How can academic librarians improve reference services for marginalized students? How can research into such questions center students’ ideas and experiences? These questions were investigated through the use of Photovoice, a participatory method that combines photography, interviews, and group discussion to create change regarding an issue. Eleven university students with historically marginalized backgrounds were asked to document how they seek information in their everyday activities, and the resulting themes and recommendations were considered in light of potential implications for the design of reference services. Notable findings include participants’ preference for in-person support regarding questions about their academic work, the use of visual information such as pictures and screenshots to aid information-seeking, and a desire for the library to improve the ease of accessing articles. The study’s process and findings underscored the uniqueness of participants’ experiences and information practices, suggesting that universal models about different user populations can overly simplify experiences and are less useful than a contextual approach to working with students.

Introduction

Students in higher education are likely to struggle with many issues in their academic work and everyday lives. Prevalent and systemic forces such as racism, sexism, heterosexism, ableism, and classism that are embedded in society shape the experiences of all students, and especially students with marginalized identities. Together these systems contribute to the maintenance of a dominant culture that often goes unacknowledged or unrecognized, and thus accepted. Libraries are part of this dominant culture. Libraries reinforce cultural norms through numerous factors, including “the languages of the signage, catalogs, databases, and especially of the book collections; the level of noise that is tolerated by the library staff and other students; the types of activities that are encouraged and facilitated by the library staff, such as study, exploration, and group work; and the demeanor of library staff.” Reference services represent another facet that oftentimes perpetuates barriers students experience in other areas of life.

This research seeks to improve reference services for marginalized university students. Students of color, LGBTQ students, first-generation students, and students with disabilities are infrequently considered in library and information research. This study sought direct input from students at the author’s former workplace, Long Island University’s Brooklyn campus, through Photovoice, a participatory methodology. Photovoice is a qualitative method that combines visuals and narratives in exploring community issues. Participants take photos in response to a prompt, and generally the researcher conducts interviews or focus groups with the photos as a focus and way of eliciting responses. Participant interpretation of their own photography aspires to reveal par-
participants’ own perceptions and experiences, and facilitate the telling of their stories. Writing about the method in the context of higher education, Fern Goodhart notes that Photovoice “provides a process and resources for students to amplify their voices in order to influence and gain power to shape the university policies.” Through applying this method to reference services, the author hoped that a similar effect might be achieved.

**Literature Review**

Reference services and the reference desk in particular have been the topic of a great deal of commentary in the past two decades, often being subjected to elimination, deemed irrelevant, or pronounced dead. Calls to do away with reference on account of new information technologies, the prevalence of directional questions, or because reference work could be conducted by non-librarians, are common. These calls commonly conceive of reference as a mechanism for fact-disposal and position cost-effectiveness and efficiency as paramount concerns, yet libraries have been pursuing alternative models of reference services for many years prior to defending reference on the grounds of productivity and efficiency.

As the presence and value of reference services has been the topic of ongoing debate, researchers have studied providing reference for, and the information practices of, patrons of different marginalized identities. This research includes a wide variety of user studies, including the influence of race and ethnicity on librarian approachability and library use, the effectiveness of reference service to international students, differing levels of online reference support provided to various perceived ethnic groups, Latino students’ perceptions of their university library, and the information behaviors of first-generation students. A critical appraisal of how the library literature conceptualizes first-generation students has added necessary depth to this topic. Developing reference services that meet the needs of LGBTQ patrons has been discussed in several works. Other studies consider how cultural backgrounds may impact one’s information seeking at the reference desk and how cross-cultural differences might be accounted for in reference services, especially in regards to international students. No research on reference in academic libraries and students from marginalized backgrounds appears to have directly involved research participants in developing reference services.

A number of studies have contributed necessary complexity to discussions of reference, and in particular, to identifying the forms of power present in reference interactions. Efforts have been made to question and reframe the language of reference, including the tendency of the “user-centered” discourse to more often serve the needs of the information system than the user, and replacing the “reference interview” terminology with “reference dialogue” to emphasize its student-driven, conversational nature wherein the librarian is also likely to learn something new. More recently, the history, theory, and practice of reference librarianship and social justice work has been addressed in the collection *Reference Librarianship & Justice*.

