

Focusing on the students that did meet with a research consultant, in Fall 2016, 15 (6 percent) were first-year students, 203 (90 percent) were second-year students, and 8 (4 percent) identified themselves as a different class standing. All of the students that identified themselves as an “other” class standing stated that they were in their third year at Penn State.

In Spring 2017, of the students that met with a research consultant, 1,258 (92.4 percent) were first-year students, 93 (6.8 percent) were second-year students, and 8 (0.6%) identified themselves as a different class standing. Of the students that identified themselves as an “other” class standing, 5 were in their third year at Penn State, 2 in their fourth, and 1 in their fifth (see table 1).

Research Confidence: Before and After Consultations

To determine the effectiveness of these consultations, we asked students to reflect on their level of confidence performing library research before their consultation. Of the total that met with a research consultant in Fall 2016, 62 (27.4%) reported feeling *confident* about their ability to perform library research prior to meeting with a research consultant, while 109 (48.2%) felt *somewhat confident* and 55 (24.3%) felt *not confident*. In Spring 2017, 422 (31.1%) of students reported feeling *confident* about their ability to perform library research before their consultation, while 760 (55.9%) felt *somewhat confident* and 177 (13%) felt *not confident*.

We also asked students to consider their level of confidence performing library research after their consultation. Of the total that met with a research consultant in Fall 2016, 192 (85%) reported feeling *confident* about their ability to perform library research after meeting with a research consultant, while 32 (14%) felt *somewhat confident* and 2 (1%) felt

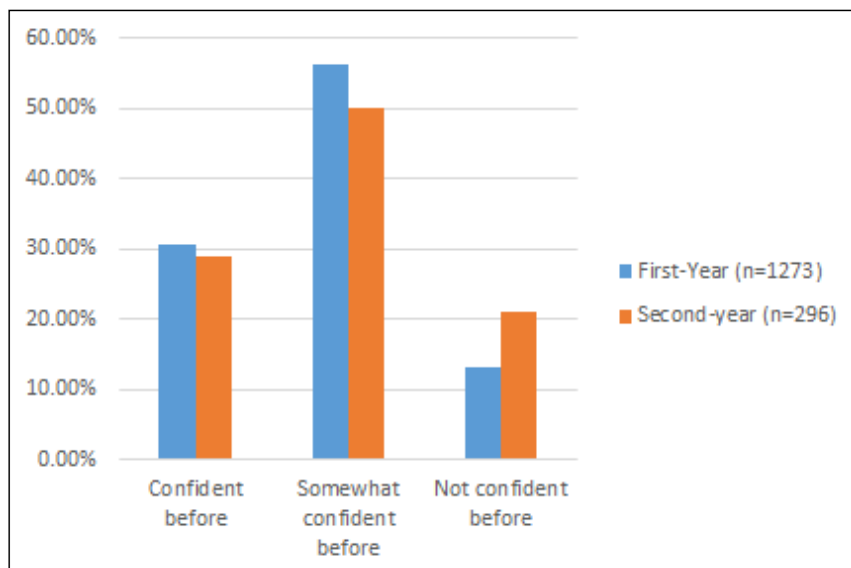


Figure 1. Confidence rating before research consultation, by class standing

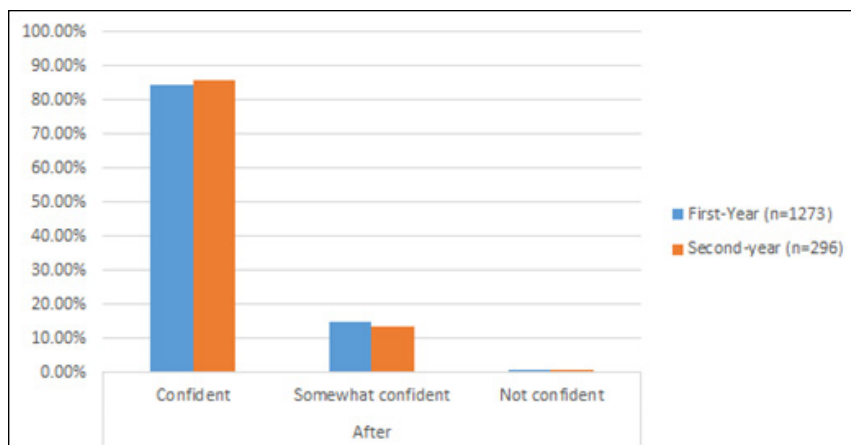


Figure 2. Confidence rating after research consultation, by class standing

not confident. Of the total that met with a research consultant in Spring 2017, 1,148 (84.5%) reported feeling *confident* about their ability to perform library research following their research consultation, while 203 (14.9%) felt *somewhat confident* and 8 (0.6%) felt *not confident* (see table 2).

