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Authors

Careaga, Greg
Gravier, Frank
Lyons, Ken
et al.

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Testing the Ithaka S+R Student Survey Role of the Library and Library Space Planning modules: The UC Santa Cruz Experience

Greg Careaga

Head of Assessment and Planning, University Library
University of California, Santa Cruz

Frank Gravier

Undergraduate Experience Librarian
University of California, Santa Cruz

Ken Lyons

Undergraduate Experience Librarian
University of California, Santa Cruz

Laura McClanathan Meriwether

Information Services Coordinator, University Library
University of California, Santa Cruz

Deborah A. Murphy

Undergraduate Experience Librarian
University of California, Santa Cruz

Introduction

During the fall of 2014, the University of California, Santa Cruz (UCSC), University Library Undergraduate Experience Team (UET) partnered with not-for-profit academic research and consulting service Ithaka S+R to test a draft Library Space Planning module for their student survey. Alisa Rod, survey methodologist at Ithaka S+R, created the module and trained UET members in cognitive interview techniques. UET recruited UCSC undergraduate and graduate student subjects, performed thirty-one cognitive interviews, and returned a report of findings that influenced the development of the production release of the survey module.

UCSC's motivation

In the summer of 2014, the Richard L. Press University Librarian Presidential Chair Elizabeth Cowell created the UET to evaluate and extend the Library's contribution to undergraduate student success, and to build campus partnerships with student success stakeholders. The Library was simultaneously in the early stages of preparing for a major renovation of the Science & Engineering Library (S&E), one of two campus libraries and a heavily used study space. A pre-test project partnership with Ithaka S+R would serve to build UET's assessment skills and teamwork, and help make the Library Space Planning module ready in time for our spring 2015 Undergraduate Student Survey project. Data from that survey would inform our planning for the S&E renovation.

Project launch

This project was UET’s first major undertaking. We used two strategies to facilitate collaboration: a common virtual workspace for project documents and a well-defined project task list. We used Google Apps, a familiar and UCSC-supported platform for team members. We developed a common approach to directories, file names, file versions, etc. to allow us to share and track documents easily.

There is an aphorism, dubiously attributed to Henry Ford, that “nothing is particularly hard if you divide it into small jobs.” In that spirit, our most useful tool in for organizing and executing this project was the task list. It allowed us to define the major tasks and the minor tasks that constituted them, identify dependencies, and create and manage the project timeline. Most importantly, it allowed us to define clearly who was responsible for timely completion of each task, even when the tasks themselves were group work.

| Unique Id | Activity | Start Date | End Date | Percent completed | dependency | Project/task Lead | Comments |
|-----------|---|------------|-----------|-------------------|------------|-------------------|---|
| 1.000 | Ithaka student survey module pretesting | 15-Sep-14 | 8-Jan-15 | 100% | | Careaga | |
| 7.000 | Implementation | 22-Oct-14 | 5-Dec-14 | 100% | 3, 4, 5, 6 | Lyons | |
| 7.010 | Reserve spaces | 22-Oct-14 | 29-Oct-14 | 100% | | Lyons | McHenry: Using 2376. What about S&E? Old 'bullpen' |
| 7.011 | McHenry 2376 set up | 10-Nov-14 | 12-Nov-14 | 100% | | Careaga | MT to test network connection. Place second table. GC laptop |
| 7.012 | McHenry office backup | 10-Nov-14 | 12-Nov-14 | 100% | | Murphy | Secondary McH site. No issues |
| 7.013 | S&E bullpen area | 10-Nov-14 | 12-Nov-14 | 100% | | Careaga | Get key from MT. Confirm printing availability. Printing/network available |
| 7.020 | Match participants/interviewers | 3-Nov-14 | 1-Dec-14 | 100% | | Lyons | Ongoing. Completed |
| 7.030 | Create calendar | 27-Oct-14 | 13-Nov-14 | 100% | | Murphy | M-Th 8-9, F 8-5. No weekends — no Mondays 10-11:30 |
| 7.040 | Incentives — gift cards | 27-Oct-14 | 31-Oct-14 | 100% | | Careaga | \$5 GVC cards? Asked RC 10/28. Approved 11/5. PO request submitted 11/10. PO submitted to GVC 11/12. Cards in hand 11/14. |
| 7.050 | Perform 25 interviews | 10-Nov-14 | 5-Dec-14 | 100% | | Lyons | |
| 7.051 | Enter interview notes into spreadsheet | 17-Nov-14 | 5-Dec-14 | 100% | | Lyons | |