The societal systems that reference services are embedded within reflect another area of inquiry in the LIS literature, with the impact of systemic racism within the context of reference considered by April Hathcock and Stephanie Sendaaula, and Annie Pho and Rose L. Chou. In a study of intercultural aspects of the reference interview, R. Errol Lam asks librarians to take “the initiative to understand, empathize, and deal more effectively with black students during the reference interview.” Pnina Shachaf and Sarah Horowitz demonstrate the racialized biases present in virtual reference services, showing through the use of fictitious users posing queries via email that patrons of color may receive reference service unequal to that of White patrons. Most significantly to the study at hand, Freeda Brook, Dave Ellenwood, and Althea Lazzaro state that librarians must “relinquish the notion of total control over space and instead empower students, faculty, and community members to take ownership of academic libraries and use them as sites of social justice.” With this aspiration of shared ownership over the library in mind, this study will turn to its primary interests and methods.
Methodology

Areas of Interest

This study sought to address two areas of interest. The primary intent was to find ways to improve reference services for undergraduates from backgrounds that are marginalized within and by higher education and libraries. This focus considers how reference might be revised or rethought, based on the ideas and experiences of undergraduates at the author’s institution. Second, the author wished to consider how research into library services might center users’ ideas and experiences methodologically, and to evaluate the use of Photovoice for this purpose. The term “marginalized” is not without its problems, as its non-specific use tends to ignore the different degrees and different histories of marginalization based on race, ethnicity, gender, sexual orientation, ability, class, and the overlapping experiences between them. The students who participated in this project all described instances of marginalization based on their identities, and the term is used to draw a distinction between dominant and non-dominant perspectives. This study’s intent is to provide insight into the following questions:

1. How can academic librarians improve reference services for marginalized students?
2. How can research into library services center students’ ideas and experiences?

Method

Photovoice combines photography and narratives in exploring community issues. Initially developed by public health researchers working with women in rural China, the method’s theoretical basis combines the participatory educational strategies of Paulo Freire, feminist theory’s emphasis on giving voice to subordinated people, and documentary photography’s representation of social issues and realities. Through this orientation to participant involvement and the subject of study, Photovoice emphasizes the potential for results that lead to specific changes, particularly as they affect participants’ lives, through applying insights gained from the research process. This action-research approach extends to participant involvement in the data collection, selection, and analysis processes, facilitating much greater participant decision-making and input compared to many conventional research methods. This in turn can lead to results determined by the community studied, instead of solely the researcher.

In their examination of visual methods within information research, Alison Hicks and Annemaree Lloyd found that the use of photographs in data collection contributes to the ease of describing information sources and activities, clarifying and exploring concepts, and providing access to alternative viewpoints. Ultimately, “one of the key benefits of participatory visual research methods is to empower participants to represent their own understandings of what information means to them.” Shailoo Bedi and Jenaya Webb also found photographic methods to be an optimal way of learning about users’ experiences and creating a more collaborative approach to research. Photovoice has been used and described in several studies in LIS, with the method being adopted to better understand the information practices of refugees in Australia and undergraduate student worldviews.

In libraries, Photovoice has been applied to understanding research processes and preferences as well as patrons’ approach to and use of space.

Data Collection

The study was reviewed by and received approval from the Institutional Research Board of Long Island University. In the Fall 2017 semester, flyers seeking study participants were posted in different locations on campus, offering the incentive of a $30 gift card in exchange for participation. Eleven undergraduates contacted the researcher, indicating their interest. The participant demographics included nine participants who identified as female and two as male, and eight participants ages 18-23, two ages 24-29, and one 30-35. When invited to
provide additional information about their identity that they felt were relevant to how they perceived the world, participants wrote “impaired mobility,” “new citizen,” “immigrant,” “queer woman of color,” and “first one in my family to study at university.” Student names included in this study were changed to protect their privacy.

Each participant first met individually with the researcher, wherein the study’s goals and process was described, a letter of informed consent was signed, and participants filled out a form indicating their gender, race or ethnicity, age, level of study, and area of study. Also during this initial meeting participants were apprised of the ethics and potential risks involved in taking photos, verbally and with a handout summarizing the information. Participants were given two weeks to take 20 photographs documenting when they looked for information. The researcher emphasized that information seeking related and unrelated to academic purposes was welcomed and of interest. After two weeks each participant and the researcher met for interviews. One hour was allotted for participants to add captions to the photos they took, select five photos to discuss in-depth, and discuss these photos along with ideas for how reference and the library could improve. The interviews took place in October and November 2017.

