



Evidence Based Library and Information Practice

Commentary

A 2CUL Collaborative Ethnographic Assessment of Humanities Doctoral Students: Design, Implementation and Analysis

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Introduction

Ethnographic studies of various user groups have flourished within libraries in recent years. Most of these studies focus on planning service programs, facilities, and end-user interfaces, following a foundational tenet of participatory design – that systems and tools are best designed with engaged input from their users (Foster & Randall, 2007). The pioneering effort to design library spaces on the basis of ethnographic research findings at the University of Rochester, since extended to other areas of library service (Foster & Gibbons, 2007), has led a number of academic research libraries to ground planning efforts in similar research methodologies.

The advantages of utilizing ethnographic research as a planning tool derive from observing subjects in their work process and capturing their experiences in their own words. Combined with data measuring actual user behaviour, qualitative information gathered from interviews and observations provide a powerful tool for improving customer service and the end-user experience. While many early efforts centered on undergraduate academic work practices, more recent studies focus on the work of “serious researchers,” a frequently used catchall denoting faculty and graduate students. Examples include case studies produced at the broad discipline level by the Research Information Network, design projects concentrated on advanced researchers (Foster, Clark, Tancheva, & Kilzer, 2011), and efforts by scholars themselves to examine their own research workflows and the library’s role within those processes (Abbott, 2008).

Graduate students, and specifically doctoral students in the humanities, represent fertile ground for libraries interested in using ethnographic inquiry for service improvement and planning. Humanities doctoral students are some of the most frequent and dedicated library users, given the nature of their research programs. A number of recent studies show that

these students take longer to complete their programs and drop out at a higher rate than those in the sciences and social sciences (Ehrenberg, Zuckerman, Groen, & Brucker, 2010; National Research Council, 2010; Hoffer & Welch, 2006). Contributing factors are numerous and include the availability of adequate funding, prospects for employment after completion, and the quality of students’ relationships with their faculty advisors – all important variables in completing a doctoral degree in a timely fashion (Ehrenberg et al.). This intense interest in doctoral student completion and retention is underpinned by a growing anxiety about graduate education and the future of the academy (Ehrenberg & Kuh, 2009) which has, in turn, spawned a cottage industry of guide books for both current and future graduate students (Hume (2005) and Semenza (2010) were two guidebooks often cited by study subjects).

Most research on doctoral student success does not discuss the library as a factor affecting completion or retention. In an attempt to fill this gap, the research libraries at Columbia and Cornell universities (2CUL) conducted a collaborative ethnographic user needs study investigating the needs of doctoral students in the humanities, focusing specifically on the question of whether the library could positively impact student success (Gessner, Jaggars, Rutner, & Tancheva, 2011). The study was supported by grants from the Gladys Krieble Delmas Foundation, the Council on Library and Information Resources, and funding from the respective graduate schools at Cornell and Columbia. This funding covered equipment purchases, incentives for interview participants, training, and some modest staffing support for the project.

In summary, the study focused on doctoral students in the humanities at any stage of their programs. Between the two institutions, the research team conducted 5 focus groups with 27 participants and 45 individual interviews. Data gathered from the focus groups were used to refine the two protocols used in the interviews.

Written questionnaires were developed and administered at the end of each focus group and interview session. The interviews lasted between 60 and 90 minutes and were conducted in person by teams of two library staff members, except for two interviews, which were conducted via telephone.

The study concentrated initially on students enrolled in English, religion, history, and classics doctoral programs, but participation was expanded to include other humanities disciplines at both institutions. History and English were the only two disciplines to overlap at both institutions, and they also contributed the highest number of participants. The subjects varied in age from 21 to 75 years old, and their academic backgrounds and experience with libraries, archives, and academic writing ranged dramatically. Almost two-thirds of all participants had advanced to doctoral candidacy. Over half of the interviewees had earned advanced degrees (typically a master's degree) prior to starting their doctoral program.

