Library Learning: Undergraduate Students' Informal, Self-directed, and Information Sharing Strategies

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Abstract

A focus group study of fourteen University of Saskatchewan second to fourth year humanities and social science undergraduate students was conducted in the fall of 2011. The purpose of the research was to determine how students learn about library resources and services. Findings indicate that the participants often use a variety of informal, self-directed and information sharing strategies. Seeking help from professors, peers, friends, and family members is a common practice. Convenience, familiarity, and perceived knowledge are key factors that determine who and how these students learn about the library. Formal instruction and seeking assistance from librarians did not resonate for participants as a typical approach for learning about the library.

The author suggests that undergraduate students engage in informal learning and information sharing as many 'adult learners' do, similar to an employment setting. The library, within the formal educational structure, lends itself to a more informal learning context. The study concludes that libraries must continue to develop resources, services, and innovative programs that support students' informal learning styles, while also providing formal instruction as part of the undergraduate curriculum ensuring students are exposed early on to core foundational skills that contribute to their success as informal and self-directed learners.

Keywords

informal learning; self-directed; information sharing; convenience; familiarity; adult learners

Introduction

The approaches students take when learning about the library or conducting research often does not include librarians. Whether based on this author's personal observation and experience or supported by prior literature, it seems

that students tend to seek out others before going to the library or librarian for help, if at all (Valentine 303). Perhaps this is because students don't understand the role of a librarian, or they fear embarrassment, or simply because they do not like to ask for help (Valentine 304). Either way, libraries spend a great deal of time and effort marketing services and programs, including promoting librarian instruction and research help, yet students often bypass these options choosing less formal approaches for learning about the library.

This paper summarizes the findings of a qualitative focus group study of fourteen University of Saskatchewan second to fourth year undergraduate students in the humanities and social science disciplines, examining the approaches they take to learn about library resources and services, who they go to when seeking assistance with their research, and why. The study does not assess whether the students are achieving the highest level of success through these approaches but, rather, considers the factors that influence the directions they take.

The study was conducted to answer the following questions:

- What approaches are undergraduate students in the humanities and social sciences typically taking to learn about library resources and services?
- Do these approaches change as students' progress through the undergraduate years?
- Why do students choose the paths they do?

Exploring the paths of informal learning that seem so prevalent among undergraduate students will assist in the development of services, programs and spaces that are more meaningful and relevant to students.

Literature Review

The literature focusing on undergraduate student library use spans many years and presents consistent findings related to the directions students choose to take when learning about the library and conducting research.

Barbara Valentine's 1993 study concluded that students look for the "easiest, least painful way to complete a research project in a timely and satisfactory fashion" (302). Valentine indicates that a "quick and dirty" approach using limited resources was the typical practice by students. They did not use an organized strategy as librarians might teach in an instruction session. The study found that students would conduct "easy" research which meant starting with something familiar. The notion of feeling lost or lacking familiarity with the library and its resources was considered a significant obstacle to the students. Seeking help from peers, friends, family members, and instructors was also identified as a common approach for students. Valentine delved into why students seek out instructors more frequently than librarians and identified a variety of reasons including fear, accessibility, risk versus reward, benefits versus cost associated with consulting authorities, and of course simply not understanding the role of a

librarian. Valentine states "students use research strategies that they perceive will reap the greatest benefits with the least cost in terms of time or social effort. The fact that students want to avoid interactions that they believe may be painful should not be surprising" (304).

Similar to Valentine, Fister interviewed fourteen students who had completed a successful research project and found that theses students did not use a well organized research strategy compared to what librarians might teach. The 'tool-intensive' techniques and 'logical and systematic' processes often taught in library instruction was not the typical approach students took (9). What Fister did find was that a significant portion of time, energy, and diverse approaches were spent formulating a focus for their research. At this stage many of the same people that Valentine identified – instructors, classmates, and friends – were consulted, and students tended to do a great deal of browsing widely and scanning over resources and titles, eventually backtracking with a more critical review of the material they had previously looked at (5). She found that students generally have a sophisticated understanding of the nature of research and were not just finding information, but successfully using it to support an argument. Her study raised questions about some assumptions regarding library skills and what should be taught in the context of the undergraduate student research process (10).