To explore whether or not there were differences in the research confidence ratings of first- and second-year students, we compared these results by class standing. Of the total first-year students (n = 1,273) that met with a research consultant, 391 (31%) reported feeling *confident* about their ability to conduct research before the meeting, 716 (5%) reported feeling *somewhat confident*, and 16 (13%) reported feeling *not confident*. Similarly, of the total second-year students (n = 296), 86 (29%) reported feeling *confident* before the research consultations, 18 (50%) reported feeling *somewhat confident*, and 62 (21%) reported feeling *not confident* (see figure 1).

After meeting with a research consultant, both first- and second-year students reported similar levels of confidence. Of the total first-year students (n = 1,273), 1,073 (84%) reported feeling *confident* about their ability to conduct research after the meeting, 192 (15%) reported feeling *somewhat confident*, and 8 (<1%) reported feeling *not confident*. Similarly, of the total second-year students (n = 296), 254 (86%) second-year students reported feeling *confident*, 40 (14%) reported feeling *somewhat confident*, and 2 (<1%) reported feeling *not confident* after their research consultation (see figure 2).

Approachability

Of the total that met with a research consultant in Fall 2016, 211 (93.4%) considered the research consultants to be *approachable*, while 14 (6.2%) considered them to be *somewhat approachable* and 1 (0.4%) considered them to be *not approachable*. In Spring 2017, 1216 (89.5%) of the total students that met with a research consultant considered them to be *approachable*, while 137 (10.1%) considered them to be *somewhat approachable* and 6 (0.4%) considered them to be *not approachable* (see table 3).

First- and second-year students rated the approachability of research consultants similarly. Of the total first-year students in the analysis, 1,136 (89%) found research consultants *approachable*, 130 (10%) rated them to be *somewhat approachable*, and 7 (1%) found them to be *not approachable*. Of the second-year

students, 275 (93%) considered research consultants to be *approachable*, 21 (7%) found them *somewhat approachable*, and 0 (0%) rated them as *not approachable*.

Helpfulness

Of the total that met with a research consultant in Fall 2016, 203 (89.8%) considered the research consultants to be *helpful*, while 22 (9.7%) considered them to be *somewhat helpful* and 1 (0.4%) considered them to be *not helpful*. In Spring 2017, 1,065 (78.4%) of the total that met with a research consultant in Spring 2017 considered them to be *helpful*, while 264 (19.4%) considered them to be *somewhat helpful* and 30 (2.2%) considered them to be *not helpful* (see table 4).

There was a slight difference in the helpfulness ratings by first- and second-year students. Of the first-year students in the analysis, 999 (79%) found research consultants *helpful*,

Table 3. Approachability

Rating	Number of Students
Approachable	1,427 (90%)
Somewhat approachable	151 (10%)
Not approachable	7 (<1%)
Total	1,585

247 (19%) rated them to be *somewhat helpful*, and 27 (2%) found them to be *not helpful*. Of the second-year students, 256 (87%) considered research consultants to be *helpful*, 36 (12%) found them *somewhat helpful*, and 4 (1%) rated them as *not helpful*.

DISCUSSION

By providing students with one-on-one or small group research consultations during a lower-division course, we hypothesized that business library personnel were situating students to feel more confident conducting business research. Survey results show that research confidence ratings increased dramatically after meeting with a research consultant, suggesting this type of intervention is effective from the student perspective. Although high-volume research consultations are time-intensive for library personnel, we find it encouraging that students show an increase in research confidence as a result of the interaction. Previous literature highlighted the relationship-building potential, focused attention, and librarian expertise as valuable aspects of research consultations.²⁸ Our findings reveal an additional benefit of research consultations not discussed in-depth in previous literature: increased research confidence of students. Given ongoing concern with decreasing library anxiety and increasing student comfort with library use, the results provide further evidence of the value of research consultations to students and the importance of committing personnel time to the endeavor.

