If you provide a “generic” academic library at a community college, will it meet students’ needs? Probably not, according to research conducted on three community college campuses in Montgomery County, Maryland. Providing the most effective libraries to these students requires a new understanding of who they are and how they conduct their academic work. Community college students, who are overwhelmingly commuters, need a library oriented more to teaching and learning than to research. Because they are older on average than four-year college students, community college students are more likely to have families and jobs that take them away from campus. Their programs are more diverse, ranging from honors academic programs to vocational programs to developmental English and math classes. These differences affect academic work practices and campus use patterns, leading to distinctive needs for library resources, spaces, services, and technology. In the following pages, we discuss how one nonresidential community college system engaged over 1,400 members of the college community in a project to improve the library in an informed way. After a discussion of the project’s aims and questions, we describe Montgomery College and provide an overview of our methods and findings. We conclude by showing that the information we gained, combined with the project’s inclusive approach, enabled
specific improvements to be made to the library while increasing the library’s ability to identify and respond to the needs of its large commuter undergraduate community.

THE RESEARCH QUESTION

The ethnographic project was launched at Montgomery College Libraries with a primary objective of gaining a better understanding of how the libraries were used and what changes in the libraries might help students do their academic work and take better advantage of their academic opportunities. Another objective was to provide students with real-life opportunities for research and design.

The project followed the general framework and process of a previous project at the University of Maryland, which included studies that library employees conducted using ethnographic methods, additional ethnographic studies by graduate anthropology students, and design work by graduate architecture students (Steele et al. 2015). Although there are no graduate students at Montgomery College—indeed, there are only freshmen and sophomores in the college degree programs—all components of the original study were included, albeit on an adjusted scale. Additionally, the Montgomery College project asked stakeholders on all three of the college’s campuses to provide guidance to the project, help disseminate findings, and reinforce outcomes. Stakeholder groups included representatives from major administrative and operational units as well as librarians and members of the academic staff. Over 1,400 members of the Montgomery College community participated, including students, faculty members, staff, and administrators, making the project very broad and inclusive and providing numerous opportunities for students to become involved, whether as researchers, respondents, or designers.1

With regard to the project’s primary objective, to gain a better understanding of how the library was used and what changes might benefit students, the research question was stated broadly but the methods were designed to capture a great deal of detail. Project leaders wanted to know who was in the library and what activities they were conducting, including some specifics of their work practices; why they sat where they did; whether they worked alone or with others; what helped and hindered their work; what they read and how they learned of it, acquired it, and read it; and where they conducted academic work if not in the library.

Alongside the library-led project and under their professors’ direction, students in anthropology classes also conducted ethnographic research. The students had five research questions to address: How do students and faculty typically use the Montgomery College Libraries? What are the needs and expectations of students and faculty when using a library? Are there aspects of library services and programs that might work better if improved or modified? How do students and faculty feel about working in and enjoying the
library space? Are there aspects of the library space (visual, spatial, auditory) that could be improved to support better concentration, comfort, and aesthetic appreciation for library users?

It is important to note that the project tilted in the direction of design research. While the researchers sought basic information about student practices and needs, the studies were oriented toward practical outcomes, that is, identifying ways to improve the library system’s spaces, services, and resources. This was motivated by a desire to better support students, since it was believed that a greater understanding of how and where students did well or struggled in their work would provide an informational basis upon which to develop design concepts. At the same time, the project’s design was matched to the mission and resources of the library and to the teaching and learning needs of faculty and student participants. For this reason, it was appropriate to conduct limited studies oriented to library use and improvement rather than full-blown ethnographic research. The studies conducted by anthropology students both supported the overall objectives of the project and accomplished specific course-related teaching and learning work.2

MONTGOMERY COLLEGE

Montgomery College, the community college of Montgomery County, Maryland, provides approximately 34,400 credit students and 56,000 students overall with a variety of programs in general education, career preparation, workforce development, and continuing education. The student body is diverse in background with no majority race, nearly 6,500 non-U.S. citizens, and 159 foreign countries represented. The college has three campuses, two additional sites dedicated to workforce development and continuing education, and two community engagement centers. Montgomery College is a nonresidential institution and all students are commuters. Montgomery College’s mission statement says: “We empower our students to change their lives, and we enrich the life of our community. We are accountable for our results.” All faculty and employees share a commitment to this mission and to student success.