Research by O'Brien and Symons confirmed students rely more often on peers and professors than library staff. They concluded that 'year of study' and 'academic discipline' influenced some of the information choices students make, but in particular, the Web and peers have the most impact on student information seeking practices (421). O'Brien and Symons suggest that while students avoid seeking out library staff for help, their decision is not based on fear or that they don't believe library staff have the knowledge or expertise to help them – they simply don't want to have to ask for help (421). O'Brien and Symons found that students visit the library for a variety of purposes, consider it the hub of campus and don't feel intimidated in any way. Therefore, fear or library anxiety is not the reason why students don't seek help from library staff (421).

Connaway et al. expand on the notion that students seek help and conduct research by starting with what is most familiar and convenient. They found this to be critical for students when making choices during the information seeking process (188). Students base their decisions on whether resources are readily accessible in print or online, whether the resource contains the necessary information, and whether it is easy to use. This suggests that for the library to be one of the first choices of information for students, its systems, interfaces, and services need to be familiar and easily accessible.

Lee et al. introduced a reference service model that was designed to address students' desire for convenience and familiarity and the fact that they tend not to like asking for help at the information desk and when looking for assistance. By establishing 'office hours' and 'Librarian in Residence' services, they took the

traditional reference desk out to the students and into their space. This new approach was reasonably successful; however, the need to have professor buy-in and promotion was crucial in order to encourage students to use the service. The expectation was that as the relationship and rapport between librarians and faculty increased then so too would the impact on how the students used the service (8-10). There was a clear connection that seeking help from a librarian was related to whether the professor promoted or required the student to use the service.

Seamans' research also focused on how students find and use information for both their academic and general needs and concludes that students typically discuss their information needs with others. The people they consult with are usually peers, family members, and instructors (97). When asked about seeking or verifying information from a 'so-called expert', most did not unless it was a requirement as part of a class assignment (66). Pellegrino's study found similar results, suggesting that students don't seek out experts unless they are required to by an instructor. Librarians themselves seem to have very little influence when it comes to encouraging students to seek help from them. Professors, on the other hand, had significant influence on whether undergraduate students go to a librarian, and there was strong statistical evidence between students seeking librarian help as a result of being encouraged by their professor to do so (276).

When students do consult with a librarian, go to the reference desk, or participate in instruction, Whitmire (383) and Mizrachi (575) have both found that students do report positive interactions with librarians. Often though, a positive library experience is conveyed in relation to the physical space of the library. Students identify library space as being very important to them. It is a place where they can study, socialize, rest, and also do their research. The trend towards library environments that encourage informal, social, and collaborative learning, and where food, drink, and noise are typically acceptable, may contribute to this positive experience. Harrop and Turpin explored informal learning behaviors, attitudes, and preferences related to library space and highlight nine attributes: destination, identity, conversations, community, retreat, timely, and human factors that contributed to an ideal space typology (64). Students placed significant importance on the library related to the spaces that allowed for learning to happen through conversation, community, and social interactions (67). Being in a space where they can connect with peers, friends, and colleagues allows for both planned and unplanned learning (68).

The literature presented here highlights some common themes. In particular, the studies show that when conducting library research, students generally prefer to discover and learn on their own without asking for help. Students rely on familiarity and convenience when seeking information, whether it is to find resources or get help from someone else. When using the library, social connections, collaboration, and relationships are very important to students. The findings in this literature review are relevant to the current study and provide valuable background and context for the questions being explored.

Methodology

This study was conducted using focus groups as a qualitative methodology. It was thought that this would provide a richer forum for student discussion and would also allow the author to reflect in more detail on the students' sentiments arising from these discussions.