Interviews revealed that even though there is no "typical" humanities doctoral student, there are institutional and library-related concerns that these students share and consider important in their pursuit of advanced degrees. While interviewees confirmed the importance of other factors already identified in the literature (funding, future employment prospects, and the faculty advisor relationship), their comments on what the library does and might do to contribute to their success were of particular interest. The opportunities for libraries that emerged from the study included providing work and social space, fostering community, ensuring access to deep research collections, providing assistance in supporting both research and teaching, and nurturing the development of doctoral students as scholars.

The detailed results of the study, including an in-depth demographic analysis, are reported elsewhere (Gessner et al., 2011). The current paper will focus on the *process* of conducting a

collaborative ethnographic study between two research libraries and student populations. The paper will examine the processes taken to design and administer the study and analyze the resulting data within an inter-institutional, collaborative framework. The project leaders identified both opportunities and challenges while completing the project, including addressing differences in institutional review board (IRB) procedures and crafting instruments, and analyzing results collaboratively, across two research teams and different institutional cultures.

Project Organization

Team Structure and Project Management

By the end of the project, a total of 22 individuals (including 7 students) across both campuses had contributed in some way to the success of the study. The core research team consisted of 11 library staff members who contributed their time in addition to their regular duties (see Appendix for a listing of team members). Only the Project Manager from Cornell received a 25% leave from regularly assigned duties to support the study.

The Columbia team consisted of the Associate University Librarian for Collections and Services (the co-Principal Investigator (PI) from Columbia), the Assessment and Planning Librarian, who managed the overall project and the local IRB process, five staff members from across the organization, including four subject specialist librarians and a paraprofessional access services supervisor, and a graduate student Research Assistant.

As the Project Manager for Columbia, the Assessment and Planning Librarian served as the primary liaison with Cornell. Working with the Project Manager, the Research Assistant coordinated the many daily tasks, scheduled interviews, ensured that interviewers were assigned for each interview, prepared interview

materials, organized and filed interview recordings, and shared data with Cornell.

The Columbia team met routinely throughout the course of the 18-month project. Team members were recruited to participate based on their experience with or interest in user assessment, familiarity with the population to be researched, and ability to dedicate time to a long-term project. The supervisors of each team member were consulted to ensure that time would be made available to dedicate to the project without negatively impacting their primary job responsibilities. Team members were responsible for conducting interviews, data analysis, and the drafting of preliminary results. They were also asked to familiarize themselves with relevant research on the state of graduate education in the humanities (via a literature review assembled by the Research Assistant), and to complete training in ethnographic interview techniques.

The Cornell team consisted of several staff members from across the social sciences and humanities library: the library's director (the co-PI from Cornell), two reference librarians, a staff member from access services, an administrative assistant, and a Reference Specialist/Assessment Analyst. In addition, two access services staff members and five students served as transcriptionists. Two members of the Cornell team had previous exposure to ethnographic research methodologies through an earlier project (Foster et. al., 2011), and additional participants were recruited based on their subject expertise and experience with or interest in ethnographic research. Prior to the launch of the study, team members researched the issues surrounding doctoral student success and attrition in humanities programs, collecting the research in a collaboratively maintained online bibliography.

At Cornell, the Reference Specialist/Assessment Analyst served as the local Project Manager and primary liaison with Columbia. As was the case at Columbia, core team members were

responsible for conducting interviews, data analysis, and drafting preliminary results. The core team met weekly or more as needed, depending on the evolving needs of the project. A project wiki was created at Cornell to manage and distribute project documentation, and email was relied on heavily to communicate between meetings.

The Cornell and Columbia teams met jointly a total of five times over the course of the project. The initial face-to-face meeting at Columbia included a one-day training workshop on ethnographic interviewing techniques. The four subsequent meetings were conducted via videoconference and occurred during data analysis and the drafting of preliminary results. The joint team meetings were planned by the Project Managers during numerous telephone calls and email exchanges that began a full three months in advance of the official launch of the project.