No two students are alike—except in their role as commuters. Student goals are diverse, with some students preparing for transfer into four-year bachelor’s degree programs, others preparing for a career change or the job market, and still others engaging in lifelong learning. Some have the personal and family resources to succeed, but others face a range of financial, linguistic, and societal obstacles. Many are the first in their families to attend college, and lack family models for succeeding academically. The college has many students who are recent immigrants who may still be learning English, veterans returned from military service overseas, and men and women holding down one or more jobs while developing the skills for better employment. Many have responsibility for their own children or for other family members. As a
result, Montgomery College students follow many different pathways through the education system. The complexity of their lives has a direct bearing on how the library needs to position itself to support them and help them meet their goals.

In support of the mission and the institutional focus on student success, Montgomery College provides four libraries on its three campuses. The Rockville and Germantown campuses both have general libraries, while the Takoma Park/Silver Spring campus has both a general and an art library. The Montgomery College Libraries employ 22 librarians and 26 staff plus student employees across the four facilities to support teaching and learning as well as student and institutional research, and to deliver electronic and physical resources to the Montgomery College community. Overall, the libraries provide access to over 200,000 printed books and 145 electronic databases and related resources, as well as approximately 98,000 e-journals, 60,000 e-books, and 75,000 streaming videos.

In addition to electronic and physical resources, the libraries provide a number of services to support student and faculty success. Librarians provide group instruction sessions and personal research consultations. Users can obtain research assistance in person or they can get help online through the 24/7 AskUsNow librarian chat service or the libraries’ online subject and course guides. The libraries provide a variety of study environments to fit all learning preferences, including private group study rooms and collaboration areas. The libraries provide computer workstations and an in-library laptop and tablet loaning service. Additional technology services include high-speed scanners, video production equipment, and collaborative workstations for group projects.

**METHODS**

Montgomery College’s libraries coordinated the overall project comprising studies conducted by library teams and anthropology classes, as well as design work done by architecture students. Library teams and anthropology students conducted studies on all three campuses over the three years of the project, including the Rockville campus in the first year (2013/14), the Takoma Park/Silver Spring campus in the second year (2014/15), and the Germantown campus in the final year (2015/16). Architecture students were engaged on the Rockville campus in the first year of the project.

**Participatory Design Activities by Library Teams**

Research and stakeholder activities conducted by library teams over the three years of the project included 911 students, 56 faculty members, 42 library
employees, 19 administrators, and 41 other college employees. The library teams’ studies had two significant characteristics. They gathered extensive, actionable information upon which to base library improvements. Equally importantly, the project brought together people in widely varying roles from many units across the college’s three main campuses to conduct the studies, reflect on the findings, and envision change.

The particular approach taken in this project was participatory design, a departure from traditional design processes that rely more heavily on precedent, that is, on the expertise of previous designers. The participatory design process engages a broader range of experts to understand and describe current and emerging work practices, identify unmet needs, and develop solutions to those needs. To conduct a participatory design process, a facilitator, supported by a project team, creates structured opportunities for students, employees, and other nontraditional experts to provide information about how they do their work and how it might go better. This is done through the use of such activities as interviews, observations, and the creation of photos, drawings, and other artifacts that provide a framework for conversations about work practices and preferences. The final step is to interpret the information provided in the course of these activities, develop qualitative requirements, and make design recommendations.