Because the study was focusing specifically on humanities and social science students with previous experience using the library, it was decided that recruitment would be limited to areas where these students are more likely to gather rather than across the entire campus. Posters and bookmarks were created and distributed throughout the library servicing the humanities and social sciences and in prime locations of the College of Arts & Science building only.

The desired number of participants for the study was twenty-four with the intent of running four focus groups broken down by first, second, third and fourth year students. In the end, only fourteen students volunteered to participate in the study, none of which were first year students. Given administrative constraints and timelines, it was not possible to extend the recruitment period in order to reach the desired twenty-four. A decision was made to proceed by conducting three focus groups of second, third, and fourth year students. Although disappointing that no first year students volunteered, it was not surprising given the study was conducted in the fall semester when these students are less likely to have explored and used the library. In the end, this did not have a direct impact on the findings because second year students were typically reflecting on their first year experience.

Of the fourteen focus group participants, twelve were female and two were male. All the students were enrolled in a variety of courses within the social science, humanities and fine arts disciplines. The age of participants was not collected as it was not considered a key variable for this study. However, knowing the age of the students, regardless of their year of study, might have provided further insight into their approach and behavior when learning about the library.

The majority of students identified themselves as social science majors in the disciplines of Sociology, Psychology, Political Studies, Native Studies, and Archaeology. There were a few students studying the humanities disciplines of Linguistics, English, Medieval and Renaissance Studies, and French. Some students also indicated they had taken (a few) courses in the sciences.

Table 1.Year of study and discipline

Year of Study	Total Students	Humanities and Fine Arts	Social Sciences
Total Students	14	4	10
Second	4	0	4

| Third | 4 | 1 | 3 |
| Fourth | 6 | 3 | 3 |

Students who volunteered were asked prior to their participation whether they had used library resources or services in the past. This was a requirement of the study in order to ensure that participants were able to respond to questions based on past experience. Although previous attendance at a library instruction or orientation session was not a requirement to participate, thirteen of the fourteen students did in fact attend some type of formal session (tour, orientation, classroom instruction) in the past. Additionally, one of the participants was a student who worked in the library. Since participants were asked to share their own experience, this was not considered a conflict nor expected to influence the discussion in any way. The student was simply reflecting within her own personal context.

The focus groups were held the first week of November 2011 with the intent of missing most mid-term exams, but during a period when students are likely preparing to write final research papers. Each session ran ninety minutes, including fifteen minutes for students to eat a pizza lunch beforehand. The pre-focus group time gave participants an opportunity to get comfortable with each other and the setting. The author acted as the moderator for each of the focus groups by providing some brief guidelines for the session including outlining the topic and a description of what was meant by library resources and services (Appendix I). A script of identical questions was used for each of the focus groups (Appendix II). While the author asked questions, the research assistant recorded the sessions using an audio recorder with supplemented written notes where necessary.

Each focus group recording was transcribed by the research assistant. Given the small scale of the study, it was determined that analysis of the transcripts would be more efficient and easily managed through a manual coding and labeling process which was handled by the research assistant by grouping and sorting similar comments, themes, and observations. These were further analyzed by the author and entered into a spread-sheet.

Findings

The focus group findings indicate that similar paths were taken by participants when conducting library research. Google, Wikipedia, library catalogue and databases were all identified as tools used for locating research material. How the students learned to use these resources and conduct research was informal, self-directed, and usually intentional. Learning through trial and error, seeking assistance from others, and information sharing were typical. These approaches were consistent for all participants regardless of their year of study, was valued, and considered part of their academic learning experience. When conducting

research and seeking help, these students look for convenience, familiarity, and knowledge to guide them and rely on professors, family members, peers, and friends as key individuals in the process.