Process

Institutional Review Boards

Before launching the study, both teams obtained approval from the IRBs at their local institutions. The teams discovered divergent IRB requirements and procedures between the two universities, probably due to the fact that the review process for Cornell's Ithaca campus does not routinely interact with human subject research for medical/clinical trials while Columbia's does. Luckily, the only significant impact of these differences was on the timing of data collection, as the study could not begin before approval was obtained at both institutions.

At Cornell, the normal procedure is to request an exemption from the IRB for library-related studies that pose no risk to human subjects and are usually considered "service improvement" activities. For this study, the normal procedure was initially followed but because of the open-

ended nature of the instrument questions, an exemption was not granted.

Because many members of the Columbia team were new to human subjects research, it was decided that the entire team would complete the local IRB training process, obtaining certification as researchers on the project. Similarly to Cornell, the normal procedure at Columbia is to request an exemption for library-related studies. Unlike at Cornell, the Columbia team received an exemption for the study protocol, most likely due to the fact that it was decided not to include former students in the study at Columbia, thus reducing the necessary layers of review and documentation.

Training

Training in ethnographic research methods was supported by the grants and institutional funding that financed the project. The project teams from both universities received training jointly from anthropologist Nancy Fried Foster, who had worked with members of the Cornell team on a previous project (the members of the Cornell team who had completed similar training earlier did not participate in the workshop). The training proved valuable not only for its content but because of the successful team building accomplished across the two local teams during the workshop. For the Project Managers in particular, this was an important opportunity to meet and make a face-to-face connection after months of planning and before a year of working together intensively at a considerable distance. This training provided the requisite skills for team members new to ethnographic research and laid a solid foundation for the teams to collaborate effectively during the subsequent phases of the project.

The training was based on the study goals, which had been developed jointly by the two teams. Relying heavily on the protocol the teams drafted for individual interviews, the training covered techniques and best practices for

conducting effective ethnographic interviews, as well as approaches for analyzing qualitative research data. Live interviews with graduate students were incorporated into the workshop, which team members found both engaging and extremely helpful in their preparation.

Instruments and Written Questionnaires

Three instruments were developed for the study: a focus group protocol and pre- and post-qualifying exams for the individual interviews. A written questionnaire was also created to collect additional demographic, funding, and other relevant information (see appendices of Gessner et al. (2012) for examples of the interview protocols and questionnaire). The process of developing these instruments was an interesting collaborative process because the Cornell and Columbia teams had different applications for the data in mind, as well as differing sets of available data about their local graduate student populations. The Columbia team was chiefly interested in gathering information about the research process for humanists within the local context, whereas significant research of this type had already been completed at Cornell. The Cornell team's goals centered on finding points of convergence between graduate students' needs and opportunities for the library to engage those needs. To accommodate the collaborative nature of the project, the interview protocol balanced the goals of the two institutions, which ultimately benefited both teams.

Following a best practice in qualitative data gathering, the teams collected data from study participants using multiple approaches. A written post-interview questionnaire was used in addition to the interview protocol. A pre-interview questionnaire was initially considered, but the teams decided on using a post-interview questionnaire so as not to bias the interviews themselves. The questionnaires were administered on paper following each interview, ensuring a 100% completion rate by the participants. The questionnaires were developed

from a combination of questions that each of the local teams had used previously in other assessments. For example, the Columbia team included a set of technology-usage and library satisfaction questions in order to provide context for each participant's responses. These questions were relevant to the aims of the current study, and as they had been used in other assessments could be used in comparisons between local user populations.

A subset of the two teams, led by the Project Managers, developed and edited the focus group instrument collaboratively over a period of three weeks. The teams agreed during the initial study design process that the focus groups would be used to gather preliminary data about the population being studied and to gather information to help refine the individual interview protocol. The collaborators shared documents via the project wiki and held regular conference calls to discuss how to best develop the instrument. This iterative process of development and revision proved rigorous and engaging for those involved.

