Evidence Based Library and Information Practice

Article

Bridging the Gap: Understanding the Differing Research Expectations of First-Year Students and Professors

Meg Raven
Coordinator of Reference and Instructional Services
Mount Saint Vincent University Library
Halifax, Nova Scotia, Canada
Email: meg.raven@msvu.ca

Received: 3 May 2012 **Accepted**: 3 Aug. 2012

Abstract

Objective – The project sought to understand the research expectations of first-year students upon beginning university study, and how they differed from the expectations of their professors, in order to provide more focused instruction and work more effectively with professors and student support services.

Methods – A survey of 317 first-year undergraduate students and 75 professors at Mount Saint Vincent University in Halifax, Nova Scotia, was conducted to determine what each expected of first-year student research. Students were surveyed on the first day of the term in order to best understand their research expectations as they transitioned from high school to university.

Results – The gulf between student and professor research expectations was found to be considerable, especially in areas such as time required for reading and research and the resources necessary to do research. While students rated their preparedness for university as high, they also had high expectations related to their ability to use non-academic sources. The majority of professors believed that students are not prepared to do university-level research, do not take enough responsibility for their own learning, should use more academic research sources, and should read twice as much as students believe they should.

Conclusions – By better understanding differing research expectations, students can be guided very early in their studies about appropriate academic research practices, and librarians and professors can provide students with improved research instruction. Strategies for working with students, professors, and the university community are discussed.

Introduction

Librarians frequently hear from professors: "My students won't look beyond Google for sources"; "They copy indiscriminately without citing"; "They complain about reading anything longer than a screen." The lament is different from students: "I don't understand why I can't use Google or Wikipedia"; "What's the big deal about copying? Everyone does it"; "I just don't understand this long journal article – it's written for an expert in the field, not me."

Most academic librarians have lived these experiences. Those who choose to work in the field of library instruction likely spend a great deal of time considering students' and professors' differing expectations of student research. While a sample of some of the research carried out is offered below, none of this research addresses in detail students' research expectations upon beginning their university studies. Professors and librarians acknowledge implicitly that most students arrive at university unprepared to conduct academic research but that as part of the learning experience their expectations will shift and align with those of their professors; however, this paper proposes that both professors and librarians will be better prepared to help first-year students advance their learning if we identify and better understand the research expectations with which students arrive at university. Understanding exactly where students are beginning their studies will provide librarians with the information we need to create the most appropriate research instruction programs.

The primary goal of this study was to identify how first-year students' and professors' expectations of student research differ, and thus explore the role librarians can play by working with both groups to bridge this gap. To this end, a study was undertaken at Mount Saint Vincent University (MSVU), in Halifax, Nova Scotia, Canada, that investigated first-year university students' and professors' expectations of the academic research process as conducted by first-year students.

MSVU is a small, predominantly undergraduate university that specializes in liberal arts and selected professional studies. The student body numbers approximately 5,000, and the 80% female population reflects the University's heritage as a former female school. Embedded in the mission of the institution is a commitment to teaching and personalized education. All attempts are made to keep class size small, with 73% of classes enrolling fewer than 30 students (Mount Saint Vincent University, 2012). The university's strong commitment to collaborative teaching and learning provided an ideal arena to investigate differing research expectations and to propose concrete, yet collaborative faculty-librarian recommendations that could benefit students.

Literature Review

The volume of information literacy (IL) literature is considerable and contains research that attempts to explain and offer interventions for the introductory scenarios that describe the very different research expectations of professors and students. Much has been written

on university students' general research experiences, with the majority of contemporary work focusing on students' use of online sources. Van Scoyoc and Cason (2006), McClure and Clink (2009), Griffiths and Brophy (2005), and Thompson (2003) all provide useful insights into students' use of online resources for academic research and their inability to effectively evaluate the information they retrieve. These studies, coupled with work undertaken in the field of information-seeking behaviour (Head, 2008), suggest that students are more concerned with how much time research will take than with the accuracy of the information found (Weiler, 2005); that even though students have used abstracting and indexing databases, many will select only articles available in full text (Imler & Hall, 2009); and, finally, that many still prefer Google (Williamson, Bernath, Wright, & Sullivan, 2007).

Other studies have explored the issue of student satisfaction with their research experience (Belliston, Howland, & Roberts, 2007; Martzoukou, 2008) and their satisfaction with library services (Gardner & Eng, 2005; Harwood & Bydder, 1998; Voelker, 2006). Findings suggest that students are generally happy with their research and library experiences (Gardner & Eng, 2005) but often prefer the convenience of their own homes when conducting research (Vondracek, 2007).

Another important line of research has considered the role the university professor plays in students' learning to carry out academic research. Valentine (2001) looked at the disparity between students' understanding and experience of a research assignment and the goal of the assignment as described by the professor. Students typically evaluated an assignment based on the degree of effort required and the grades awarded, whereas the professor viewed a particular assignment based on its learning experience. McGuinness (2006) writes convincingly that there is "a tacit assumption among faculty that students would somehow absorb and develop the requisite knowledge and skills through the very process of preparing a written piece of coursework" (p. 577), and that becoming information literate simply requires participation in established academic research traditions such as research methods courses, computer skills classes, and library instruction. McGuinness goes on to describe faculty as believing that students will simply "pick up" information literacy skills, and if students are motivated to become information literate, they will learn. Little seems to have changed since Leckie (1996), in her classic article, criticized faculty who created assignments that required students to use skills which they had not yet developed.

The studies identified above, however, do not adequately address the issue of research expectations. With the exception of Scutter, Palmer, Luzeckyj, Burke da Silva, and Brinkworth (2011), Laskowski (2002), and Long and Tricker (2004), very little work has been done on the research expectations of students. (The bulk of student expectation research concentrates on students' more general academic and career expectations and aspirations.) Scutter et al. present important data on a range of first-year student expectations that includes how much time students expect to study for each course in which they are enrolled, but they do not address more detailed research expectations. Laskowski tackles the issue of divergent research expectations between students and professors by focusing on students' use of technology. Her study shows that discrepancies exist between how and when students and professors believe technology should be used in academic research: "many students believe that their professors do not appreciate or understand the wide variety and scope of material available online and that they devalue online resources because of format rather than content" (p. 305). Long and Tricker surveyed only undergraduate students, not faculty, in the United Kingdom to determine if their expectations of university-level research differed from their experiences. They found that

students' expectations do differ from their experiences, but not substantially.

The study described below proposes that with a better understanding of both students' and professors' expectations of first-year student research, some light can be shed on what sometimes feels like a widening gulf between students' research practices and professors' research expectations. It is proposed that by adding research expectations as a variable in the information literacy equation, librarians and professors will be better equipped to assist first-year students with their research.

Methods

Data collection involved the construction of two surveys: Student Expectations of the Research Process (Appendix A) and Faculty Expectations of Student Research (Appendix B). Both surveys were administered with the approval of the Mount Saint Vincent University Research Ethics Board. The student survey was designed to gather data on students' past research experiences and their expectations of university-level research. Students were asked very specific questions about past research experiences and sources they had used and about more general activities that could influence research behaviours, such as use of technology and time spent reading. The faculty survey was constructed to complement and compare with data gathered from the student survey.

The student survey was administered to first-year classes only. This choice was made for two reasons: first, these classes were most likely to contain recent high school graduates, making it possible to learn more about student research expectations upon beginning university; and second, it was necessary to identify, for professors, a specific group of students to base their own responses on when completing the faculty survey. Professors likely have very different research expectations of first-year and senior students. The first-year classes were chosen from across disciplines in an attempt to have broad student representation.