Google, Wikipedia, Library Catalogue, and Databases

Regardless of their academic year, students in the study said that they often use Google and Wikipedia as a starting point to find research material. This is important to note, as it highlights the initial direction these students go when starting their research, and it is frequently not the library. That said, the library website, catalogue, and journal databases were also used, especially as they learned with experience, that this approach garnered more success than going directly to the Web. "I used Google, but then I found out that it takes more time, it's even more time consuming because you don't know where to start… I found you go to U of S library and you choose your courses… and they have the best bet articles and from there you just dive down, you just choose a journal and then you choose an article…" (2nd yr). This student was referring to the library designed Subject Guides which provide suggestions for 'best bet' databases. In one particular case, a fourth year student commented that 'over time' through trial and error she had learned on her own to search using the catalogue and databases and was then able to effectively use Google as a starting point which resulted in a more thorough search.

Self-Directed and Trial and Error

Participants in all three focus groups showed a strong preference for self-directed learning when using the library and doing research. Participants referred to a 'learn as they go' approach through 'trial and error' using Google, the library website, catalogue, and journal databases. "I tend to figure things out mostly by trial and error… I usually find, for example a new database, they are not that much different from other databases, so I can usually figure that out in like half an hour and then I got the hang of it. So generally just sort of do it myself" (4th yr).

The students seemed to be quite comfortable working this way and felt that it was part of the learning process. "I usually come across a problem and I try to find the solution on my own. So that's where I usually discover other resources that the library has" (2nd yr). These students felt that over time this approach helped develop their abilities to conduct research and find relevant sources. "I think that the more I learn the more my research patterns and resources that I use are going to change" (2nd yr).

One fourth year participant felt that her improved grades were an excellent indicator that she had developed and improved her research skills over time. "I've kind of noticed that as I've refined, you know, my process… it [has] been supported by the grades that I've been getting" (4th yr). Reflecting on the value of a self-directed or trial and error approach, one student said "I think that it's effective in that for myself, I found a lot of things that I wouldn't have found if I'd

just asked for help to get the simplest route there. I wouldn't have discovered X, Y, Z if I just looked for A" (3rd yr).

Seeking Help

Participants showed confidence related to their research skills and said that they often do not feel the need to seek assistance. Once they recognize a need for help, they typically look to their professors, friends, peers in class, or a family member. Quite often students would seek out the professor first. "I wasn't sure where else to go because you know back in high-school you just, any help you have you just go to your teacher. So I was expecting the same thing as a first year student… I was expecting help from him, so, that's kind of natural I guess" (2nd yr).

Asked where or who they go to for help within the library, responses included: the online chat service, checkout desk, information desk, IT help desk, person shelving the books. When these students cannot locate an item on the shelf or are unable to find what they need in a database or the catalogue, they go to the most convenient and familiar location or person. Sometimes this might be one of the service desks, but they are just as likely to go to a professor and ask for help on the assumption that the library does not have what they are looking for, so the professor will have something to help them. "My most common problem when I am writing papers is that I can't find a resource, like a professor might recommend a book and it's not in the library, so usually what I'll do is go to the professor and I'll borrow their personal books from their collection because usually they have everything in that field and then I might turn to interlibrary loan but very rarely" (4th yr). In many cases they simply don't bother to ask for help and will figure it out on their own or give up and try something else. "I usually try to muddle through it as best on my own, and it was only a couple of times that I went to the reference desk" (3rd yr).

Participants were asked if they had ever gone to a librarian for help. Some had gone to the reference desk before. One student said "No, I guess I never have, you know, I've never felt the need to. I'm sort of used to my system, where I can go ask my professor and he can say 'oh consider this one and that one…'" (4th yr). One fourth year student stated "the only time I would ask help from a librarian was if the professor required it for class" (4th yr).

Many of the participants had no idea that library 'help guides' or 'how do I' pages were available to assist them. Some students had recalled stumbling across them on the website but didn't really use them. For those who knew about the tools, they found them moderately useful, although fairly general, and mostly relevant for first year students. In one case a student felt that the information provided about how to write a book review might be different from the professor's expectations; therefore, the preference was to go directly to the professor for help rather than trust the information in the help guide. One second year student found that the guide about writing a thesis statement was helpful, and would

consider using 'help guides' in the future. Nevertheless, the guides were not a commonly chosen path for assistance.