A similar process was used in developing the interview protocol, where the same cross-institutional subset of team members worked to ensure that the protocol would cover research questions and gather data useful for both teams. The resulting protocol was reviewed by all members of both teams for their perspectives and feedback. The Cornell team consulted with their IRB to refine all instruments, which were subsequently pre-tested with students. As previously discussed, Cornell had conducted earlier studies gathering information about the research processes of humanists within the local context, whereas Columbia had not yet gathered this information from this particular population. Through extensive discussion, a compromise was struck on the areas to be covered in the interviews, resulting in a rather comprehensive protocol covering research processes for humanities doctoral students, as well as other environmental and behavioural elements.

Focus Groups and Interviewing

The initial plan was to conduct focus groups and individual interviews simultaneously at both institutions; but given staff schedules and other demands on team members' time, this proved impossible. Instead, the Cornell team conducted focus groups a month ahead of Columbia and shared initial results and suggestions for refining interview questions. Similarly, individual interviews began at Columbia a month ahead of Cornell, with both teams completing interviews by a mutually agreed-upon deadline.

At both institutions, focus groups and individual interviews were conducted by team members in pairs, with one person facilitating the focus group/interview and another taking notes with a laptop and an audio recorder. These audio recordings were subsequently transcribed by Cornell team members. The Project Managers kept both teams apprised of the focus group and interview schedules via the wiki, posting updated information as this phase of the project progressed.

At Columbia, recruitment for the individual interviews was a collaborative effort between the Graduate School of Arts and Sciences and the local Project Manager. Administrators from the Graduate School sent recruitment emails to doctoral students in target departments, alerting them to the opportunity to participate in the study. The Columbia team also placed fliers requesting participation in high-traffic locations throughout the campus, which turned out to be an effective recruitment tool. At Cornell, recruitment for the focus groups and interviews also relied on email invitations sent to students in target departments. Recruitment was facilitated by close collaboration between the Cornell PI, department chairs, and administrators from the Graduate School, who encouraged students to participate. The Cornell team also used invitational fliers posted throughout key buildings on campus, but this

method did not prove to be as effective at Cornell as at Columbia.

Transcription

Undergraduate students at Cornell transcribed the audio recordings of the focus groups and interviews using the Start-Stop Universal system. The time initially budgeted for transcription was significantly underestimated, as was the number of students needed. Ultimately, three additional students had to be hired, for a total of five. In addition, two Cornell library staff members were diverted from other duties to complete the task. Given the large number of transcriptionists and potentially uneven work product, the Cornell team closely reviewed and revised the transcripts in pairs before coding began.

Coding

Again, a cross-institutional subset of the local teams, led by the Project Managers, worked collaboratively to develop the codebook and procedures for analysis of the approximately 900 pages of transcripts that resulted from 45 90-minute interviews. A grounded-theory approach was utilized to analyze the transcripts and develop the codebook (Mansourian, 2006). Four team members read each transcript independently, developing a preliminary code structure and definitions. Team members then came together to share their work and debate the most appropriate, practical, coding structure, considering the original research questions posed for the study and local goals for applying findings. From this exercise, a codebook was developed, providing the agreed upon coding structure, definitions for each code, and examples of a statement describing a code for some complex cases. Instructions were also developed, so that all team members would use a consistent approach for coding the transcripts.

Although the teams considered a variety of software packages for coding, such as Atlas.ti or NVivo, due to cost restrictions (project funding

did not cover the purchase of software for all team members tasked with coding), the time necessary to train team members in these software packages, and computer hardware considerations (eight individuals on the Columbia team were using five different computer operating systems), the team chose a coding approach using Microsoft Word, developed at the Brown University Library (Neurohr, Ackermann, O'Mahony, & White, 2011).

To ensure inter-coder reliability, two-person teams coded each transcript. Each member of these teams would read and code a transcript independently; then the two would come together to compare codes and collaboratively decide on a final coding. Each coded transcript was compiled into a single Microsoft Word file, and the aggregate of these files was used to create a Master Index document. The Master Index allowed team members to discover, via the coding structure, quotes from any transcript with a specific code, conveniently compiled together.