Figure 1: Excerpt from the project task list

The project launched in mid-September via teleconference with Rod. We provided feedback on the draft module, discussed qualitative approaches to testing the instrument, and reviewed Ithaka S+R’s timeline for finalizing and releasing the module. We settled on an approach and set a goal of interviewing twenty-five UCSC students. We planned to begin interviewing by November 10th, conclude by December 5th, and report our findings to Rod by December 18th.

Training the interviewers

C. Northcote Parkinson (1955) famously observed “work expands so as to fill the time available for its completion.” To that we would add, “and then some.” Pressures of the new school year caused our ambitious implementation calendar to slip, threatening to push our data collection back toward the Thanksgiving holiday.

We recommenced our preparations in earnest in late October. Rod created an online instance of the survey with both the Role of the Library and Library Space Planning modules because questions in the latter depended on skip logic in the former. The team was challenged to “take the survey/break the survey,” which is to say, answer the instrument with a variety of untoward responses in an attempt to confound the survey logic. We were unsuccessful in doing so, but the experience increased our knowledge of, and confidence in, the modules we were about to test.

In early November, Rod trained UET to use cognitive interviewing, a qualitative assessment technique designed to “identify and analyze sources of response error in survey questionnaires by focusing on the cognitive process respondents use to answer questions on a survey or

questionnaire” (Haeger, et al., 2012). We used a script-based, retrospective verbal probing approach.

UET members paired off to practice, taking in turns the role of subject and of interviewer. Over several iterations, we familiarized ourselves with the script and practiced giving neutral prompts and neutral responses to queries from subjects. Before this project, we were inexperienced at cognitive interviewing. These training and practice sessions proved vital to our preparation. The role-playing exercise also helped us refine the script, in occasionally surprising ways. For example, the interview questions were interspersed with the survey questions and were sometimes hard to isolate. Highlighting the interview questions and printing the script in color was a simple solution that greatly improved the usability of the script. We arrived at the data collection portion of the project confident in our ability to perform the interviews.

Recruiting participants

While training and practicing, we were also developing an outreach strategy. We wanted a diverse pool of subjects in order to have “the greatest cross-section of the population as possible in order to identify a wide range of problems” (Willis, 2005). We were constrained by how many interviews five of us could conduct well in the middle of a busy academic quarter. We settled on a goal of twenty-five and committed to making the interview experience as convenient as possible for the subjects.

We advertised the survey on the library’s Web site, via library social media outlets, on flyers that were broadly distributed across campus, and on quarter sheets that were spread throughout the libraries by our Roving Program students. We also reached out to student government, academic departments, student resource centers, and residential life.

We directed interested students to a LibGuide with a conspicuous link to an interview calendar. The LibCal software we used was already familiar to any student who had reserved a study room in one of our libraries. Students were able to make an interview appointment during a three-week window. Each received an automated e-mail confirmation as well as a personal e-mail from their librarian interviewer. We made ourselves available for interviews at both libraries from 8:00 a.m. to 9:00 p.m. every weekday except for Friday (5:00 p.m.) and committed to responding to appointment requests within two working hours.

We offered a modest incentive in the form of a \$5 gift card to the Global Village Café at McHenry Library to each subject at the conclusion of his or her interview. Our students are more accustomed to prize drawings for survey participation and responded positively to this small but immediate gesture.