Information Sharing

Comments were frequently made about the connections students have with their professors, peers, friends, family members, and colleagues. These individuals might be in the same class, work in the library, or have the same discipline background. They were considered reliable sources of information and the students felt comfortable learning from them. "I actually went to my dad for the first time for a little bit of help… a lot of the topics that he's an expert on are related to what I'm studying right now so it was very interesting to actually sit down and kind of talk work and research with him and it was great, it really helped…" (4th yr).

Information sharing and learning through collaboration and social networks was a concept that came up repeatedly in the group discussions. "Collaboration with peers and everything is huge, especially in my program where it's relatively small; we're in all of the same classes together and we're all doing the same project at the same time, so you talk to your peers and, you know, just through conversation someone will say 'oh, hey, by the way did you happen to find this?' and, you know, you're all able to kind of feed off of each other" (4th yr).

Information sharing often happens as a result of social interactions or casual conversation. For example, one student who worked in the library stated "I am rather social at work so usually I am discussing stuff with people, talking about what I'm doing for school with people I work with, and usually, you know, the discussion can sometimes lead to what's new or people telling me 'well have you tried this?' or that kind of thing…" (4th yr). In other cases, students intentionally look to people they believe will have the information they need; often this is a professor. "Well, I think there's this idea, at least in my case, that if they're teaching it they have at least some kind of background in the area and so a lot of times they will help you key in on certain, you know, authors or articles or even just keywords that can help me in search for sources" (4th yr).

Convenience, Familiarity, and Knowledge

Participants seeking out professors, peers, friends, and family members were strong and consistent themes throughout the focus groups and were frequently linked to three key factors, *convenience, familiarity* and *knowledge*.

A professor who is teaching and marking papers, a family member who has a background in the same field as the student or has been to university before, peers in the same class, or friends who work in the library, are all examples participants gave when identifying who they go to for help. In each case, these individuals meet at least one (if not all three) of the key factors.

Professors in particular fit the criteria better than anyone and were most often referred to in the discussions. They are familiar, convenient, and have the knowledge and authority that students are expecting. "I guess mostly just profs, like you know, they normally know, if they're the one marking it, what sort of resources they're looking for… also they've been exposed to really obscure texts sometimes that you wouldn't necessarily find no matter where you looked, and they sort of set you off on the right direction" (4th yr).

Similarly, a fourth year student stated that friends in the same class or those who work in the library were just an obvious approach for her "I think through asking friends, friends that are in my courses. I have a couple of friends that work here in the library as well. It is much easier to approach someone when you kind of know them a little bit" (4th yr).

The frequency that participants identified a family member as someone they went to for help was surprising to the author. "When I was in first year I went to my mom a lot because she also went to this university, and so she knew sort of how the website worked and how the library was set up, and she was right there all the time. I was living at home, so it was just the most convenient" (4th yr).

Year of Study

The year of academic study does not appear to influence the approach students take to learn about the library. Self-directed, trial and error, and information sharing are common practices at all levels. Making mistakes and developing skills along the way was considered part of the learning process. As one third year student stated "It probably slows things down but then you're not going to forget it again because you didn't just ask somebody and have them do it, you really found where it was." A couple of senior students did admit that, maybe if they had received formal library instruction earlier and understood how a librarian could help them, they might have come to the knowledge they have now in a more timely fashion.

The most notable difference between the years of study was that upper level students were clearly more articulate in expressing themselves and talking about their ability to use the library. Senior students were generally more comfortable in the focus group setting than second and third year students. Maturity and more academic experience likely contributed to this confidence.