Eight introductory classes, with a total student count of 434, were surveyed on the first day of the 2008-09 academic year. This date was selected so that students would complete the survey before their professors had an opportunity to discuss with them their own research expectations. A librarian visited the classroom at a pre-arranged time and distributed hard-copy surveys that students could complete on the spot. A total of 317 student surveys (73% return rate) were completed.

Approximately 240 full-time and part-time professors at MSVU were contacted by email and invited to complete a web-based survey. A total of 75 faculty surveys (31% return rate) were completed.

Results

Demographics and Access to Information Communication Technology (ICT)

The survey asked students to provide basic demographic information about themselves. Eighty percent of respondents were female, 71% were in their first year of study, and 76% were age 20 or under. Over 95% identified themselves as full-time students, and their declared majors represented a cross-section of disciplines: 38% social science and humanities; 22% sciences; 37% professional studies; 3% with undeclared majors. Fifty-eight percent of students reported working while going to school, and of those, over 50% reported working more than 20 hours per week.

In order to better understand students' use of ICT, and how it may impact their use of research resources, students were asked to indicate which technologies they could easily access. Over 80% of students responded that they had ready access to a laptop, the Internet, cell phone, texting, or an iPod (or similar device). When

asked to indicate how much time they spent online in an average week during the past year participating in activities such as web browsing, social networking, email, or gaming, approximately 27% of students indicated they spent over 16 hours per week online; 39% spent 8-15 hours per week online; and 34% spent fewer than 7 hours per week online.

High School Experiences

Access to and use of technology are an important variable when considering how students may expect to conduct academic research. Also important to consider are the experiences these students may have had with previous research in high school. Students were asked to respond to questions about their use of the Google search engine and research databases while in high school, and also to indicate how much instruction they had received on citation and plagiarism. Specifically, students were asked if their teachers allowed them to use Google (or other search engines) to do research for assignments. Sixty-six percent indicated that they were allowed to use Google "all the time" and 21% indicated "most of the time." By contrast, only 12% of students indicated they used a research database "all the time" or "most of the time" to do research. Far more common were the students (51%) who reported that they "rarely" or "never" used a research database. It is important to note that in the province of Nova Scotia, where 77% of students completed high school, school boards have subscriptions to the EBSCO databases.

Students reported on levels of citation and plagiarism instruction while in high school. Sixty-four percent of students indicated that high school teachers discussed the issues of citation and plagiarism with them "all the time" or "most of the time." By contrast, when professors where asked how much instruction they believed students had received in high school, only 15% indicated they believed teachers spoke about these issues "all the time" or "most of the time." The majority of professors indicated that they believed citation and plagiarism were discussed only "sometimes" (40%) or "rarely" or "never" (41%).

Table 1
First-year Students' High School Research Experiences

	All the time	**Most of the time**	**Sometimes**	**Rarely/never**
Students' report that high school teachers allowed them to use Google for research assignments in high school	66%	21%	8%	3%
Students' use of databases for research assignments in high school	6%	6%	22%	51%
Students' report of teachers discussing citation and plagiarism in high school	28%	36%	19%	14%
Professors' belief that high school teachers discuss citation and plagiarism with students in high school	5%	10%	40%	41%

Note: Not all totals equal 100% as some respondents did not answer all questions.

Research Skills

Students and professors were asked to rank students' preparedness to do university-level research and to indicate who they feel is most responsible for first-year students' learning how to do research. Figures 1 and 2 show the discord between students' and professors' views in these areas.

In Figure 1, 70% of students reported that they were "very prepared" or "somewhat prepared" to do university-level research. This level greatly exceeds how their professors view their preparedness, with 87% indicating that students are "not very prepared" to conduct such research. Related to this is the question of who is responsible for students learning university-level research skills. It is interesting that while students rate their preparedness as high, Figure 2 shows that only 50% take personal responsibility for learning the necessary research skills. By contrast, 80% of professors indicate that the students themselves are most responsible for learning these skills.

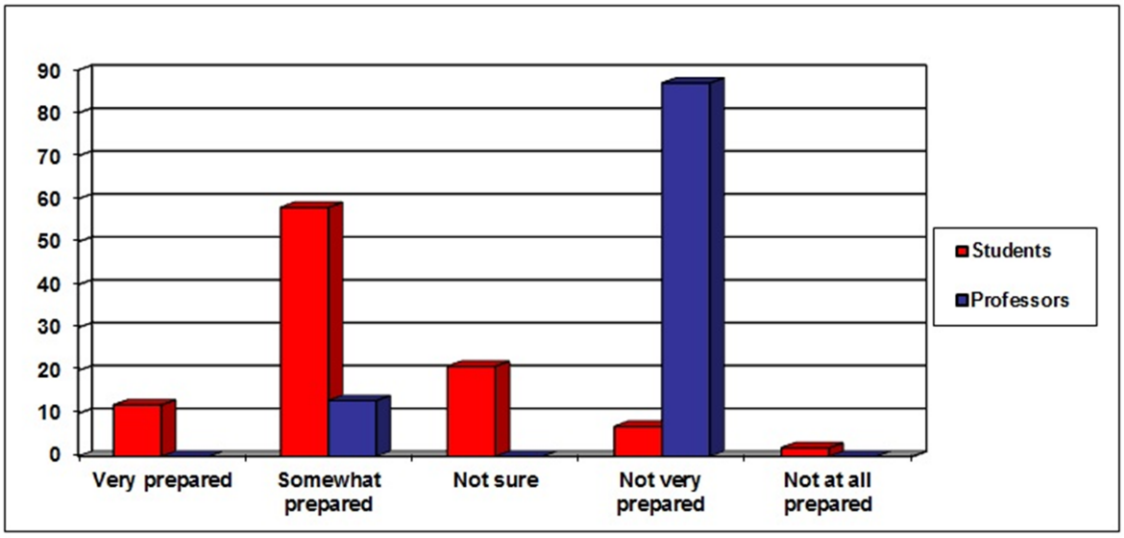

Figure 1
First-year students' preparedness to do university-level research

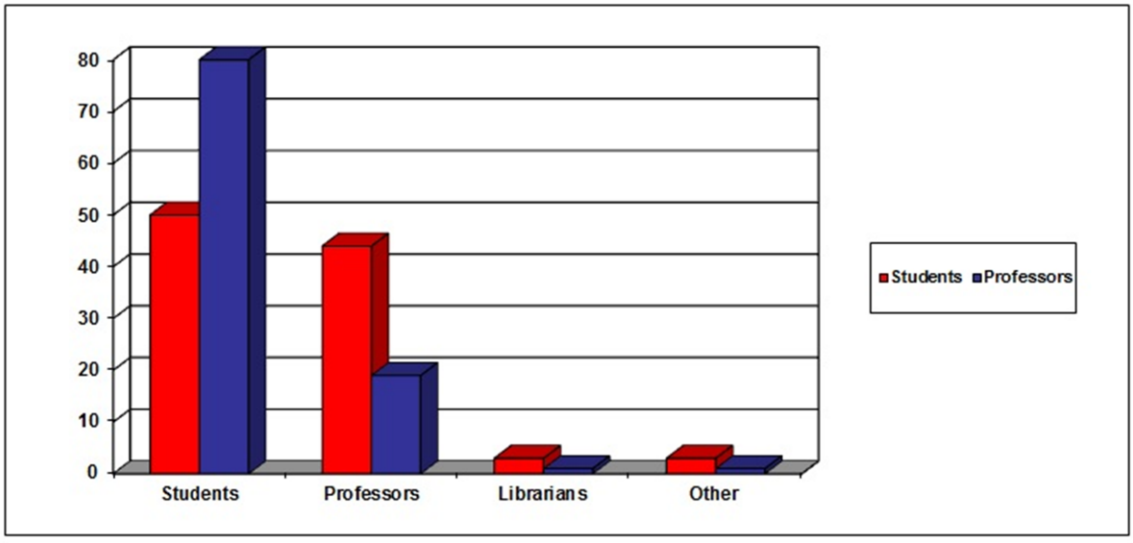

Figure 2
Who is most responsible for first-year students learning how to do research?