Participatory design intentionally considers the whole community as equal stakeholders in a design process, albeit with different forms of expertise and complementary or even divergent interests. This approach was a particularly apt choice because it engaged the commuting students as both researchers and respondents in studying their own nonresidential campuses. Moreover, Montgomery College accomplished this on a fairly large scale with a modest investment and significant rewards.

Participatory or user-centered approaches have been used extensively in library technology and space design, especially since the 2005 publication of a study of faculty use of preprints, unpublished reports, and other grey literature in connection with the design of the institutional repository at the University of Rochester (Foster and Gibbons 2005). That study demonstrated the value of understanding academic work practices before identifying requirements for software development in academic libraries. The additional benefits of participatory design—the increased connection and engagement among librarians and academics—were described two years later with regard to a study of undergraduate work practices at the University of Rochester (Anderson and Marshall 2007). Both benefits were explicitly sought in the Montgomery College project, that is, the assessment was designed to develop information and collaboration at the same time.

Project leaders recruited library teams in successive years on the three campuses to conduct research activities and help analyze and interpret results. Each team included librarians and library staff as well as representatives from other college units: Grants and Sponsored Programs on one campus, and...
Writing, Reading, and Language Centers on two campuses. The non-library members increased the size of the team and how much research they could conduct, and provided helpful, semi-outsider perspectives.

The campus-based teams ran a short survey within the library (reply cards) and engaged students in brief interviews at non-library campus locations (spot interviews). Additionally, at Rockville and Takoma Park/Silver Spring, the team conducted charrettes (design workshops) with faculty members, library employees, and students. These methods were selected to provide a picture of student library use, including work practices related to completing assignments, studying, and doing project work, as well as faculty and staff needs related to the library.

The reply cards were handed out in several areas in each of the four libraries and included questions about what respondents were doing, why they were in their chosen locations, and where they would go if forced to go elsewhere. The cards also asked for basic demographic information.

The spot interviews were conducted with students who were intercepted at non-library campus locations. By recruiting and interviewing students outside of the library, the project was able to include diverse students, both library users and non-users, in a wide range of programs. In these interviews, students were asked where they had last done work for a class outside of class time, why they had selected that location, how their work had gone, and what would have helped the work go better. They were also asked about their most recent non-textbook reading for a class.

The design workshops held on two of the campuses (Rockville and Takoma Park/Silver Spring) included students, faculty members, and employees of the libraries as participants. The participants created drawings of ideal library spaces and were then asked to talk about what they imagined themselves and others doing in the spaces. As with the other methods, the focus in the design workshops was on the activities in which people were engaged, or hoped to engage, in the library or with library services, resources, or technologies.

Each year, the campus-based library team analyzed and interpreted the data with the help of the consulting anthropologist. Data analysis began with the construction of Excel spreadsheets into which verbatim responses were transcribed. These verbatim responses were examined and discussed iteratively to develop codes, which were then inserted into the spreadsheets. Basic statistics revealed trends in activity, duration, and location of study, individual and group work, reasons for selecting study location, and so on. The pivot table feature of Excel made it possible to identify some interactions among the variables.

**Ethnographic Studies by Anthropology Students**

In addition to the studies conducted by the library teams, students in anthropology classes conducted observations and interviews to understand current
use of the libraries, student and faculty needs and expectations, and whether any changes to library services and facilities could improve concentration, comfort, and outcomes. Over three years, 290 anthropology student researchers participated in the project, including students from twelve ANTH 201 (Introduction to Sociocultural Anthropology) classes, ANTH 201 students from the Montgomery Scholars Honors Program and Honors Module, and students from the college’s Renaissance Scholars Program.

The students were taught how to conduct structured interviews and in-library observations, and through these activities they interviewed 306 fellow students and 23 faculty members. Eight members of the college’s full-time anthropology faculty developed the interview and observation forms, associated classroom assignments, and methods for analysis and modeling. Three part-time faculty members and an honors faculty member supported implementation on all three campuses.