Analysis and Writing

Members from the Cornell and Columbia teams paired up for the analysis and writing phases of the project, despite some initial questions about working across organizations from a distance. This early anxiety gave way to productive working relationships, and team members enjoyed working with their colleagues from the partner institution. These pairs were assigned a set of themes, for which they would analyze the raw data using the Master Index produced in the coding phase of the project. Each pair was responsible for drafting a section of the report, outlining findings and recommendations, which the larger group then reviewed, discussed, and edited.

Tools

The Columbia and Cornell teams used a variety of tools to communicate, facilitate collaboration,

and gather and analyze data over the course of the project. Some were used only in a local context and others were supported for team members on both campuses by one of the partner institutions. Tools important for the successful completion of the project included:

Wiki

Cornell provided a Confluence (Atlassian News) wiki to support the project. Guest accounts were created for the Columbia team, which enhanced overall communication and enabled all project documentation to be stored and shared in one location. The wiki served as both a document repository for both teams, aggregating IRB protocols, meeting minutes, draft questionnaires, and other documents, and as the main communication vehicle for the project, providing project timelines, interview schedules, team member information, and status updates on different phases of the project.

Telephone and email

The Project Managers communicated almost daily via email and held weekly meetings via telephone. Conference calls for larger groups were used frequently throughout the project, especially when sub-teams needed to come together. Sometimes it is the simple technologies that facilitate frequent and open communication, building the trust and understanding that enable a collaborative project to run effectively.

Video conferencing

The Cornell and Columbia libraries had invested in video conferencing systems (Polycom HDX 7000 series) to support the larger 2CUL collaboration. The teams were able to utilize these systems during the analysis phase of the project, coming together to discuss the data as a full group. Team members at both institutions were initially skeptical about the quality of interaction that would be possible via

video conferencing but were pleasantly surprised by the experience. After a series of icebreakers facilitated by the Project Managers, the teams felt comfortable, and the meetings were productive and engaging.

Microsoft Word

Unexpectedly, the teams used Microsoft Word to code the interview transcripts. While several team members had previous experience using software packages such as NVivo or Atlas.ti, it was not possible to acquire one of these packages for all team members due to the financial, time, and technological constraints previously mentioned. Instead, the team successfully used the indexing function in Microsoft Word to code the transcripts.

Audio recording & playback

Audio recorders (Olympus LS10 Linear PCM) were used to record focus group discussions and individual interviews by both teams. The audio quality produced by this equipment aligned with project needs, and thus optional external microphones were deemed unnecessary. The goal was to create crisp, high quality reproductions of every interaction, so the recorders were augmented with flash storage cards to support large file sizes (Kingston 8GB Micro SDHC Flash Cards). Anticipating the need to review hundreds of hours of audio, Samson SR850 Professional Studio Reference Headphones were purchased for both teams. To ensure technological compatibility, the Cornell team purchased and distributed all equipment for the project.

Data backup

Audio recordings were burned to DVD, and data from Columbia was sent to Cornell for transcription. Both teams purchased external hard drives to save all data gathered from the project, which was stored in accordance with local IRB requirements.

Video tutorial

The Columbia team employed a video tutorial, created in Camtasia, covering proper coding procedures. While this proved an effective training method at Columbia, team members were not able to successfully share the tutorial with colleagues at Cornell because of file size restrictions on the project wiki.

Transcription software

A Start-Stop software system was utilized during transcription, enabling the transcriptionists to pause recordings with a foot pedal, freeing their hands for uninterrupted typing. This system substantially sped the transcription process.

Google Calendar

The Columbia team used Google Calendar to schedule interviews, ensuring that both an interviewer and note taker were available for each interview. Each team member had access to the project calendar and was able to accept or reject appointment invitations.

Citation management software

The Cornell team used a citation management application (RefWorks) to manage and share a bibliography and articles relevant to the project. A direct feed from RefWorks to the project wiki ensured up-to-date information available to both project teams in one location.