Students and professors were asked to rate students' general Internet searching skills and their academic research skills. Figures 3 and 4 show that students and professors view students' skills in these areas very differently.

In Figure 3, results found that almost 75% percent of students rated their general Internet searching skills as "excellent" or "good," whereas 84% of professors rated students' skill as only "average" or "poor." When students were asked to indicate how they rated their academic research skills, that is, the ability to find scholarly information, they were slightly less confident. As illustrated in Figure 4, 49% still categorized themselves as "excellent" or "good." Here professors were quite clear in their rating of students' research skills: a full 67% indicated skills were "poor" or "terrible."

Students were also asked to indicate who they believe has the best Internet searching skills, choosing from IT professionals, librarians, professors, and students. They ranked IT professionals as the best searchers 45% of the time, followed by librarians 37% of the time. Students ranked themselves third (12%) and professors last (6%).

Figure 3
Rating of first-year students' general Internet searching skills

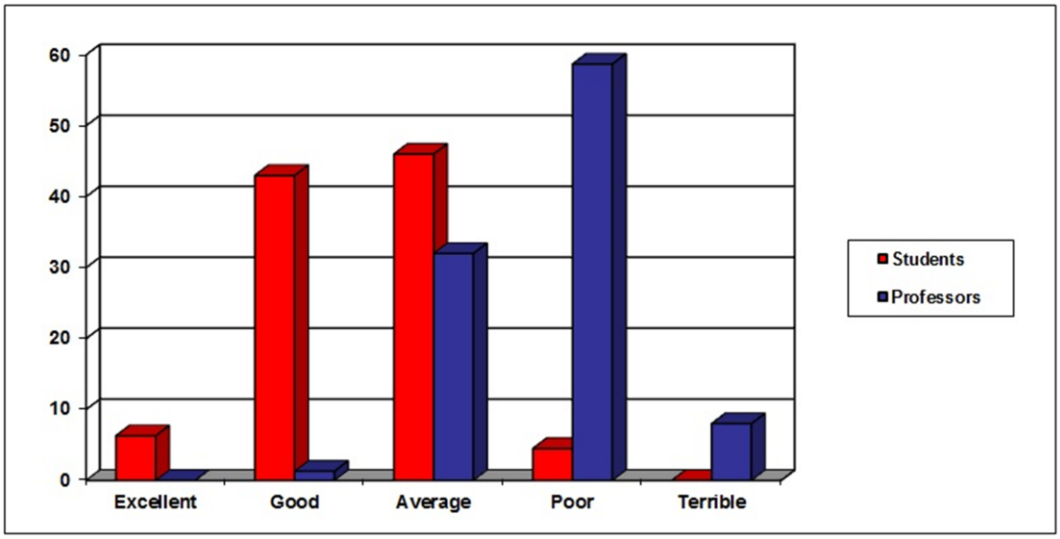

Figure 4
Rating of first-year students' academic research skills

Reading and Research

Much has been written about the decline in reading (see Jameson, 2007; Reedy, 2007; or Salter and Brook, 2007, for discussions of the decline in reading among college students). Given the importance of reading in higher education, the current study sought to better understand how much time first-year students had spent reading in the past year, and how much time they expected to dedicate to reading to keep up with their school work and research during the upcoming year. Professors were also asked to indicate how much time they expected first-year students to spend reading. Figure 5 illustrates that there is a considerable gulf between how much time students expected to dedicate to reading and what professors expected of them in this regard.

Column one illustrates students' reading experiences during the last year. On average they reported reading approximately 7.8 hours per week – just a little over one hour per day. Column two illustrates students' expected reading during the coming year. In this case, students were asked to indicate, regardless of how much they read in the past year, how much they expected to read in the coming year. Students indicated that they expected to read more, predicting on average 9.8 hours of reading per week. Column three illustrates professors' expectations of student reading. Even though students indicated that they would be reading more than in the past, their expectations did not approach professors' reading expectation of, on average, 14.9 hours per week.

Students and professors were then asked to consider how long they anticipated it would take students to conduct the necessary research for a 10-page paper or assignment in an introductory course. Figure 6 shows that again we see divergent research expectations between students and professors.

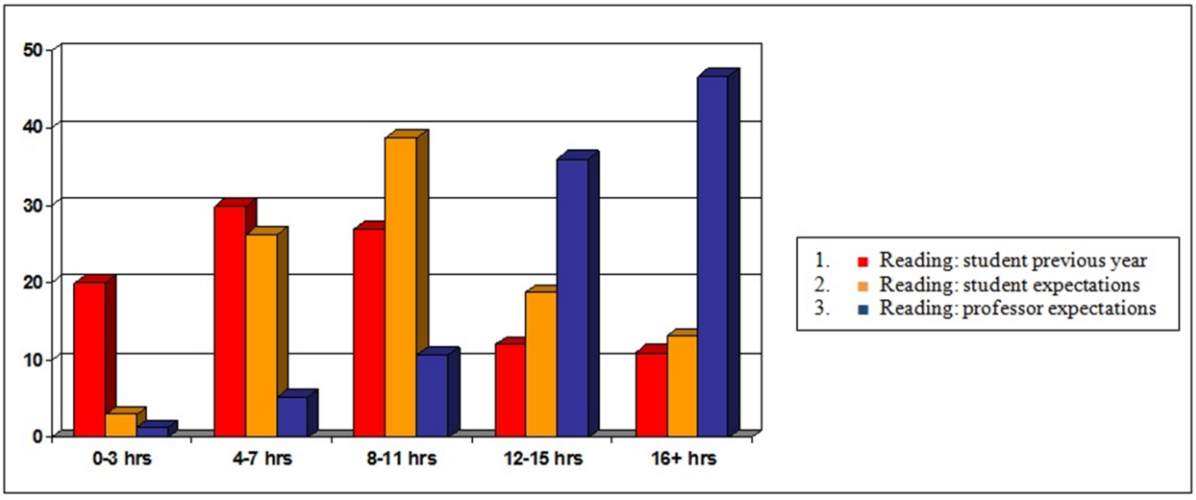

Figure 5
First-year students' reading experiences and expectations (hours/week)
Note: "Reading" was defined for students as any time spent reading in print or online format in order to accommodate various reading media but did not include time spent emailing, texting, gaming, social networking, or general web browsing.