Students conducted structured interviews in non-library campus locations. Two researchers were present at each interview, one in the role of interviewer and the other taking notes on the responses. Respondents included students from the general student population as well as faculty and students in smaller groups representing selected campus communities. These groups included general full-time and part-time faculty, students who had accommodations with Disability Support Services, students in the American English Language Program, evening students, and students who were military veterans. Nursing students, nursing faculty, and arts faculty were interviewed on the Takoma Park/Silver Spring campus to understand how their needs were being met by the two campus libraries that were some distance from each other.

Students conducted observations in the four campus libraries during morning, afternoon, and evening sessions. In thirty-minute periods, student observers either noted entrances, exits, and general activities in the space or coded specific activities in selected areas.

Each year, the student teams analyzed and interpreted the data with the help of their faculty. Data analysis began with the construction of Excel spreadsheets into which verbatim responses and observational data were entered. Groups of students reviewed the data to determine underlying themes, which they then used to develop concept models, findings, and recommendations.

**Design Work by Architecture Students**

Students in an architecture class participated in the project by developing design concepts for the library on the Rockville campus based on findings from the studies conducted by library teams and anthropology students. A member of Montgomery College’s full-time architecture faculty led the students and provided them with the following functional goals for a redesign of the library:
- A welcoming space that is easy to navigate
- A space that helps students feel welcome, secure, comfortable, and able to do serious work
- A variety of spaces including group study and quiet areas
- A unified service desk

The ARCH 201 (Introduction to Architectural Design) course covered the spectrum of architectural design, including programming, sustainable strategies, structural logic, envelope design, space planning, environmental influence, and aesthetics. The centerpiece of the course was the library project, in which students were asked to draw from the ethnographic studies as well as facilities information provided by Central Facilities. The twenty-one students in the class worked in four teams to develop four potential futures for the Rockville campus library. At the end of the semester, the teams presented their ideas to a jury that included architecture faculty from the college, architects from architectural firms, and the library director.

RESULTS

Library teams and anthropology classes not only collected but also analyzed and interpreted the data independently. The two sets of findings were then integrated to support planning and decision-making, as described below.

Findings from Participatory Design Activities Conducted by Library Teams

The campus-based library teams analyzed and interpreted the data and learned, first of all, that there were some differences but also marked similarities across the three campuses.

On all three campuses of this community college, the library provides a special place for students in which they can give their attention to their studies without distraction. For some students, there are few alternatives. Montgomery College students, like those at other community colleges, tend to be older than students at the four-year colleges that are better documented in the ethnographic literature. Many of them have jobs and family responsibilities that leave little time for studying; they appear to make careful use of their time on campus, taking advantage of even short stretches of study time when they can.

Students who come to the library are drawn by the things that contribute to an atmosphere of quiet concentration and focus. This includes everything from suitable furnishings to adequate power and good Wi-Fi, as well as noise dampening and soothing décor. Students want to feel welcome and
secure. Most reported that they worked alone. While many students reported sitting next to other students, they did not necessarily know these other people. Respondents did not consider commercial establishments, such as coffee shops, to be good alternatives to the library.

Students make extensive use of online information resources, but they do not limit their use of these resources to time spent in the library. Only a small number of the students responding to reply cards distributed within the library were using library-supplied resources at the time. Reading, in particular, is an activity that most responding students reported doing at home. Furthermore, these students show a marked preference for reading on a screen.

The range of reading materials that respondents reported using is quite broad. Not all students at Montgomery College read academic books and articles, and many of the respondents who do so read material recommended and even provided by their professors or instructors. Unlike the four-year colleges that are better represented in the literature, all three campuses of this community college offer a wide range of workforce training programs in addition to academic courses. A small but significant number of the students who responded to on-campus interviews had not yet read a book or an article for any class; several had only read from the assigned textbook. Others read job-related explanatory material, such as charts and posters, or magazine articles and other popular reading material.