While we expected research confidence to increase overall, we expected to find notable differences in research confidence ratings between first- and second-year students. Typically, second-year students have had the opportunity to acclimate to the academic environment and may have conducted library research in other courses. Surprisingly, in this study, the confidence rating percentages of first- and second-year students are very similar. Although this finding warrants further research, we speculate that a possible explanation is that the difference between a first-year student and a second-year student may only be a single semester, depending on matriculation date. Another possible explanation is that first-year students may feel more confident than their ability warrants given their lack of experience with research in the higher education environment. This explanation is consistent with Kruger and Dunning's findings

Table 4. Helpfulness

Rating	Number of Students
Helpful	1,268 (80%)
Somewhat helpful	286 (18%)
Not helpful	31 (2%)
Total	1,585

that unskilled people overestimate their intellectual abilities.²⁹ Our study evaluated research confidence and did not assess research competence; however, the overconfidence of first-year students in their information literacy skills is also a recurrent finding in studies on the topic.³⁰ Additionally, MGMT 301 is generally the first business course taken by both first- and second-year students and therefore they may have similarly limited experience with research in the disciplinary context. Knowing that research confidence does not necessarily increase with years of experience in the academic environment, library personnel can leverage the learning context afforded by research consultations to evaluate the individual needs of students new to a discipline.

We anticipated students to rate library personnel as approachable and helpful based on anecdotal student feedback from previous semesters, and overall, results supported this expectation. The most notable finding was the difference between the helpfulness ratings by first- and second-year students. More second-year students rated research consultants as *helpful* than first-year students. Related to our findings on research confidence, we conjecture that second-year students may be more aware of what they do not know and thus have a greater appreciation for research consultation assistance. Our findings on approachability and helpfulness offer further evidence that consultations provide the foundation of positive relationships between business students and library personnel. Research consultations succeed in effectively connecting students new to disciplinary research to the resources and people they can return to for help.

While beyond the scope of this study, analysis of the qualitative data gathered from the students that chose to meet with a research consultant would yield additional insights on research consultations from the student perspective. Specifically, these qualitative data could be analyzed for possible insights into what factors affect student ratings of confidence, helpfulness, and approachability. Additional avenues for exploration could include the impact of prior library instruction on research confidence, and general education and disciplinary learning goals as they relate to research consultations. Ideally, these studies could be longitudinal in order to assess the lasting impact of research consultations and early career library interventions on the individual over time. Familiarizing students with the resources of their discipline in an entry-to-major course may have the potential to increase student learning gains in upper-level courses where more intensive research may be required.

CONCLUSION

Research consultations are one way to create a learning experience in which students gain research confidence and acclimation to their institution's library resources and personnel. Introducing students to the library personnel assigned to their discipline through course-related research consultations may ease overall library anxiety and subtly correct any misconceptions students have about the roles of academic library personnel.

The Reiter and Huffman article supplied evidence that library personnel are able to successfully build and maintain a sustainable model to support the management of research consultations for a high-enrollment course.³¹ Gathering data from the student perspective provides insight into the impact of the service. Because of the size of the population surveyed, we are able to draw conclusions about the effectiveness of research consultations on confidence, and perceptions of library personnel approachability and helpfulness. The study suggests that one-on-one and small-group consultations support a dramatic shift in research confidence while also reinforcing library personnel as approachable and helpful. From both the student and library perspective, this course-related service is well worth the time investment.

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APPENDIX A. SURVEY QUESTIONS

1. Did you meet with a research consultant for the Business Information Project?
 - Yes
 - No (If No, skip to question 8)
2. How would you rate your level of confidence about doing library research for your assignment *before* meeting with the research consultants?
 - Confident
 - Somewhat confident
 - Not confident
3. How would you rate your level of confidence about doing library research for future assignments *after* meeting with the research consultants?
 - Confident
 - Somewhat confident
 - Not confident
4. How would you rate the approachability of the research consultant?
 - Approachable
 - Somewhat approachable
 - Not approachable
5. How would you rate the helpfulness of the research consultant?
 - Helpful
 - Somewhat helpful
 - Not helpful
6. Would you meet with a research consultant again for assistance with future assignments? Why or why not?
7. Do you have any final comments or do you have any suggestions for how we may improve the research consultation service in the future? (Skip to question 9)
8. What was the reason you chose not to meet with a research consultant?
9. Please indicate your class standing
 - First-year
 - Second-year
 - Other (Please specify)
10. Please indicate your current or intended major
 - Accounting
 - Corporate Innovation and Entrepreneurship
 - Finance
 - Management
 - Management Information Systems
 - Marketing
 - Risk Management
 - Supply Chain and Information Systems
 - Undecided Business Major
 - Major outside of Smeal College of Business
11. What is your gender?
 - Male
 - Female
 - Other
12. What is your race?
 - White/Caucasian
 - African American
 - Hispanic
 - Asian
 - Native American
 - Pacific Islander
 - Other
13. Are you an international student?
 - Yes
 - No