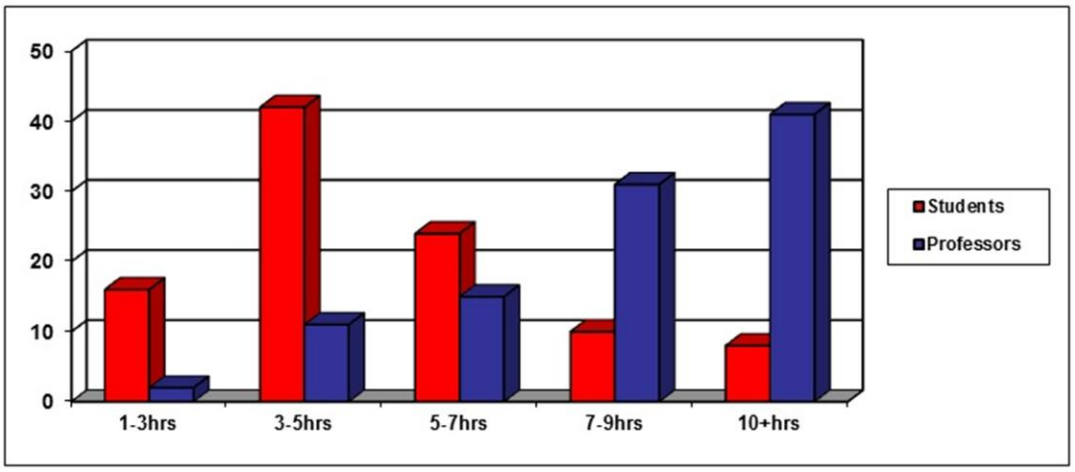

Figure 6
Time required to research a 10-page paper/assignment

Table 2
Resources Students Expect to Use and Sources Professors Expect/Want Students to Use for Academic Research

First-Year Students' Top 5 Research Resources		**Professors' Top 5 Research Resources (for first-year student use)**	
1	Books from home library	1	Journals
2	Google	2	Library Website
3	Newspapers	3	Books from home library
4	Encyclopedias	4	Library catalogue
5	Library Website	5	Databases

Fifty-eight percent of students indicated it would take them less than 5 hours to research such a paper or assignment; by contrast 41% of professors indicated they expected students to spend at least twice that amount of time.

Appropriate Research Resources

In an attempt to better understand how first-year students and professors value the Google search engine or other similar search engines as an academic research tool, students were asked to indicate how much research material they expected to locate by carrying out a Google search, and professors were asked to indicate how much research material they expected/wanted students to find by searching Google. The majority of professors (73%) indicated that Google was an appropriate academic research tool for locating less than 20% of research material. In contrast, 70% of first-year students expected to make use of Google to locate between 50% and 100% of their research material.

To understand what other resources students expected to use for academic research, and the resources professors expected/wanted students to use, both groups were asked to select from a list of over 40 electronic and print resources that they expected to use, or expected students to use, when carrying out academic research. Table 2 summarizes the top five resources, ranked by

frequency of selection as an expected research resource.

Getting Help

If an assignment presented challenges, students were asked to consider where they would go for help, and professors were asked where they expected first-year students to seek help. Figure 7 illustrates that students and professors both see the professor as the key assignment authority, followed closely by librarians. Both groups also see fellow classmates as a good resource when help is needed. An interesting discrepancy found here is that students consider their friends almost as good a source for research help as librarians. Seventy-three present of students will seek help from a librarian and 67% will go to friends. Professors discount the value of input from friends (10%) and family (5%), whereas students expect to make considerable use of these groups.

Discussion

High School Research Experiences

The data presented here suggest that most first-year students entering university directly from high school developed their research skills in an environment where Google was the primary research tool. While the data do not tell us whether teachers advocated for the use of research databases, they do tell that students report rarely using them. High schools students look upon their teachers as research authorities. With Google identified as the research tool of choice, more focused and consistent information literacy work needs to be done in teacher education programs (Kovalik, Jensen, Scholman, & Tipton, 2010), and school boards must reinvest in school library programs and teacher-librarian positions (Gunn & Hepburn, 2003; Heycock, 2003).

One interesting, yet positive, finding of this study is that students clearly remembered

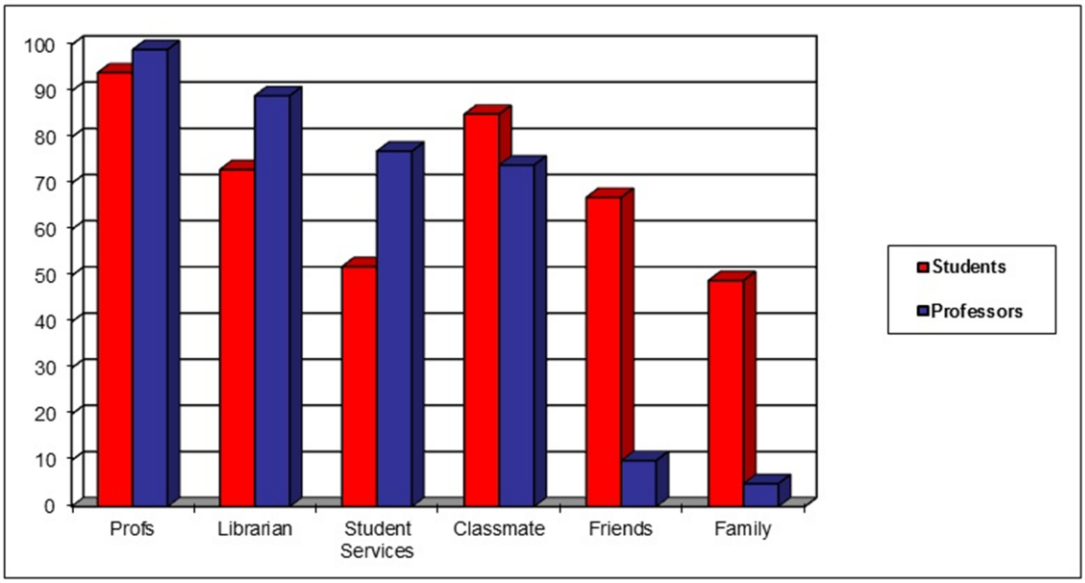

Figure 7
Where first-year students expect to seek research assistance, and where professors want students to seek research assistance

receiving a fair amount of instruction on citation and plagiarism during high school. Like many professors, librarians are frequently confronted with students who seem unaware of conventional citation practices, and who do not have a good grasp of the concept of plagiarism. While it appears teachers are stressing the importance of these concepts, more focused research is required to uncover why students are not retaining what they suggest they have learned. Perhaps students are not getting enough practice citing and writing, or perhaps there is not consistent instruction across high school classrooms. Chao, Wilhelm, and Neureuther (2009) provide strong evidence that students' ability to cite, paraphrase, and avoid plagiarism improves with practice.

In universities with teacher education programs or links to high schools, there is still much work that can be done. Current and future teachers will have the greatest impact on the research abilities of first-year students, and so it is imperative that librarians make them aware that students entering university continue to struggle with citation and plagiarism, and many are unfamiliar with the academic sources found in research databases. Academic librarians who are able to partner with high school librarians will find the results of the Oakleaf and Owen study (2010) very helpful. It describes a successful collaboration involving syllabi review that helped prepare senior high school students for university-level research.

Librarians with subject responsibility for education may wish to consider approaching education curriculum groups to advocate for more integrated instruction in the areas of citation and plagiarism and in the use of databases and Google. In addition, schools of education often provide in-service training for current teachers. MSVU recently offered a well-received librarian presentation as part of an in-service session. Topics covered included the identification of professional literature that outlines the challenges faced by many first-year university students and the sharing of first-year students' initial research experiences.

The First-year Millennial Student

This study corresponds with the results of work done by Englander, Terregrossa, and Wang (2010), and Miller (2007), in which college students reported spending, on average, 14.3 hours and 17 hours per week online, respectively. The current research also confirms what a number of authors (Abram, 2007; Becker, 2009; Sweeney, 2012; Twenge, 2006) have written about Generation Y or Millennial students' high levels of self-confidence: students are arriving at university believing they are quite prepared to conduct university-level research, but only half are taking personal responsibility for learning how to do such research. By contrast, most professors rate first-year students as not very prepared to do research and believe they must take personal responsibility for their own learning. These differing expectations need to be addressed with students early in their academic programs, and the idea of personal responsibility reinforced throughout their studies.