**Findings from Ethnographic Studies Done by Anthropology Students**

The anthropology students’ ethnographic studies indicated that while each library facility is quite different, responding to its own set of very specific needs, there were common themes across the three campuses.

The studies showed that students need greater access to technology and especially to computers and electrical outlets. The studies also found that students make little use of tutorials, course pages, and other online resources and may not fully understand the availability and value of course reserve materials. According to the ethnographic studies conducted in the anthropology courses, many students are reluctant to ask library employees to assist them, thereby missing an available source of help.

The students’ ethnographic studies also discovered that respondents found fault with library facilities. They wanted more comfortable seating and a greater variety of work spaces and would like to add more artwork and more colorful surroundings. Respondents also found some areas of the library to be congested and lighting was identified as a problem, with respondents saying that some library areas were noticeably dim.
OUTCOMES

Repeatedly over the three years of the project, the library emerged for students as an excellent space in which to devote themselves to their studies away from the demands and distractions of jobs and family. For commuter students at community colleges, minutes and hours spent in the library can be essential to achieving their education goals.

The information gathered during the study provided a rich source of information for strategic planning and the identification of short-, medium-, and long-range library improvements. In each year of the project, the library team developed a list of possible implementations that were considered by a campus-based implementation team in light of additional information sources such as the 2014 LibQUAL+ survey results and institution-wide planning documents. Each implementation team selected, refined, and added to the concepts and then initiated the work of putting these ideas into practice. Some of these concepts, such as a need for more outlets, related to basic infrastructure, but many more related to designing spaces that enable students to work with standard technologies, get help when needed, use the many resources the libraries provide at no cost, feel inspired, and focus on the work at hand rather than their many other cares. Because the ethnographic data were integrated with institutional information, implementations have aligned with the college’s strategic directions.

In developing and implementing concepts, the libraries were keen to address the documented needs of the real people who participated in the studies. Some changes were instituted across the libraries because they address universal conditions and needs of Montgomery College students.

Extended Open Hours

Because so many commuting students lack access to good study environments outside of campus, the libraries piloted extended evening hours, from 8:00 P.M. to 10:00 P.M., Monday through Wednesday. After collecting and analyzing additional behavior-mapping data during those hours, the schedule change was extended to Thursday and made permanent.

Technology Upgrades

Commuter students may not own the technology they need to complete their schoolwork, or it may be difficult for them to carry it to campus. The libraries upgraded technology based on users’ highest priorities, circulating laptops and tablets within the libraries, providing high-speed scanners, and offering easy-to-use video recording studios, known as One Button Studios, that do not require any prior video production experience. Technology use is monitored.
to ensure that offerings are meeting needs. Discussions are underway about other ways that the libraries can support the technology needs of students.

**More Electrical Outlets**

When commuter students bring their devices with them, they need to keep them charged. Additional power outlets, including USB outlets, have been installed in all libraries, increasing public outlets by 67 percent. Charging stations were also added.

**Easier Access to E-Resources**

Commuter students may not have time to come to the library to access content housed in tangible form, such as books and journals. Access to e-resources was improved with implementation of a discovery services system, expanded e-resource collections, and better service promotion. All students can access the content regardless of time of day and location.

**Improved Web Services and Communication**

The navigation of online content and effective communications from the library were found to be so important to the success of commuter students that the libraries created a new position to address these issues. The new web services and communications librarian leads a communications committee, also recently created, to increase awareness of the Montgomery College Libraries, improve understanding and competence, and increase use of the libraries’ resources, services, and initiatives by members of the Montgomery College and Montgomery County communities.

**A More Inspiring Library Environment**

The homes of commuter students may not provide space that allows them to do their best work. In many cases, it falls to the library to provide spaces that inspire and motivate commuter students. The libraries have been adding new furniture that is mobile and more comfortable, installing more artwork, repainting walls, and installing new carpeting in their facilities.