In the Spring 2018 semester, a focus group session was held with the eight participants who were able to attend. In this 1.5 hour session, each participant selected two photos to share with the group and describe. Based on these photos and the ensuing conversation on what these photos expressed or had in common, the participants and researcher determined the major themes together. The thematic development that took place is described further in the Data Analysis section.

**Data Analysis**

The data were analyzed by both the participants and researcher at various stages. Prior to interviews, all photos from each participant were reviewed by the researcher to gain a better understanding of potential themes among photo sets and across participants. Interviews generally were limited to discussion of five photos, but occasionally a participant wished to discuss an additional image. The most significant point of analysis was the focus group session, wherein the researcher facilitated a discussion on participant photos and developed a list of potential and then finalized themes based on participant input and the connections the researcher drew attention to during the session, using a whiteboard to keep track of and revise the ideas being offered. The themes and subthemes were all suggested by participants and agreed upon by the group of eight, and were not changed so that they reflect the opinions of the participants to the fullest.

**Findings**

Based on the group discussion that took place, the participants chose to frame their information practices primarily in terms of time and timing, in addition to a stand-alone theme that addressed academic efforts. The primary themes and associated subthemes are as follows, and for the purposes of this paper, only the Academic Work theme will be explored in detail.

**Academic Work**

- Keeping up in class
- Studying with friends
- Help from professors

**Information in the Moment**

- Getting around
Connecting with loved ones

Gathering Information for Later
- Parsing complex information
- Personal interests

Academic Work
Under the academic work theme, which participants determined was deserving of its own category, information seeking activities that specifically concerned students’ coursework and academic tasks were represented across three subthemes: Keeping up in class, Studying with friends, and Help from professors.

- Keeping up in class

Participants used numerous strategies to succeed in their classes, study for tests, and engage in other academic activities. Key elements mentioned in this subtheme were taking pictures as notetaking, finding ways around purchasing textbooks, and using Wikipedia for basic information. Several participants noted their use of photos as a way to take visual notes in class, sometimes later transcribing the whiteboard content into their own collection of notes to study from. When discussing how she seeks help, Yu Yan, an international student majoring in English and Physics, described her use of photos as a way to keep pace with class content and clarify information later on:

Yu Yan: Or if I go to [my professors’] office hours, and they’re going over a problem I didn’t understand in the homework, then I take a picture so I don’t have to try to listen and write. It’s hard. The picture captures it quickly.

Interviewer: Oh, interesting, good idea. So kind of like a memory-jogging device.

Yu Yan: Yeah, so I can remember.

One such picture the student used to clarify class content was taken in her thermodynamics class.

Several participants avoided buying textbooks required for their classes, due to cost or not finding these books useful. Oftentimes students mentioned other essentials they would spend money on instead of textbooks, including a flight home during winter break, and putting the money towards paying rent or tuition. One nursing student, Rosa, said she was unable to justify buying expensive textbooks because her professors’ PowerPoints had similar content. Rosa did decide to buy one nursing diagnosis text after weighing factors like cost and usefulness in class, and
ultimately purchased it because she expected she would consistently refer to it in her job after earning her degree. She described the book as follows, referring to the picture included as Image 2: “Usually I actually don't really use the textbook that was recommended on the syllabus, just because I feel like a lot of professors already have their own PowerPoints and it’s just a condensed form of the textbook.” Because she felt the content was addressed elsewhere and the book represented an exorbitant cost, Rosa as well as several other students chose to forego purchasing some or many books.

Wikipedia was a common topic regarding coursework and subjects students had little or no familiarity with. Despite being referenced by two-thirds of the participants during interviews and arising as a topic during the focus group, students would either apologize for using it or express some guilt for relying on the website. When it was discussed in the focus group all but one student said they used it. Despite its popularity, there were mixed feelings on Wikipedia’s reliability and a couple statements that “it’s not the best source but I use it anyway.” When asked why, participants said their teachers had warned them against using it. As André, a pharmacy student in his senior year, described regarding its trustworthiness:

Interviewer: So what were you working on, do you remember? For this particular thing?

André: Yes, I do. I was just reviewing a patient’s chart, and then a medication just came up. And it was a medication that I learned and was familiar, but I forgot the adverse effects or the side effects that that medication can have. And I just went to Wikipedia really quick just to have a refresher on like, oh yes, what are the side effects of taking this kind of medication.