While professors can identify their expectations for what students learn about research in the classroom, and the learning students are expected to pursue on their own by seeking out library research instruction and through independent activity (e.g., library tutorials), librarians have less direct access to students. This is an area where a more focused collaboration between professors and librarians could be nurtured. At MSVU, when setting up instruction workshops with faculty, librarians have begun to ask explicitly what, if any, research skills faculty will be teaching in their classes and what students are expected to do on their own. This lets the librarians know where we fit in the equation and where attention should be focused. The information gleaned is useful regardless of the instruction format (50-minute one-shot or multi-part seminar). While still at the informal information-gathering stage,

there are plans to pursue a more detailed study that considers where various university constituents (i.e., faculty, student support services, and the international student centre) expect students to learn research skills.

Mounce (2010) provides a thorough review of the faculty-librarian collaboration literature as it relates to information literacy and the benefits afforded students. Anthony (2010) also reviews this literature but with the added depth of providing tangible examples of programs in operation. What both reviews are lacking, however, are details on broadening the types of material covered by instruction librarians. These librarians are often drawn into the classroom to discuss the latest research tools when their time may be better spent initially on non-resource instruction addressing research expectations. Instead of immediately launching into database selection and search strategies, dedicating time to a discussion of the basics of research, the time involved, the reading requirements, and the careful thought and preparation required may help students to understand that research is an involved process. Taking time for discussion is important given how many students reported how little time they expected to spend on the research components of their assignments. Preparing this kind of presentation with the professor ahead of time will allow students to hear from the librarian and from their professor, in tandem, that academic research takes time to learn and carry out. Students must be encouraged to accept responsibility for this complex learning (Ferlazzo, 2011). Many librarians have seen assignments that require that a specified number of resources be consulted; we need to encourage professors to also provide details on how long the assignment should take students to research and write up.

One surprising piece of evidence collected in this study has to do with how students rated their own Internet searching skills. Students consistently ranked themselves third, behind IT staff and librarians. Professors were ranked last in Internet searching skills, which could lead to students being hesitant in going to their professors for some forms of research help. A study by Gunn and Hepburn (2003), and reinforced here, suggests that high school students are most comfortable seeking help from friends and classmates rather than from teachers. What librarians and professors should take away from this finding, especially in universities where library reference departments share physical space with an information or learning commons, is that students may see computing IT staff as most knowledgeable in Internet searching and they may opt to approach these staff members first or exclusively. Alternatively, some students simply may not differentiate between the staff working in a learning commons (Bickley, 2011) and may seek help from the first available person. At MSVU we encourage a lot of communication between technical staff and librarians to ensure that research questions are directed to the appropriate person. Short in-house training sessions or providing staff with the opportunity to job-shadow in other public service areas provides everyone with a better understanding of which questions should be handled where.

Reading and Research

The data gathered in this study supports the 2007 report *To Read or Not to Read*, which details a general decline in reading and found that 39% of college freshmen did no reading for pleasure and 26% read no more than one hour per week. The report provides strong evidence linking reading to literacy scores and it cites "written communication" as the skill most lacking by employers hiring both high school and college graduates. The current study shows a large gap between student and professor expectations surrounding reading. A full 83% of professors believe students need to be reading at least 12 hours per week, whereas only 31% of students reported that they expected to read this much. Gilbert and Fister (2011) discuss the many academic benefits of pleasure reading and also explain that academic reading is quite difficult: students "often need help in learning how to do

'close' or in-depth analytical reading" (p. 475). Building into information literacy workshops a statement or acknowledgement that the ability to read critically is challenging and takes time may help students be better prepared to tackle more advanced reading and not to shy away from lengthier journal articles. Librarians at MSVU are beginning to include in instruction workshops explicit statements informing students that the type of information they find in academic databases will usually require in-depth analytical reading. Explaining that it is common to have to read an article more than once and often with the help of a dictionary may normalize the experience for students. This is also an ideal time to remind them that there are academic support services available on campus if they feel they are struggling with this type of work.

Related to the findings on reading, and the lack of time students expect to take conducting research, is the matter of the resources they expect to use when conducting research. This is another category in which student and professor expectations varied considerably. While the list of research resources generated by the professors contains common academic research tools (journals, books, catalogues, databases), students appear to have selected sources with which they are familiar, or perhaps those they used in high school (books, Google, newspapers, encyclopedias). One has to wonder, though, if rather than selecting the research tools they expected to use, students instead selected resources they thought we would want them to use when researching. Follow-up research will be necessary to better understand these findings. It might be expected that students would use books and Google, but also anticipated on the list might be Wikipedia, electronic books, and general Websites. The marked absence of newer (Web 2.0) research technologies was common to both students' and professors' lists: both surveys asked respondents if they expected students to use blogs, podcasts, RSS feeds, and videos for research purposes, but all were notably absent. Neither group indicated that these were resources they expected to use for academic research. Librarians preparing instructional sessions should not only seek guidance from professors as to what resources they want their students consulting, but we can also provide guidance on the diverse variety of tools available that can add depth to students' research experiences.

Working with Students

Faulty-librarian collaboration has always been central to library instruction (Mounce, 2010) and this study supports the idea that it is increasingly important that librarians and professors work together to deliver a consistent message to students. Especially during their first year, students need to hear a research refrain that is campus-wide and includes student academic support services (Love & Edwards, 2009).

Coupled with delivering a strong consistent research message is the practice of reminding students that while they are not expected to know how to do scholarly research when they arrive at university, they are expected to learn new ways of doing this academic work by embracing new research tools. One specific way librarians can focus their work is by acknowledging the positive. We must validate for students their past research experiences. Students do not arrive at university as "blank research slates": they have been Googling their research questions for years. Magolda (2012) discusses the concept of a learning partnership whereby professors are encouraged to "listen more carefully to students' thinking and recognize that their experiences often prompt different, yet valuable interpretations" (p. 35). Librarians could also explore this teaching method as another way to help students develop their research skills. If librarians and professors are overly critical of past research practices, we risk discouraging these novice academic researchers. We can encourage students to join the research dialogue by asking them to describe their own research experiences and

expectations. Giving positive feedback when we see that appropriate sources are being used, and giving suggestions for alternatives when an inappropriate source is selected, can help students refine expectations early in the research process. We can reinforce that Google is the perfect tool for locating food guide standards, for example, but it is not an acceptable academic source for critiques of the standards. Each discipline and course needs to have such a relevant example at its fingertips when a teachable moment arrives. Exploring innovative ways to initiate these dialogues with students, and the outcomes, is another area for future research.

Working with Professors and Cross-campus Support Services

Working with professors is both rewarding and challenging. A number of authors (Anthony, 2010; McGuinness, 2006; Mounce, 2010) discuss the challenges librarians have engaging some faculty in information literacy initiatives. However, success stories are also available in the literature : Corso, Weiss, and McGregor (2010) describe the embedding of IL skills by a team of librarians, writing program coordinators, and professors; Kenedy and Monty (2011) discuss how student learning is enhanced as a result of a librarian and faculty member collaboration that ties together information literacy, research skills, and other essential post-secondary skills; Kobzina (2010) describes partnering with faculty in the teaching of a specific course that addresses research skills for specialized subject areas. These examples illustrate that information literacy instruction can be broad-based and very rich. Most instruction librarians are more than happy to partner with professors on curriculum or assignment review (Brown & Kingsley-Wilson, 2010) to determine how information literacy can be addressed more explicitly. At MSVU, librarians have begun to actively invite faculty to discuss syllabi and assignments with us regardless of whether or not we visit their classrooms. Many professors seemed hesitant to seek out this kind of input when they were not willing to provide dedicated classroom time for library instruction. While we would prefer to also be invited to give an IL workshop, we recognize that sometimes having access to syllabi can provide students with basic yet significant research information. One professor who had never seen value in having a librarian present during class time did agree to include library research information and a subject librarian's contact information on the course syllabus. It was encouraging to see that reference traffic increased slightly in this area. This is a very small success story, but when we see how unprepared many first-year students are for university research, we decided that any contact with students – even only through an email – was better than no contact.