**More Spaces for Quiet Work and Group Work**

Commuter students may only see their classmates on campus, and libraries are well placed to support their desire for group work spaces in addition to the quiet and silent zones that so many of them need. The libraries are working to
establish zoning in the libraries to ensure adequate quiet areas and are working to increase the number of group study rooms.

More Accessible Help

Commuter students need libraries that are easy to navigate and in which they can easily find the expertise they seek. Accordingly, the libraries are planning to implement single service desks. These desks will ultimately be staffed principally by access services employees, who will manage the library facilities and services. Librarians will be increasingly deployed both virtually and physically to student locations, including classrooms and the learning management system.

More Textbooks and Open Educational Resources

Commuter students may not have the resources to purchase textbooks or may not want to carry books with them. The libraries have purchased textbooks to expand and improve the textbook course reserve program. The libraries are also supporting the college’s open educational resources initiative to improve college affordability.

Designing the Future

In addition to the implementations that are already underway, the libraries have plans for future changes. To provide even better support to commuter students, the libraries have worked with an architect on conceptual designs for short-term and long-term facilities changes. The priorities and themes of those changes are informed by the ethnographic work and include:

- Reconfiguring the three larger libraries so that the highest-profile services (service desk, technology, instruction and group rooms) are available on the main floor
- Increasing technology hubs and offerings
- Establishing or formalizing defined study areas based on observed student work practices and preferences
- Increasing the number of group study rooms
- Diversifying the types of work spaces offered to students
- Reducing print collections and reconfiguring book stacks to free up space for other uses
- Developing effective monitoring and outreach within the libraries to identify and respond more quickly to patron needs
Making the Library Work for Community College Commuters

- Improving consultation areas in which library employees can work with students

In addition to the more visible changes listed above, the libraries are implementing several behind-the-scenes changes, including:

- Realigning the staffing structure to better support the initiatives described here
- Redefining library jobs and enhancing employee skills as needed
- Increasing the use of student employees to provide peer-to-peer services
- Partnering with the college to provide online and embedded in-person support services to students
- Assuring a strong relationship with Safety and Security to maintain safety

CONCLUSION

The main purpose of the Montgomery College ethnographic studies was to discover how the college’s students accomplish their academic work and what they need and prefer in twenty-first-century library spaces, services, and programs. With that understanding, the Montgomery College Libraries are actively working to implement changes based on what was learned while identifying further information needs that may drive future studies.

The structure and scope of the project resulted in much more than a mere understanding of what library users need to succeed at Montgomery College and a road map for changes. The project produced a stronger institution-wide understanding of student needs and the role the libraries fill in supporting student success. Through the research and design courses offered to students, the libraries established themselves in a new role, as research leaders and partners, and as a lab for students to experience real-life learning, original research, and design. Through the project, students in the anthropology, honors, Scholars, and architecture programs learned their craft and developed presentation skills. Honors program students presented a panel on the study at a regional honors conference. Other students made presentations to college-wide stakeholder groups, library teams, and award juries.

The impact was not just on college students and stakeholders. Montgomery College Libraries employees learned valuable new skills and engaged with our students differently. Methods learned in the studies are being utilized on a smaller scale to inform additional changes. Strong and enduring partnerships have been forged in the project and will serve the college’s students, the Montgomery College Libraries, and the college well into the future.
REFERENCES


NOTES

1. For more information about project participants, see Wray, Pfanstiehl, and Foster 2017.

2. For more information about methods and findings, see the Montgomery College Libraries Ethnography Study (http://libguides.montgomerycollege.edu/ethnographic).

3. The pivot table feature of Excel allows the researcher to create a quick table that shows the relationship between two variables. For example, we were able to investigate whether there was any relationship between the place a student conducted academic tasks and the type of tasks the student conducted. Information about pivot tables can be found through a simple Google search, or go to the Microsoft Office support site at support.office.com and search for pivot tables.