Finally, all of the participants, regardless of their year of study, expressed a high level of comfort regarding online library resources. Conducting research and seeking information using technology is a familiar process for these students. Jumping in and getting started did not seem to be an intimidating task. From one fourth year student's perspective, "maybe we've just been raised on electronic resources for so long it's just sort of the process we're used to. Poking buttons long enough eventually you find the right one."

Library Instruction

Although prior use of the library was a requirement for participation in the study, library instruction was not. The author was interested in hearing whether students would identify instruction or orientations as one of the ways they learned about resources and services. Initially, participants did not talk about library instruction in any way. It was not until a specific question was asked about their experience attending some type of library session that participants indicated this would have been one of the ways they learned how to use the library. In fact, thirteen of the fourteen students had previously attended a library session, either as a general orientation or classroom instruction that was arranged by a professor.

While participants did say their experience was positive, they considered it mostly helpful in providing a general overview of the library. Some third and fourth year students commented that they had found library instruction to be repetitive and too basic for their needs and that they had already taken similar sessions in earlier years. Some of the students did indicate that they would consider taking more instruction sessions or workshops if they were specific to what they were researching and if they were readily available when they needed them, but mostly they felt their current strategies – trial and error, figuring it out on their own, and asking professors, friends, and classmates for help – was their preferred approach. One fourth year student did suggest that an introduction to library studies course would be beneficial. "…an introduction to library studies course would be really interesting to take, just for getting how stuff works, why stuff works that way, more advanced search skills, how to access kind of the more broader databases that, you know, sometimes people wouldn't think to use. That kind of thing…. If not beginning, probably like second or third year when you've written a couple papers and now you kind of want to give it a bit more of an edge and kind of broaden your abilities to search" (4th yr).

Limitations

Findings from these focus groups can be considered an indication of how some students learn about library resources and services. The study focused specifically on students who had previous experience using the University Library resources and services. For this reason informal approaches may be a viable strategy for them. The experiences of students with less familiarity using the University Library, or any library for that matter, may be quite different.

This group in particular appeared to have quite a bit of exposure to libraries prior to entering university, either through a public or school library. A number of comments came out in the discussion about participants who had either volunteered in their school library or went to the school library simply as place to find solace and comfort. One participant had a parent who was a former librarian and several of the students had been regular users of the public library from a young age. "I was exposed to, you know, the environment of a library right from elementary school in the school libraries and public libraries…" (3rd yr). In fact,

one student had actually used the University Library while still in secondary school. "We came to this library while I was in high school and learned to use it for papers then, so I've been around libraries for a long time" (4th yr).

Discussion

The findings of this study are consistent with earlier research and show that the paths students take to learn about the library are often informal and self-directed. Seeking help and sharing information with individuals such as professors, peers, friends, family members and colleagues are important to their learning. Consideration for convenience, familiarity, and knowledge are typical when students determine where and who they go to with their information and research needs. These informal paths are not unlike how adults learn outside of the K-12 educational system, including within an employment setting.

Adults on the job are often independent and intentional in their learning and will look to co-workers and colleagues for assistance. Livingston's research on informal learning considers how adults learn in a work setting. Livingston states "Employment related training may be provided to new job entrants by lead hands and other accomplished workmates designated as mentors by employers and/or employee organizations. Self-directed informal learning includes intentional job-specific and general employment-related learning done on your own, collective learning with colleagues of other employment-related knowledge and skills, and tacit learning by doing" (3).

The approaches students talked about in the focus groups are much the same as Livingston identifies. Like adults who seek or are required to learn about their jobs, students learn to do library research over time using a variety of informal methods. Developing library research skills in relation to the academic curriculum is very similar to employment-related learning in that adults in both settings (education and employment) use informal strategies to develop the skills, competencies, and outcomes necessary to support their work and achieve success over time.