While most librarians will actively seek out opportunities to engage professors at their home institution, librarians can also strive to get their messages out in alternate venues, for example, discipline-specific teaching journals and non-librarian conferences. Engaging professors in their own domains may remind those who have partnered with librarians in the past to reconnect, and it may convince others of the teaching and research abilities of their librarian colleagues. At MSVU, librarians take part in cross-campus research seminars where faculty and librarians are invited to present current research projects. Teaching faculty members have been consistently interested in any work on student learning.

While much has been written about librarian collaboration with faculty, far less work has been done on librarians partnering with other cross-campus support services (Hollister, 2005). A few studies (Love & Edwards, 2009; Swartz, Carlisle, & Uyeki, 2007) have more recently provided an excellent introduction to the mechanics of this type of collaboration and provide evidence that there is much to be gained when libraries partner with student support services. A disappointing result of the current study was the finding that only half of first-year

students and 75% of professors reported that they expected students who need help to take advantage of student support services such as writing centres.

In order to broaden library instruction services, more libraries may want to consider partnering with student support services such as writing and international student centres. Walter and Eodice (2005) caution that it is important for librarians to work with colleagues to find "common language through which learning objectives can be defined" (p. 220). Librarians, who are used to partnering with faculty, may be unfamiliar with the learning objectives of student support services. It is incumbent upon us to not just take IL needs to student support services, but to understand the values and goals of these units and whenever possible try to support their initiatives without duplicating them. As described earlier, a new initiative has MSVU librarians explicitly linking the concept of in-depth reading to the retrieval of scholarly articles. Providing a referral to a support service is always helpful, but introducing the concept of in-depth reading in a way that complements the instruction students get in a support unit just makes sense. Students will perceive that there is a coordinated effort that may help them be more successful. MSVU librarians are trying to become better informed about the office of Students Services, and as a result have been invited to sit on student retention and student experience committees. While little of this work links directly to our initiatives in IL, librarians feel better informed about support services for students. We are optimistic that the time we put in now will benefit some of our own instruction initiatives in the future.

One other area in which librarians should direct their attention relates to representation on committees that give them access to program and curriculum design, which will put them in a position to provide input on research and IL skill development (Anthony, 2010). Such forums often allow administrators and student support staff to hear, sometimes for the first time, about some of the gaps in research expectations described in this study. The better everyone understands the unpreparedness of many first-year students, the better we will be at bridging this gap and coordinating efforts to support students' adjustment to university-level research.

Conclusion

This study provides evidence that the research expectations of first-year students and professors vary considerably. Students arrive at university believing that they have better online skills than their professors and that they are prepared to do university-level research; they are often overconfident about their research skills and therefore may not ask for help; they expect that it will take less time to do research than is in fact the case; and many are reading less than is likely necessary to grasp a subject in depth. While some professors will tell librarians that they know these facts, many may be struggling with what to do with the knowledge. Librarians who work closely with both students and professors are afforded the unique view of both worlds and are ideally positioned to provide not only research instruction, but research insight to students, professors, and the wider university community.

An unexpected outcome of this study is the acknowledgement that not only is the faculty-librarian relationship significant in students' research development, but that there is also an important need for broad cross-campus collaboration. This article draws attention to the idea that students deserve to get consistent research messages across campus. The more we work with faculty and academic support services, the more we are able to provide integrated, coordinated instruction. When there is a strong campus-wide voice addressing research expectations, librarians can work with students with greater certainty.

This study covers many topics at a general level and raises many further questions. There is a

need for more focused work in a number of areas, specifically relating to students' understanding of citation and plagiarism as they transition from high school to university, the sources students expect to consult for academic research purposes, and the broadening of library instruction portfolios to include instruction on critical thinking skills such as in-depth reading.

References

Abram, S. (2007). Millennials: Deal with them! Part I. *School Library Media Activities Monthly, 24*(1), 57-58.

Anthony, K. (2010). Reconnecting the disconnects: Library outreach to faculty as addressed in the literature. *College & Undergraduate Libraries*, 17(1), 79-92. doi:10.1080/10691310903584817

Baxter Magolda, M. B. (2012). Building learning partnerships. *Change: The Magazine of Higher Learning, 44*(1), 32-38. doi: 10.1080/00091383.2012.636002

Becker, C. H. (2009). Student values and research: Are millennials really changing the future of reference and research? *Journal of Library Administration, 49*(4), 341-364.

Belliston, C. J., Howland, J. L., & Roberts, B.C. (2007). Undergraduate use of federated searching: A survey of preferences and perceptions of value-added functionality. *College & Research Libraries, 68*(6), 472-486.

Bickley, R. & Corrall, S. (2011). Student perceptions of staff in the Information Commons: A survey at the University of Sheffield. *Reference Services Review, 39*(2), 223-243. doi:10.1108/00907321111135466

Brown, C., & Kingsley-Wilson, B. (2010). Assessing organically: Turning an assignment into an assessment. *Reference Services Review*, 38(4), 536-556. doi:10.1108/00907321011090719

Chao, C.-A., Wilhelm, W. J., & Neureuther, B. D. (2009). A study of electronic detection and pedagogical approaches for reducing plagiarism. *Delta Pi Epsilon Journal, 51*(1), 31-42.

Corso, G. S., Weiss, S., & McGregor, T. (2010). Information literacy: A story of collaboration and cooperation between the writing program coordinator and colleagues 2003-2010. Paper presented at the National Conference of the Council of Writing Program Administrators (CWPA), Philadelphia, PA. Retrieved 21 Aug. 2012 from http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED529197

Englander, F., Terregrossa, R. A., & Wang, Z. (2010). Internet use among college students: Tool or toy? *Educational Review, 62*(1), 85-96. doi:10.1080/00131910903519793

Ferlazzo, L. (2011). How do you help students see the importance of personal responsibility? *Helping students motivate themselves: Practical answers to classroom challenges* (pp. 14-28). NY: Eye on Education.

Gardner, S., & Eng, S. (2005). What students want: Generation Y and the changing function of the academic library. *portal : Libraries and the Academy, 5*(3), 405-420.

Gilbert, J., & Fister, B. (2011). Reading, risk, and reality: College students and reading for pleasure. *College & Research Libraries, 72*(5), 474-495.

Griffiths, J. R., & Brophy, P. (2005). Student searching behavior and the web: Use of

academic resources and Google. *Library Trends, 53*(4), 539-554.

Gunn, H., & Hepburn, G. (2003). Seeking information for school purposes on the Internet. *Canadian Journal of Learning and Technology, 29*(1). Retrieved 21 Aug. 2012 from http://hdl.handle.net/10515/sy5b853w9

Harwood, N., & Bydder, J. (1998). Student expectations of, and satisfaction with, the university library. *Journal of Academic Librarianship, 24*(2), 161-171.

Haycock, K. (2003). *The crisis in Canada's school libraries: The case for reform and re-investment*. Executive summary. Toronto, ON: Association of Canadian Publishers. Retrieved 21 Aug. 2012 from http://www.accessola.com/data/6/rec_docs/ExecSummary_Ha_E1E12.pdf

Head, A. J. (2008). Information literacy from the trenches: How do humanities and social science majors conduct academic research? *College & Research Libraries, 69*(5), 427-445.