Scheduling the interviews

We started interviewing on Monday, November 17th, a week after we originally planned. Any early concern we had that students might not sign up was quickly relieved; five students signed up for the first day and another twenty-five made appointments over the course of the first week. We learned that there is, however, an important difference between signing up and showing up. Three of five Monday interviews neither showed up nor canceled. Tuesday was a bit better with only one cancellation and one no-show out of six interviews. On Wednesday, after reviewing our approach to confirming appointments, we tightened up our e-mail language and started entering the appointments on students’ campus Google Calendar, not just LibCal. Even after these changes, our experience with student follow-through remained variable. In the end, we made

fifty-three appointments and conducted thirty-one interviews, a comfortable success given our goal of twenty-five. We completed our last interview on Wednesday, December 4th.

Interview logistics

We promised students an interview experience of thirty minutes or less and in more than half the cases, we fulfilled that pledge. Three factors contributed to overlong appointments. Sometimes a subject would arrive late. Some subjects took much longer than average (interquartile range: 9'01" to 12'20") to complete the survey—one subject took 23'16" to complete it. Some subjects who completed the survey in an average time were quite loquacious, and their responses to the interview questions caused sessions to run long.

Fortunately, we had arranged a second interview space in McHenry Library. We fell into the practice of setting top-of-the-hour interviews in space "A" and bottom-of-the-hour interviews in space "B," thus avoiding any overlong interviews cascading down the appointment chain. We only had one space available in the Science & Engineering Library. Only seven of thirty-one participants preferred to be interviewed there and overlong appointments never became an issue.

Institutional review

For the cognitive interview project, we obtained an exemption under Category 2 for a human subjects protocol (Department of Health and Human Services, 2009) from the campus Office of Research Compliance Administration. We promised to maintain the anonymity of the subjects and demonstrated that neither the survey nor the interview questions could reasonably result in harm to any respondent if confidentiality were to be breached. We assigned each respondent a unique identifier to take the survey. Ithaca S+R received only the unique ID and the survey responses; they had no personally identifying information about the student. UET knew the students' identities and unique ID but did not have access to the test survey responses. We used names, contact information, and the unique IDs to manage the interview calendar and used the unique ID to collect the interview data. At the end of the interview phase, we redacted names and contact information from the interview calendar and provided Ithaca S+R with the redacted interview calendar and anonymized interview data.

Participant demographics

We sought a representative sample of our students and did fairly well. We had students across all academic divisions and class standings in fair approximation of the campus profile. Our mix of on-campus (48%) and off-campus (52%) subjects was within two-tenths of a percent of the campus population. Female students (77%) were overrepresented compared with the campus population (52%), as were graduate students at 23% of the sample and 9% of the population, respectively.

Data analysis

Each UET member analyzed four or five of the twenty-two cognitive interview questions across all thirty-one subjects. We found that subjects generally understood the questions well but were sometimes impeded in reliably answering a question when the scale scrolled off the top of the survey webpage on some of the longer multi-faceted questions. We identified some questions that merited closer scrutiny, and one question that was understood very poorly; it was eliminated from the production release.

Comfort vs. safety

There was one noteworthy question that was interpreted in an unexpected way by about a quarter of the subjects.

Q24_4: “Overall, how satisfied or dissatisfied are you with [the general comfort level] of the campus library building you visit most often?”

CI Q13: “What did you think we meant by ‘comfort level’ in this statement?”

This was designed to be a facilities question and we anticipated responses about lighting, temperature, noise, etc. While the majority of subjects did answer this way, seven of thirty-one (23%) framed their responses—in whole or part—in terms of perceptions of personal safety.

“Seating, environment (is it safe?), temperature.”

“I am able to do my work. I feel safe in the library.”

“A safe space.”

“Whether she feels safe coming to library and won't be disturbed by anything.”

“Combination of physically comfortable seating as well as atmosphere—not people randomly creeping around in library.”

“Chairs, location, safety. If I feel like I am not going to be bothered.”

“Feeling safe, physically comfortable, relaxed.”

All seven subjects who answered this question in terms of safety were women. This is an excellent example of the strength of cognitive interviewing as a tool to examine bias since “it investigates how different groups of respondents may interpret or process questions differently” (Miller, 2014). Thirty percent of the women who participated in the cognitive interview project related comfort to safety in this question; none of the men did so.