Interviewer: Right, exactly. So, do you find it usually has info you're looking for?

André: It does, yeah. But sometimes it’s also unclear. Sometimes it can have contradictions, and I’ll look onto other sites.
• Studying with friends

While notetaking strategies, textbooks, and popular resources such as Wikipedia were discussed, studying was brought up as a separate topic related to academic work. Approximately one-third of participants used the library as a place to study, while the remainder used other buildings on campus, their homes, or their neighborhood public library branch. These decisions were largely based upon convenience for one’s schedule or location, but several students also described the need to find somewhere quiet and away from distractions for successful studying. Participants expressed the need for only a few essentials, including access to electrical outlets, sufficient space to spread out, and minimal distractions. In the words of one student, “As long as there’s an outlet and I’ve got my headphones in, I’m good.” Syeda, a first-generation student in Nursing, said she rarely used the library, and instead studied with her friends at the public library branch in her neighborhood. The location was more convenient to where they lived, and the library was a quiet, free place they could meet up and study.

• Help from professors

Student’s professors were a frequent source for answering questions and preparing for tests. Several participants expressed a strong preference to meet with their professors in person during office hours for the clarifications they required. Sophia, a student majoring in biology, explained her choice of a photo depicting a professor’s office:

Sophia: That’s my organic chemistry teacher’s office. I go to him often when I need help with homework or when I’m studying for a test.

Interviewer: Yeah, definitely. So a good source for information. And do you usually try and go during drop in hours, like, open office hours?

Sophia: Yeah, he has open office hours before class, so I often go there.

Interviewer: Ok, good. So you can just go before class. Do you try getting in touch over email or is it more of an in-person thing?

Sophia: In person.
These subthemes concerning participants’ academic work show the multifaceted ways they keep up in class, the environments they prefer to study in, and how they tend to seek help from their instructors. The following theme sheds light on how participants’ information practices, distinct from but often intertwined with their studies, were manifested in their everyday lives.

**Information in the Moment**
In order to gain a broad understanding of how participants sought information and the potential implications for reference services, students were encouraged to consider information seeking outside of university-related activities. Their photos and discussions led to the development of the theme Information in the Moment, where participants sought to meet an information need instantly or in the immediate future. Oftentimes information seeking related to this theme would be caused by something unexpected.

- **Getting around**
  Finding directional information and navigating their surroundings was one significant subtheme. This was often related to transportation. One student, for example, found that his usual subway line had changed the stops it was making during the weekend, which resulted in the need to reroute his travels using a shuttle bus and the complicated information that involves. Other participants shared screenshots of their phones from times they were getting directions from one place to another, typically for jobs they held. The sheer volume of different responsibilities students were balancing was made apparent, as they traveled all times of the day to meet various family, work, and school obligations.

- **Connecting with loved ones**
  More often than navigating their surroundings, information practices under this theme related to personal life and keeping in touch with family, friends, and significant others. To find time in the day to spend together, one participant, Yu Yan, would check her boyfriend’s daily schedule so that they would not have to text back and forth and knew when they would have opportunities to spend time together. Other participants described checking in with family using FaceTime or Skype, messaging classmates via Facebook groups they created for classes, and connecting with friends through Snapchat or Instagram. These activities were often spontaneous and frequent, in contrast to the more deliberate information practices described in the following theme.

**Gathering Information for Later**
Many participants shared examples of when they selectively gathered information to be used or referred to at a later date. Information seeking of this type was occasionally school-related, but more often concerned personal interests and planning for future events, whether the following day or later that year.

- **Parsing complex information**
  As with some examples related to directional information seeking under the theme Information in the Moment, taking photos was a method used to parse complex information. While speaking with her supervisor at work, Syeda, a nursing student, noticed an organizational chart in her office and thought that the information would be useful in an upcoming assignment. A quick snapshot of the chart gave her the information she needed to incorporate it into her assignment later in the semester.

- **Personal interests**
  Participants’ personal interests were extremely varied, and were reflected in many of the photos they selected for discussion. A common thread was comparing prices and pursuing their interests while being conscientious of cost. As one example, Jasmine, a first-generation student who enjoys cooking, compares prices found at small grocers, Trader Joe’s, and Whole Foods to determine which food she should buy where to save money. She keeps
a spreadsheet of items she buys often, and uses the photos to update the spreadsheet periodically. The interests of other participants, including keeping up with the news, shopping for clothes, and seeing theatrical productions, were oftentimes discussed in relation to cost and financial decision making.