Hollister, C. (2005). Bringing information literacy to career services. *Reference Services Review, 33*(1), 104-111. doi:10.1108/00907320510581414

Imler, B., & Hall, R. A. (2009). Full-text articles: Faculty perceptions, student use, and citation abuse. *Reference Services Review, 37*(1), 65-72.

Jameson, D. A. (2007). Literacy in decline: Untangling the evidence. *Business Communication Quarterly, 70*(1), 16-33.

Kenedy, R., & Monty, V. (2011). Faculty-librarian collaboration and the development of critical skills through dynamic purposeful learning. *Libri: International Journal of Libraries & Information Services, 61*(2), 116-124. doi:10.1515/libr.2011.010

Kobzina, N. G. (2010). A faculty-librarian partnership: A unique opportunity for course integration. *Journal of Library Administration, 50*(4), 293-314. doi:10.1080/01930821003666965

Kovalik, C. L., Jensen, M. L., Schloman, B., & Tipton, M. (2010). Information literacy, collaboration, and teacher education. *Communications in Information Literacy, 4*(2), 145-169. Retrieved 21 Aug. 2012 from http://www.comminfolit.org

Laskowski, M. S. (2002). The role of technology in research: Perspectives from students and instructors. *portal: Libraries and the Academy, 2*(2), 305-319.

Leckie, G. J. (1996). Desperately seeking citations: Uncovering faculty assumptions about the undergraduate research process. *Journal of Academic Librarianship, 22*(3), 201-208.

Long, P., & Tricker, T. (2004, Sept.). Do first year undergraduates find what they expect? Paper presented at the British Educational Research Association Annual Conference, University of Manchester. Retrieved 21 Aug. 2012 from http://www.leeds.ac.uk/educol/documents/00003696.doc

Love, E., & Edwards, M. B. (2009). Forging inroads between libraries and academic, multicultural and student services. *Reference Services Review, 37*(1), 20-29. doi:10.1108/00907320910934968

Martzoukou, K. (2008). Students' attitudes towards web search engines - increasing appreciation of sophisticated search strategies. *Libri: International Journal of*

Libraries & Information Services, 58(3), 182-201.

McClure, R., & Clink, K. (2009). How do you know that? An investigation of student research practices in the digital age. *portal: Libraries & the Academy, 9*(1), 115-132.

McGuinness, C. (2006). What faculty think-exploring the barriers to information literacy development in undergraduate education. *Journal of Academic Librarianship, 32*(6), 573-582. doi:10.1016/j.acalib.2006.06.002

Miller, M. J. (2007). Internet overuse on college campuses: A survey and analysis of current trends. In Y. Inoue (Ed.), *Technology and diversity in higher education: New challenges* (pp. 146-163). Hershey, PA: Information Science Publishing.

Mounce, M. (2010). Working together: Academic librarians and faculty collaborating to improve students' information literacy skills: A literature review 2000-2009. *Reference Librarian*, 51(4), 300-320. doi:10.1080/02763877.2010.501420

Mount Saint Vincent University. Office of Institutional Analysis. *Common university data*. Retrieved 25 June 2012 from http://www.msvu.ca/en/home/aboutus/home/institutionalanalysis/commonuniversitydata/default.aspx

Oakleaf, M., & Owen, P. L. (2010). Closing the 12-13 gap together: School and college librarians supporting 21st century learners. *Teacher Librarian, 37*(4), 52-58.

Reedy, J. (2007). Cultural literacy for college students. *Academic Questions, 20*(1), 32-37.

Salter, A., & Brook, J. (2007). Are we becoming an aliterate society? The demand for recreational reading among undergraduates at two universities. *College & Undergraduate Libraries, 14*(3), 27-43. doi:10.1300/J106v14n03&#x201702

Scutter, S. D., Palmer, E., Luzeckyj, A., Burke da Silva, K., & Brinkworth, R. (2011). What do commencing undergraduate students expect from first year university? *The International Journal of the First Year in Higher Education, 2*(1), 8-20. doi:10.5204/intjfyhe.v2i1.54

Swartz, P. S., Carlisle, B. A., & Uyeki, E. C. (2007). Libraries and student affairs: Partners for student success. *Reference Services Review, 35*(1), 109-122. doi:10.1108/00907320710729409

Sweeney, R. T. (2012). *Millennial behaviors and higher education focus group results: How are millennials different from previous generations at the same age?* Retrieved 21 Aug. 2012 from http://library1.njit.edu/staff-folders/sweeney/Millennials/Millennial-Summary-Handout.doc

Thompson, C. (2003). Information illiterate or lazy: How college students use the web for research. *portal: Libraries and the Academy, 3*(2), 259-268.

To read or not to read: A question of national consequence (2007). Washington, DC: Office of Research & Analysis, National Endowment for the Arts. Retrieved 21 Aug. 2012 from http://www.nea.gov/research/ToRead.pdf

Twenge, J. M. (2006). *Generation me: Why today's young Americans are more confident, assertive, entitled – and more miserable than ever before*. NY: Free Press.

Valentine, B. (2001). The legitimate effort in research papers: Student commitment versus faculty expectations. *Journal of Academic Librarianship, 27*(2), 107-115.

Van Scoyoc, A. M., & Cason, C. (2006). The electronic academic library: Undergraduate research behavior in library without books. *portal: Libraries & the Academy, 6*(1), 47-58.

Voelker, T. J. E. (2006). The library and my learning community: First year students' impressions of library services. *Reference & User Services Quarterly, 46*(2), 72-80.

Vondracek, R. (2007). Comfort and convenience? Why students choose alternatives to the library. *portal: Libraries and the Academy, 7*(3), 277-293.

Walter, S., & Eodice, M. (2005). Meeting the student learning imperative: Supporting and sustaining collaboration between academic libraries and student services programs. *Research Strategies, 20*(4), 219-225. doi:10.1016/j.resstr.2006.11.001

Weiler, A. (2005). Information-seeking behavior in generation Y students: Motivation, critical thinking, and learning theory. *Journal of Academic Librarianship, 31*(1), 46-53.

Williamson, K., Bernath, V., Wright, S., & Sullivan, J. (2007). Research students in the electronic age: Impacts of changing information behavior on information literacy needs. *Communications in Information Literacy, 1*(2), 47-63.

Appendix A

Student Expectations of the Research Process

1. Age: _____

2. Sex: ☐ Female
   ☐ Male

3. In what year did you graduate from high school?

4. Where are you from?

   ☐ Nova Scotia
   ☐ Another Canadian province:
   ☐ Somewhere else in the world: _____

5. In what year of study are you (include time spent at other universities)?
   ☐ 1st year
   ☐ 2nd year
   ☐ 3rd year
   ☐ 4th year
   ☐ More than 4 years
   ☐ Other

6. Major:
   (If undecided, give as much information as possible: Arts, Social Science, Science, Professional Studies.)

7. Are you a full-time (3+ courses) or part-time (1-2 courses) student?
   ☐ Full-time
   ☐ Part-time

8. Are you working at a job while going to school?
   ☐ Yes _____ hours per week.
   ☐ No

9. Are you volunteering anywhere while going to school?
   ☐ Yes _____ hours per week.
   ☐ No

10. Which of the following do you own or have easy access to? Check all that apply.
    ☐ Laptop computer
    ☐ Desktop computer
    ☐ Internet: high-speed (fast connection)
    ☐ Internet: modem access (slow connection over phone line)
    ☐ Wireless Internet
    ☐ Cell phone
    ☐ Cell phone with text messaging

- ☐ Blackberry or similar PDA
- ☐ Ipod/MP3 player (or similar device)
- ☐ Gaming consoles or devices

HIGH SCHOOL RESEARCH: Q. 11-13

The next three (3) questions ask you to reflect on your experiences in high school. If you have been out of high school for too long or can't remember, skip to Question 14.