Safety outcome

As a result of the cognitive interview project, Ithaca S+R added four new safety questions to the production release of the Library Space Planning module:

LSP 4_7: “Overall, how satisfied or dissatisfied are you with [the general level of safety] of the campus library building you visit most often?”

LSP 25: “In general, how safe or unsafe do you feel during daylight hours when going to or from the campus library building you visit most often?”

LSP 26: “In general, how safe or unsafe do you feel after dark or at nighttime when going to or from the campus library building you visit most often?”

LSP 27: “Your safety is our highest priority. Please explain any safety issues you have experienced or describe why you feel unsafe when visiting the campus library building(s).”

The spring survey and safety

UCSC conducted the Ithaca S+R Student Survey with the Library Space Planning module for all undergraduate students in spring quarter 2015. Our students reported a high perception of personal safety in our libraries. On a seven-point scale with “1” being “extremely unsafe” and “7”

being “extremely safe,” men reported an average score of 5.85. Women reported an average score of 5.80. Students with non-binary gender identities reported an average score of 5.77. Students who preferred not to disclose a gender identity reported an average score of 5.43. The Science & Engineering Library (5.85) reported a slightly higher overall average compared with McHenry Library (5.76).

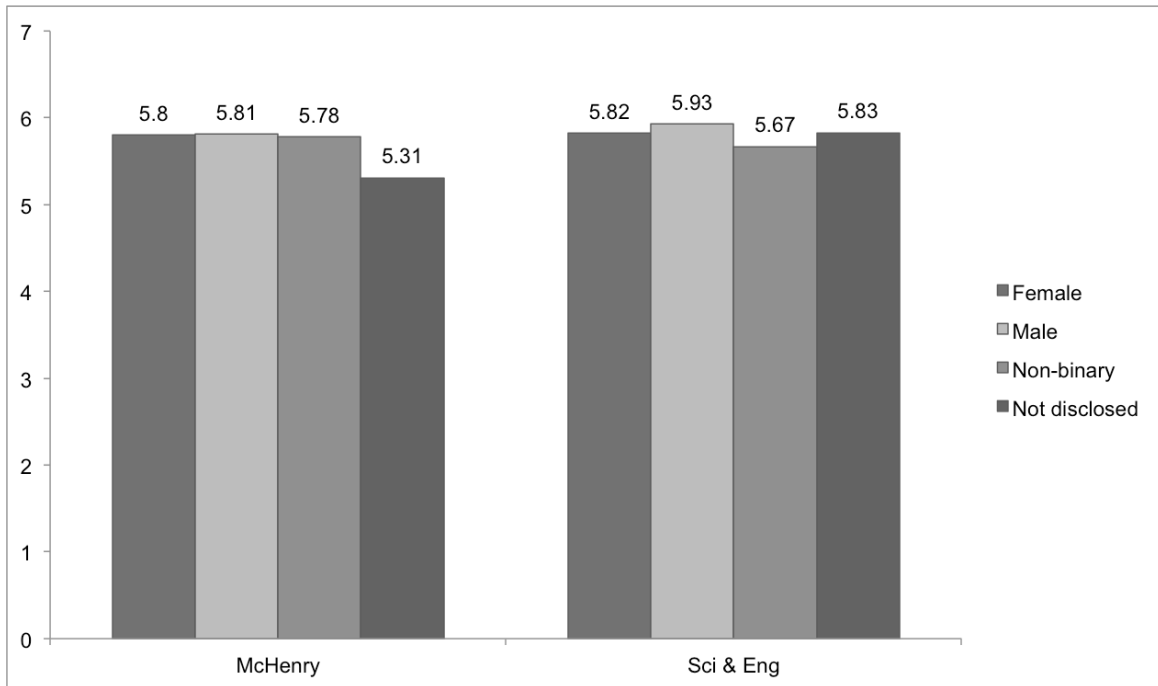


Figure 2: Perception of safety while in the library used most often

The survey asked students how safe they felt getting to and from the campus library they used most often during daylight and nighttime hours. Not surprisingly, our students felt safe on campus during the day (6.32) and somewhat less safe at night (4.89). There was little variation across libraries or gender identities during the day with the exception of those who reported a non-binary gender and a preference for using the Science & Engineering Library ($n=4$).