**Discussion**

Based on the findings, some implications for reference services can be generalized from participants’ stated information seeking preferences, as well as their reactions to reference specifically. These implications inferred from participants’ contributions include a desire for in-person assistance for certain information needs, as well as the influence of visual prompts such as photos and screenshots on saving information or conveying it to another person.

During both individual interviews and group discussion, participants expressed a significant preference for in-person support in certain circumstances. Their interest in this type of assistance, as opposed to seeking information through a source such as YouTube, Wikipedia, or Google, was primarily in clarifying questions and concepts related to their coursework. Applied to reference services, this suggests there may be a possibility for librarians to be more involved in course content. This would require close relationships with teaching faculty and an embedded approach to working with classes, but if pursued with success, could lead to librarians becoming trusted sources for more than access to relevant resources.

When asked specifically about recommendations for reference services at their library, no participants shared ideas for changes to make, and, in general, they simply did not feel strongly about reference assistance or how it was provided. Several participants had used reference services in the past, and several others knew they could receive help from a librarian but had not felt the need to ask a question. The lack of specific recommendations from participants regarding reference is due in part to the study’s design, which sought a participant-driven approach and kept the scope open to finding information more generally, rather than solely assistance from a librarian. Some participants indeed sought information from librarians, but that represented one source among many.

A lack of interest in reference is not to say that participants had no opinions about the library or the resources they needed. To the contrary—participants had numerous suggestions for how the library might improve. Overall, participants cared most about what they needed to get their work done, so they could attend to things other than their studies. Some of these needs concerned space, such as access to the library building during late hours, and others were technology-related, including easier ways to print, and updated computers in the labs. In all cases, participants were fully aware of what resources would make their academic lives easier, and were forthcoming with that information. If librarians wish to determine how to best support students, there is no better way to find out than to ask directly.

While the results did not provide immediate insight into the study’s first area of interest, the project was successful in considering how research into library services can center students’ ideas and experiences. By adopting the Photovoice method there was a high level of involvement, which meant results determined by the participants along with the researcher. Participants did not determine the photo-taking prompt, but they chose the photos they took and which photos they discussed with the author and focus group participants. In this way, the method allowed for a process that gave participants some amount of latitude to define what was significant or important to them within the context of the study’s interests.

Though this flexibility in the study resulted in fewer direct implications for reference services than the author had hoped, this openness in considering how information was sought and the conditions it was done under led to a broader understanding of these processes. In this way, Photovoice and other participatory visual meth-
ods hold the potential to widen how we as librarians think of information and its use—not just limited to the textual or verbal, but visual, social, embodied, and often deeply personal.

**Conclusion**

This study used Photovoice, a participatory visual method, to learn more about undergraduates’ information practices and help-seeking preferences, and attempt to identify possibilities for reference services to be re-designed according to participants’ stated needs. While no ideas for improving reference assistance were suggested specifically, participants offered many recommendations for improving library resources and services. These ideas included extended hours at night and on the weekends, more space for group study, getting copies of textbooks, printing from laptops, updating hardware in the computer labs, and reducing the noise level, and illustrate the wide variety of needs that students have to accomplish their academic work. In addition, this study advances a promising research method for further adoption by Library and Information Studies researchers; one which encourages a participant-driven approach to address the complexities of library use and the situatedness of information practices.

The author will be planning an on-campus exhibition of selected photos from the project, keeping with Photovoice’s intent to create an exchange that goes beyond the usual confines of a study. Captions and explanatory text from the participants who wish to be part of the exhibition will accompany the photographs. This will act as a formal ending to the project, but also as a way to broaden and continue conversations about our information environments, the overlap between academic work and personal life, how students can be better supported in achieving their goals.

Beyond reference, and even libraries more broadly, the participants’ responses and involvement underscored one major point: people’s experiences and information practices are unique. Students with similar socioeconomic backgrounds or ethnic identities, marginalized or otherwise, experience libraries, information, and the world in very different ways. The uniqueness of information seeking brings into question universal models and generalizations about different populations of users. It is essential to better understand how to support library users, but perhaps just as vital to not make broad overgeneralizations and instead treat reference and our work with patrons as the contextual, ever-changing practice that it is.

**Notes**


