What does it take to be a good reference librarian today? The library literature is teeming with articles that address this question, focusing on general competencies, teaching, and providing service at the reference desk and through online venues. Very little has been published, however, about the skills and knowledge that librarians employ in providing individual research consultations, a reference service in which the librarian meets with a student in a scheduled session away from the reference desk. Some have suggested a renewed interest in consultations as an important complement to information literacy programs.¹ This is indeed the case at University of Vermont, where the demand for consultations has increased dramatically in recent years.

During the spring 2011 semester, we conducted an exploratory study, inviting all 53 students who received individual consultations with either of us to complete a survey about why they requested consultations, what kind of assistance they received, and what they found valuable. The 52 respondents included students at all levels (first year through graduate) and at various stages in their research projects. The findings will be published in College & Research Libraries.²

In addition to hearing the students’ perspective, we wanted to learn more about what librarians bring to these consultations. We used research logs to record “field notes” immediately after each consultation, answering a set of questions, including 1) “What skills, knowledge, and experience did I employ in working with this student?” and 2) “What happened during the consultation; what kinds of help were actually provided?” At the end of the semester, we reviewed our field notes for themes and trends.

This systematic, structured reflection yielded an interesting picture of what is required of librarians in providing individual consultations. These findings should be of interest to search committees who are hiring reference librarians, administrators who are called to explain what librarians do, current practitioners who want to continue their professional development, and aspiring reference librarians who are wondering what the work will be like and what skills they will need.

Findings

What skills, knowledge, and experience did we employ to help students during individual research consultations? Our answers fell into eight categories described below.

• **Knowledge about reference sources and their effective use.** This category includes knowing the content of reference sources and databases so we can recommend those that are most useful. It includes know-
ing how to frame a question so search terms will yield results, an aptitude for generating synonyms and related terms, and the ability to quickly review search results to identify language that relates to students' topics.

It also includes knowing about search interface functionality including truncation, field searching, and controlled vocabulary; the unique features of a database; and how to use advanced features sometimes buried in database search pages. Interestingly, our field notes also show that some students needed to be taught how to navigate print resources because they were not comfortable using indexes or tables of contents.

One of our respondents wanted to find primary sources, including parole board transcripts, about an individual who was involved in the Charles Manson murders. Although transcripts were available for a fee, the student didn’t want to pay to obtain them. The librarian experimented with alternative ways to find that information. After consulting both bibliographic tools and free Web resources, including Google and YouTube, the librarian ultimately located through WorldCat a documentary film that included parole hearing testimony.

- **Knowledge about library procedures and resources.** In addition to knowledge about sources and search techniques, we employed knowledge of library procedures and resources. We showed students how to complete interlibrary loan requests and request items from remote storage. During several consultations, we referred students to other library colleagues' subject guides.

- **Deep and broad knowledge of subjects and terminology.** We often used our own subject knowledge to assist students with their projects. In some cases, that subject knowledge came from a prior career; in other cases, it came from being broadly aware and well read.

  For example, one of us noted how helpful it was to know the variant and related terms for Islamic Spain (e.g., Andalus, el-Andalus, Iberia). The other noted that her business degree and former career in marketing equipped her to teach a student how to interpret cross-tabulations of marketing data and to advise another student to add Myers Briggs types to her research on leadership styles. In another example, one of us noted that because she read the local daily newspaper, she was able to quickly recommend a timely article on regulation of raw milk products to a student researching dairy policy. We also helped students understand the assignments made by their professors, helping them define and deconstruct unfamiliar terminology they encountered in assignments and classes.

- **Experience in topic development.** Because reference librarians spend so much time searching for all kinds of information, they inevitably develop a good sense about who produces information, what kinds of information are available, and the viability of a given research topic. Our field notes indicate that we used this knowledge in helping students efficiently broaden, narrow, and redirect their topics; identify alternative sources of information; and examine topics from the perspective of several disciplines.

  We also observed that students often came to the consultations “not knowing what they don’t know”—not knowing what things would be helpful in their projects. Several students didn’t know what information is available and expressed their information need in very narrow terms. Subject and source knowledge of the librarian was often very helpful here, enabling us to suggest additional ideas.

  In one case, a student requested a consultation for help finding reports on the IT industry for a strategy paper. When he arrived for the consultation, however, he said he was having trouble identifying a suitable topic for the project. The consultation, which consisted almost entirely of a discussion about the health-care IT consulting industry in which he works, enabled him to narrow his options to three viable ideas.