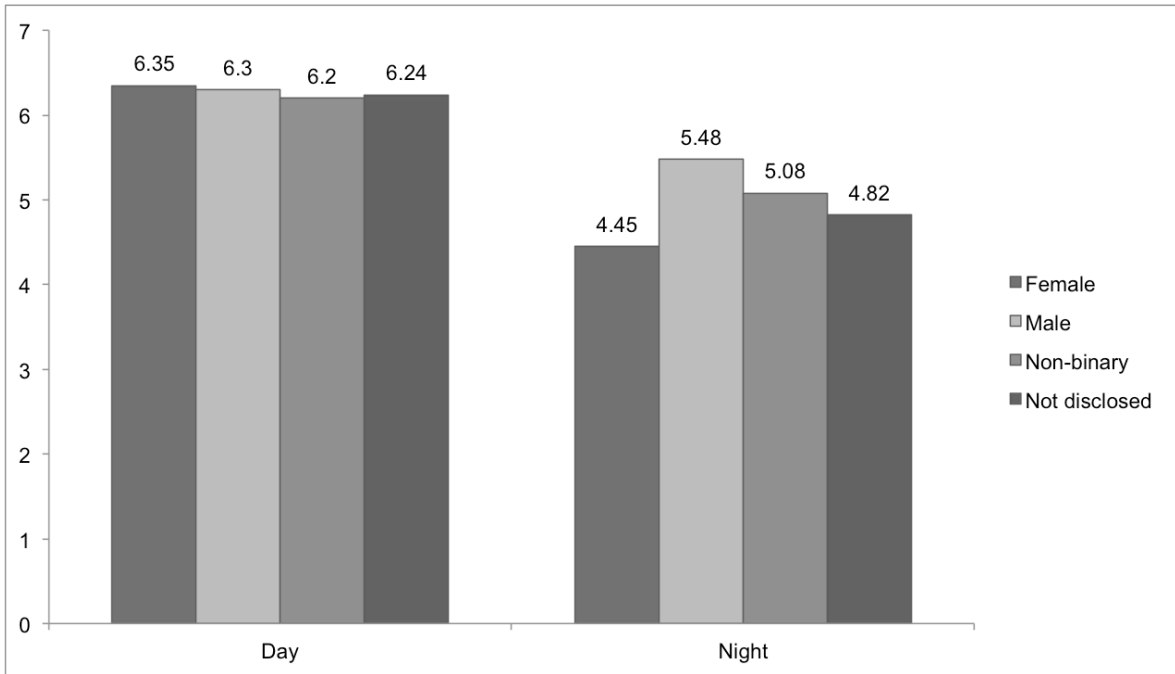


Figure 3: Perception of safety while traveling to or from McHenry Library

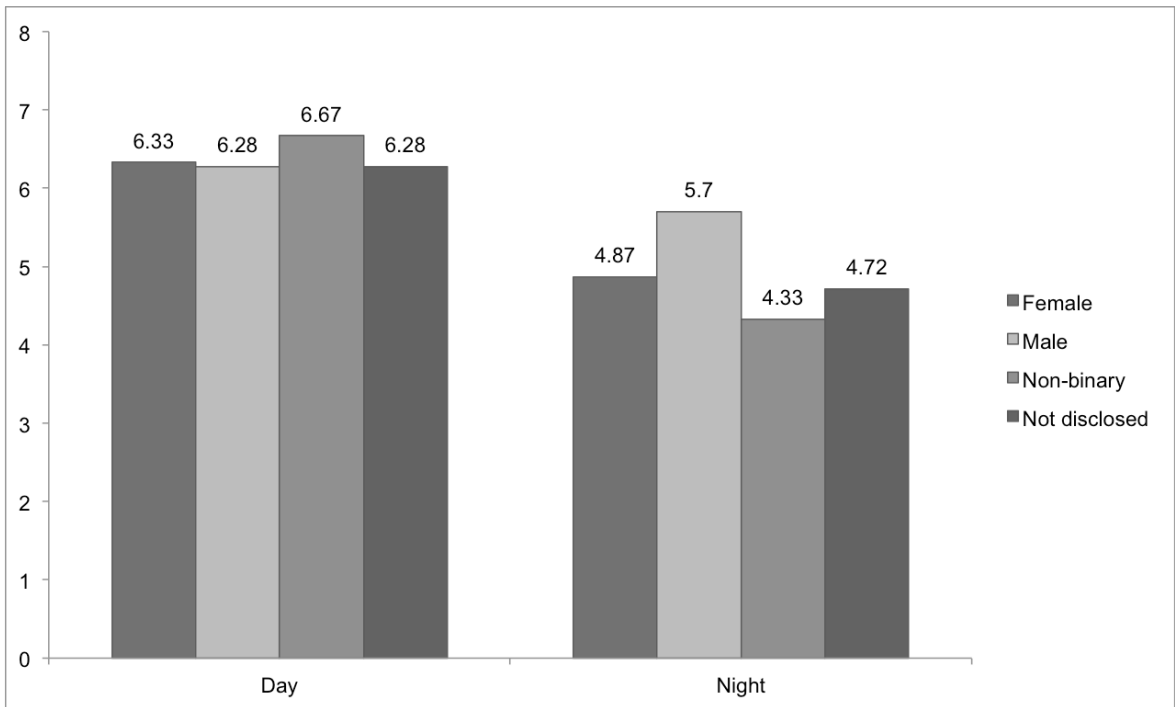


Figure 4: Perception of safety while traveling to or from the Science & Engineering Library

There were significant differences in perceptions of safety at night. Men reported a higher perception of safety overall at night (5.55) compared with students with non-binary gender identities (5.06), students who preferred not to disclose a gender identity (4.82) and women (4.57). All constituencies felt safer getting to and from the Science & Engineering Library (5.19) at night compared with McHenry Library (4.77).

Qualitative data about safety

The last safety-related question was a free-form invitation for students to share their safety concerns with us. This question garnered 318 responses out of 1,766 completed surveys, or 18%. Women provided the most comments (261) and responded at a higher rate (23.7%) than other constituencies. Primary users of McHenry Library reported comments at a higher rate than primary users of the Science & Engineering Library. The dominant safety concerns were:

- darkness and inadequate nighttime lighting on pedestrian paths
- risks associated with the heavily forested environment around McHenry Library
- risk perceived as inherent to being a woman on a college campus
- distance to bus stops and student parking
- unreliability of the campus night shuttle
- lack of a campus escort program

The relative perception of nighttime safety between libraries is not surprising. The Science & Engineering Library is located in a more densely developed part of campus with well-lit and convenient access to parking and public transportation. McHenry Library is located in the less developed and heavily wooded heart of campus where lighting is not as good, and transportation and parking are farther away.

Safety considerations for other demographic indicators

Our instance of the full Undergraduate Student Survey collected limited demographic data. We only asked about gender identity and campus/off-campus residence. Ithaca S+R provided UET with an anonymized data set and report of findings, and provided our campus Office of Institutional Research, Assessment, and Policy Studies (IRAPS) with a non-anonymized data set. IRAPS will provide us with additional demographic data and we will analyze them with an eye to understanding how all of our student constituencies perceive their safety with respect to our libraries. No such data were available as of the date of this submission.

Project outcomes

The cognitive interview project was an effective tool for building a culture of assessment and project management practices within newly formed UET. Our work improved the survey module and opened an important line of inquiry. The Undergraduate Student Survey project helped build a strong partnership between UET and IRAPS that led to a successful application to the ACRL Assessment in Action Program. We collected data that will inform our Science & Engineering Library renovation and allow us to further assess both demand for, and how we might implement, twenty-four-hour library service on campus. We will share the student concerns about safety with campus police, campus facilities, transportation and parking services, student affairs, and student government.

The cognitive interview and survey projects returned excellent value for the resources devoted to their execution.

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