Daniel Schugurensky's research with the *Centre for Study of Education and Work* and the [Ontario Institute for Studies in Education](#) of the University of Toronto focuses on life-long and informal learning in education and states "Informal learning takes place outside the curricula of formal and non-formal educational institutions and programs" (2). He is not suggesting that informal learning does not happen in educational institutions, just not as part of the curricula. If that is the case, one can argue that the library and librarians are naturally positioned both physically and academically to foster paths of informal learning.

Informal sharing of information among adults in the educational context is not unusual. Sanna Talja suggests that scholars in academic communities are just as likely to share information collectively and collaboratively through a variety of methods as they are in seeking information as individuals (7). This applies to

students conducting research as well. Talja discusses a conceptual framework of four types and levels of information sharing. The concepts of 'Directive sharing' between teachers and students and 'Social sharing', which is sharing as a relationship and community building activity, can be related to students' information sharing as well. An example of this kind of social sharing surfaced during one of the focus group sessions. A conversation developed relating to finding and using data and statistics in a research paper. One student in particular seemed quite experienced using these resources and was happy to share this information, identifying for others where to find these resources and how they might incorporate them into their research. The student indicated he would be willing to assist others if they wanted. All of the students were comfortable in this conversation and it was interesting to observe that they, although not having previously known each other, were at ease sharing information in this way.

While the practice of information sharing and preference for self-directed and independent learning was evident in this study, the risks involved for informal learning approaches also need to be considered. Concerns about wrong information being shared and the fact that students will only receive a very narrow scope of what they need to know are a reality. Marsick and Watkins (25) caution that

> Because informal and incidental learning are unstructured, it is easy to become trapped by blind spots about one's own needs, assumptions, and values that influence the way people frame a situation, and by misperceptions about one's own responsibility when errors occur. When people learn in families, groups, workplaces or other social settings, their interpretation of a situation and consequent actions are highly influenced by social and cultural norms of others. Yet, people do not deeply question their own or others' views. Power dynamics may distort the way in which they understand events. These issues make it imperative that we teach adult learners strategies to make this kind of learning both more visible and more rigorous. (31)

Ensuring that all students develop the necessary library skills and information seeking strategies to support their informal and self-directed learning and be successful researchers is a challenge. One way to accomplish this is through library instruction programs that are integrated into the curriculum and designed to meet the learning needs of students as they progress through their academic careers. Developing information literacy and library core competencies at the beginning of undergraduate students' academic careers will provide them with the foundation to be successful in pursuing library research through informal modes. Librarians and professors working collaboratively to incorporate library research skills into the curriculum enables librarians to become more convenient, familiar, and considered knowledgeable in the eyes of students. Students recognize and see value in these collaborations. "One thing I found useful in the [library] session is that it was clear that he [the librarian] and the professor had

collaborated… the information was very specific to the projects and the course itself" (4th yr).

Sarah Dahlen recommends that librarians design instruction sessions that incorporate 'adult education' concepts that facilitate adult learning practices such as intentionality, transparency, and active participation. She argues that librarians do a disservice to college students by not recognizing and treating them as adults. "By fostering adult learning preferences such as being goal-driven, self-motivated, and defined by life experience, librarians are poised to assist students in their transition to the next developmental stage and to create lifelong learners" (14).

It is important for librarians to engage and interact with students in new ways. Developing library programs such as student peer mentorship, internship, and first year experience programs are possible ways for student and librarian relationships to expand in areas that are less formal. The informal learning and sharing that happens through these less traditional library programs supports Steven Bell's concept of the 'learning library' which is "really not a physical entity at all, but a process for educating students about research skills. This process enables students to learn how to think about and use information resources proficiently. They may learn this from a professional librarian, a student assistant, or in team efforts with faculty, and they may learn it in the library training room or the lounge of a dormitory" (57).

Libraries need to support the informal, self-directed approaches that students will inevitably take as adult learners. A continued focus on creating library facilities and learning spaces that foster information sharing, and encourage students to learn from each other through social networks, is essential.