  At the end of the consultation he said, “You’ve helped me see that I need to do some more thinking about what direction I want
to take. It was great to have someone to talk it over with as a sounding board.”

• Experience in doing research projects. Our field notes pointed to ways in which we draw on experience in doing our own research projects when we advise students. Our experience comes from the scholarly work we do as faculty members and from having been students ourselves pursuing advanced degrees. We shared advice about such practical matters as techniques for taking notes and staying organized, the value of reading secondary literature first to become familiar with a subject, how to manage citations in group projects for which every member contributes a different section of the paper.

• Knowledge about people on campus. Our knowledge about people on campus, particularly faculty members, was useful in two ways. First, it enabled us to refer students to subject experts who could help them in either a formal capacity (e.g., as a thesis advisor) or an informal one (e.g., someone to talk to about a topic). Second, our familiarity with professors’ expectations and preferences often helped us answer students’ questions about how to approach an assignment or present their results. For example, a student asked one of us whether we knew if the professor preferred that students use a large number of sources or fewer sources of higher quality.

• Ability to use synthesis to arrive at an answer. Answering students’ research questions often required finding pieces of information from different sources (or within the same source), and then using synthesis to arrive at the desired answer. For example, to estimate the total market potential for bathroom remodel projects in Chittenden County, Vermont, one of us helped a student find data about Vermont households from the U.S. Census Bureau. Then we found national data about the typical incidence of bathroom renovations from another source, and did some calculations to derive an answer.

• Skill in active listening and providing affective support. We noted our use of reference interview skills and active listening techniques to better understand the meaning behind the students’ words. We asked clarifying questions, and our conversations with students enabled us to assess the ways in which students needed support or affirmation, or the ways in which students were confused and either didn’t know it or wouldn’t admit it. We were then able to adjust our consultation technique for the student, taking into account personality, level of research knowledge, and complexity of the assignment.

We also noted that we provided reassurance, encouragement, and confidence-building in many consultations, serving as “cheerleaders” or “coaches” and working to lower the psychological and emotional barriers that many student researchers face.

Many students seemed to appreciate the chance to build a relationship with the librarian. One of our respondents was a science major working on a project for an English class and out of her comfort zone. At the start of the consultation she was awkward and uncomfortable, but when she left she seemed excited and upbeat. She returned some weeks later to report that she got an “A” on the project, and to deliver a thank-you card and gift certificate to Barnes and Noble. She also shared a copy of her paper so the librarian could see her final product.

Conclusion
Using systematic, structured reflection, we identified a large repertoire of skills that librarians use in helping students during individual research consultations. A larger study would likely reveal even more. We were surprised by the complexity of our interactions with students and by the many different kinds of help we provided.

Perhaps more than any other mode of reference interaction, individual research consultations enable librarians to extend what goes on in the classroom, either by adding our own subject knowledge, or by questioning students about theirs. Because consultations give students and librarians more time and space, grappling with difficult and complex research questions is more likely to become an intellec-
ually interesting and rewarding collaboration. In contrast, dealing with complex research questions at the reference desk or through online modes of communication is often stressful and frustrating because the librarian feels pressure to “dispense with” the student more quickly to help other waiting patrons.

As expected, individual research consultations almost always involved finding information. Our project revealed that consultations often involve higher-order skills, as well, such as knowing how to approach and organize the research endeavor, shaping a topic appropriate for the scope of a project, making connections among various pieces of information and applying them to the problem at hand, and identifying alternative research strategies. In addition, our findings show the importance of being able to “read” people and adjust to their personalities, anxiety levels, learning styles, and facility with the research process. We also observed how useful it is to be well-read and broadly acquainted with people and resources in the library, across campus, and throughout the community.

Many of these skills and attributes have long been the hallmarks of excellent reference librarians, and our research shows that students still need librarians who have them. Online discovery tools and even vastly improved computer interfaces are no substitute. It is important that the library profession continue to value and nurture these skills in reference librarians.

Notes
2. Accepted June 11, 2012, for publication September 2013: T. Magi and P. Mardeusz “Why some students continue to value individual, face-to-face research consultations in a technology-rich world,” [preprint available at http://crl.acrl.org/content/early/2012/06/19/crl12-363.short?rss=1].