Successes and Challenges

Any discussion of the relative success of conducting a collaboratively managed assessment of this scale must start with acknowledging the importance of clear, flexible, and constant communication, especially between the Project Managers. The ability of the Project Managers to effectively negotiate potential points of conflict between the teams' goals and work styles was crucial. Project

Managers were empowered by the co-PIs to make daily operational decisions, which enabled an easy flow of communication and positively contributed to maintaining the project's momentum. Daily email exchanges and weekly phone calls kept the information flowing and both teams informed of the project's progress.

The positive, supportive working relationship modeled by the Project Managers spread to and across the project teams as the project progressed. Team members at both institutions were almost uniformly engaged and responsive. Successful completion would have proven difficult if team members had not been fully committed to the project's goals and flexible in how those goals were to be met. An important example of this operational flexibility was the extent to which the teams employed various technologies to work at a distance. Collaborating via technology worked much better than expected, and team members from both institutions reported enjoying the experience.

While ultimately considered a worthwhile activity, the project required a substantial time commitment from team members from both institutions. This was time away from their routine job functions, so clear communication with supervisors about the time commitment on the part of the Project Managers and co-PIs was critical. In fact, one team member was unable to meet the time commitment and was released from the project after a discussion with his supervisor. As the activities comprising ethnographic assessment represent a new type of work for many library staff members, the initial comfort level and skill sets of team members varied widely. It was important for project leaders to recruit team members with an active interest in and a proclivity for both qualitative assessment and working collaboratively.

As the project progressed, time management became increasingly important. The Project Managers performed well in terms of keeping local teams focused and on task. But as with

most projects, more could have been accomplished with more time on task, especially during the data analysis and writing phases. Project leaders and team members alike commented on the need for more time to analyze and discuss data before drafting results; and in retrospect, more time should have been allotted for those tasks, given the added complexities of collaborating across distance and organizational boundaries. As discussed earlier, the process of transcribing the massive corpus of interview transcripts took much longer than anticipated. Looking back, project leaders would consider outsourcing this task to a professional transcription service rather than relying on student workers, whose work had to be augmented by support staff diverted from their normal duties.

Project Impact

The overall project was judged a clear success by the administrations from the libraries and graduate schools at both institutions. Much was learned about humanities doctoral students and their research behaviours, and the results from the study were used on both campuses to improve services and launch new initiatives targeted at this user population. Results were used at Cornell to plan and implement a pilot immersion program for humanities graduate students and at Columbia as impetus to relocate the graduate student teaching center within the library, among several other initiatives at both universities.

The immersion of a large number of library staff members in such a project, supported by high-quality training, and followed by visible outcomes based on the study's results, has deepened interest in and enthusiasm for user assessment and data-driven decision making within the partner organizations. In this sense, the project was a positive, effective vehicle for staff and organizational development. In fact, following the completion of the project, library leaders and staff on both campuses actively discussed extending the study to other

disciplines, possibly in the sciences or the social sciences. Although this post-completion zeal has been somewhat tempered by the reality of how time consuming and staff intensive a project of this type can be, as of this writing, some members of the Cornell team are in the early stages of planning another ethnographic study.

Of greatest importance strategically, the execution of the project and resulting service improvements facilitated a deeper engagement not only with an important user group but also with local academic leadership, most notably department chairs and administrators within the graduate schools on both campuses. The conversations enabled by the planning and reporting phases of the project offered invaluable opportunities to position the library as an effective partner in addressing issues affecting students and faculty on both campuses and across the broader higher education sector. Project leaders began this process answering questions from academic administrators and potential funders about why the library was concerned about the broader issues surrounding student success. At the end of the project, the libraries at Cornell and Columbia emerged with not only an improved understanding of an important constituent group, but were also better positioned as active, visible contributors to solving some of the difficult problems their parent institutions face in fulfilling their research and teaching missions.

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**Appendix
Research Team**

Columbia	Cornell
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