Future Research

As libraries develop more integrated, embedded, and required instruction programs as part of the curriculum, there is a need to explore further the link between formal and informal learning that students engage in when developing library and information research skills. Exploring the idea of librarians adopting an 'adult education' approach to teaching as a way to address students' informal learning preferences would be of interest and benefit to libraries. Discovering ways we might change traditional library services, resources, and programs to support adult learning styles similar to those in an employment setting will be important to consider.

Conclusion

In summary, while the findings of fourteen students cannot be generalized to the larger population, it does appear that for these particular students using a variety of informal, self-directed, and information sharing strategies are typical and often valued. Conclusions can be drawn from this study to support findings from earlier

literature indicating that students like to be independent and self-directed but, when seeking assistance, will rely on individuals who are familiar, convenient and have the knowledge they expect to help them. In most cases these people are professors, peers, friends, and family members.

If the goal of an academic library is to ensure students develop information literacy and research skills to be successful in their studies, then libraries must continue to develop innovative programs and services that meet the diverse learning styles of all students. While some students might prefer an informal approach, they may not necessarily be as successful as they could be when provided with the right skills. Information literacy instruction as part of an undergraduate curriculum ensures that students are exposed early on to core foundational skills contributing to their success as informal and self-directed learners. Librarians would then be in a position of being more convenient, familiar, and considered knowledgeable by undergraduate students.

As Steven Bell (57) suggests, sometimes all students really want to know is what online button to click so they can learn on their own; other times the need for deeper learning and development of foundational research skills are necessary for students to become capable, self-directed, life-long learners.

Acknowledgements

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Appendix I

Focus Group Overview:

1. Welcome:

- Introduce moderator and research assistant. Thank participants for taking part.
- Provide food & refreshments.
- Read & sign consent forms. Allow participants to voice any concerns.
- Have participants fill out a name tag.

2. Brief outline of the topic for discussion:

'We have asked you here to help us with a study that we are conducting about the different pathways that undergraduates in the Humanities and Social Sciences take to learn how to use the library's resources & services and who they go to for help along the way'

4. Overview of what is meant by library resources & services:

'On the paper in front of you, you can see a list of various types of resources & services available in the library. We in no way expect you to have used all of these. We simply want to remind you of what library has to offer in order to help your recollection.

5. Guidelines for the focus group session:

- There are no right or wrong answers; we just want to hear about your experiences.
- We are tape recording this focus group so that we can later transcribe it and then use some of the results in an academic study. None of your names will be used in the study.
- We will keep to a first name basis throughout the discussion.
- The discussion will likely take about an hour; if you need to leave the room please excuse yourselves quietly.
- Please turn off all cellular phones.
- Are there any further questions or reservations before we get started?

7. Conclusion:

- Quick debrief
- Summary of the key points in the discussion
- Thank participants for taking part.

Appendix II

Questions asked at the time of recruitment:

1. Have you used the library before (services, resources, or facilities)?

2. What year of university are you in?

Focus Group Questions:

1. As a way of introduction, please tell us a bit about your program of study.

2. What are the types of library resources and services you have used to support your course work and research assignments?

3. Please talk about the path or approach you take when conducting research for a paper or assignment.

4. How did you learn about the library resources you might need to use?

5. Did you need to seek help at any point in the research process?
   Probe:
   - What did you need help with?
   - Where in the library did you go to get help?
   - Were you satisfied with the help you received?

6. Who are the people you seek help from when doing your library research?
   Probe:
   - How do you determine who to ask for help?

7. Have you ever used the Library 'How do I' pages or other help guides or tutorials available from the library?
   Probe:
   - Did you find them helpful?

8. Talk about your experience attending any in-class library instruction sessions, orientations, tours, or other information session as a means of learning about the library?

9. From your experience which of the approaches that you have taken to learn about library resources & services did you find most helpful and useful?

10. Based on your own preference and previous experiences, what method for learning about library resources and services are you most likely to use as you continue through the rest of your academic career?