11. In high school did your teachers allow you to use Google (or other search engines) to do research for your assignments?
    - ☐ Yes, all the time
    - ☐ Most of the time
    - ☐ Sometimes
    - ☐ Rarely
    - ☐ Never
    - ☐ Not sure

12. In high school did you ever use a research database (such as EBSCO's Academic Search) to do research?
    - ☐ Yes, all the time
    - ☐ Most of the time
    - ☐ Sometimes
    - ☐ Rarely
    - ☐ Never
    - ☐ I'm not sure what a databases is

13. In high school, when teachers gave out an assignment, did they discuss the issues of citation and plagiarism with you?
    - ☐ Yes, all the time
    - ☐ Most of the time
    - ☐ Sometimes
    - ☐ Rarely
    - ☐ Never
    - ☐ I'm not sure what citation and plagiarism are

14. During the last year, approximately how many hours per week did you spend reading books, magazines, journals and/or newspapers for school, work and/or pleasure? Reading could be in print or online, but shouldn't include general web browsing, e-mail or gaming.

    - ☐ 0-3 hours per week
    - ☐ 4-7 hours per week
    - ☐ 8-11 hours per week
    - ☐ 12-15 hours per week
    - ☐ 16-19 hours per week
    - ☐ 20+ hours per week

15. During the last year, approximately how many hours per week did you spend online, e.g., general web browsing, Facebook, e-mail, gaming, etc.

- ☐ 0-3 hours per week
- ☐ 4-7 hours per week
- ☐ 8-11 hours per week
- ☐ 12-15 hours per week
- ☐ 16-19 hours per week
- ☐ 20+ hours per week

16. Do you feel prepared to do university-level research?
    - ☐ Yes, I feel very prepared
    - ☐ I am somewhat prepared
    - ☐ I'm not sure
    - ☐ I don't think I'm very prepared
    - ☐ No, I know I'm not prepared

17. How would you rate your academic research skills? (Your ability to find academic or scholarly information.)
    - ☐ Excellent - I almost always find what I'm looking for
    - ☐ Good - I usually find what I need
    - ☐ Average - sometimes it takes me awhile to find something useful
    - ☐ Not very good - I'm usually disappointed with my results
    - ☐ Terrible - I never find what I need

18. Who do you think is responsible for you learning the skills necessary to succeed at carrying out university-level research?
    Rank the following in order from 1 (most responsible) - 6 (least responsible)

    ___ Professors
    ___ Librarians
    ___ Me
    ___ Student Affairs (through their academic support programs)
    ___ My friends or family
    ___ Other students

19. What percentage of your research material do you expect to find using Google?
    - ☐ 0-20%
    - ☐ 21-40%
    - ☐ 41-60%
    - ☐ 61-80%
    - ☐ 81-100%

20. You have just been assigned a 10-page paper/assignment for an introductory course. Approximately how long would you spend on the research component of this assignment (before you start the real writing)?
    - ☐ 1-3 hours
    - ☐ 3-5 hours
    - ☐ 5-7 hours
    - ☐ 7-9 hours

☐ 10+ hours

21. How much time do you expect to spend reading each week to keep up with all your courses? Reading could be in print or online, but shouldn't include general web browsing, e-mail or gaming.
    - ☐ 0-3 hours per week
    - ☐ 4-7 hours per week
    - ☐ 8-11 hours per week
    - ☐ 12-15 hours per week
    - ☐ 16-19 hours per week
    - ☐ 20+ hours per week

22. How would you rate your overall internet searching skills?
    - ☐ Excellent - I almost always find what I'm looking for
    - ☐ Good - I usually find what I need
    - ☐ Average - sometimes it takes me awhile to find something useful
    - ☐ Not very good - I'm usually disappointed with my results
    - ☐ Terrible - I never find what I need

23. Who do you think has the best internet searching skills? Rank 1 (best) - 4(worst).
    - ___ Professors
    - ___ Librarians
    - ___ Students
    - ___ People working in IT/Computing

24. Please indicate which of the following resources you <u>expect to use for research purposes</u>. <u>Check all that apply</u>.

    Electronic Resources:

    - ☐ E-mail
    - ☐ IM/chat (Instant Messaging)
    - ☐ Google (or other search engines)
    - ☐ Wikipedia
    - ☐ Library web site
    - ☐ Facebook, MySpace (or similar social networking sites)
    - ☐ MSVU's online library catalogue (Novanet)
    - ☐ Other online catalogue (public library)
    - ☐ Databases like EBSCO's Academic Search to find articles
    - ☐ Online journals
    - ☐ Online magazines
    - ☐ Online newspapers
    - ☐ E-books (online books, reports)
    - ☐ Scholarly, government, professional web sites
    - ☐ General, popular web sites
    - ☐ Films, documentaries, DVDs
    - ☐ Games: computer or virtual

☐ YouTube (or similar video sites)
☐ iTunes (or similar music sites)
☐ Flickr (or similar photo sites)
☐ Blogs
☐ RSS feeds
☐ Podcasts

Print Resources:

☐ Journals
☐ Magazines
☐ Newspapers
☐ Books, reports from MSVU Library
☐ Books, reports from other universities (Dalhousie, SMU)
☐ Books, reports from the public library
☐ Encyclopedias
☐ Dictionaries
☐ Archival (historical) material

Other:

☐ Art
☐ Music
☐ Experts in the field
☐ Your own experiences
☐ Other:_____

25. Which of the following people do you expect to go to if you need help with your assignments? Check all that apply.
☐ Professors
☐ Librarians
☐ Friends
☐ Classmates
☐ Student Services (Writing Centre)
☐ Family
☐ Other: _____

Appendix B

Faculty Expectations of Student Research

1. Primary department:

2. How long have you taught at the university level (MSVU and other institutions):

3. Are you a full-time or part-time faculty member?
☐ Full-time faculty
☐ Part-time faculty

☐ Other

4. While students were in high school do you believe teachers allowed them to use Google (or other search engines) to do research for their assignments?
   - ☐ Yes, all the time
   - ☐ Most of the time
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never
   - ☐ Not sure

5. While students were in high school do you believe they ever used a research database (such as EBSCO's Academic Search) to do research?
   - ☐ Yes, all the time
   - ☐ Most of the time
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never
   - ☐ Not sure

6. What percentage of first-year students do you think know what a research database is?
   - ☐ 0-20%
   - ☐ 21-40%
   - ☐ 41-60%
   - ☐ 61-80%
   - ☐ 81-100%
   - ☐ Not sure

7. When high school teachers give assignments to their students do you believe they discuss the issues of citation and plagiarism with them?
   - ☐ Yes, all the time
   - ☐ Most of the time
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never
   - ☐ Not sure

8. What percentage of first-year students do you think know what citation and plagiarism are?
   - ☐ 0-20%
   - ☐ 21-40%
   - ☐ 41-60%
   - ☐ 61-80%
   - ☐ 81-100%
   - ☐ Not sure

9. During the last year, approximately how many hours per week do you think first-year students spent reading books, magazines, journals and/or newspapers for school, work and/or pleasure? Reading could be in print or online, but shouldn't include general web browsing, e-mail or gaming.

- ☐ 0-3 hours per week
- ☐ 4-7 hours per week
- ☐ 8-11 hours per week
- ☐ 12-15 hours per week
- ☐ 16-19 hours per week
- ☐ 20+ hours per week
- ☐ Not sure

10. Do you believe the majority of first-year students are prepared to do university-level research?
    - ☐ Yes, they are very prepared
    - ☐ They are somewhat prepared
    - ☐ I'm not sure
    - ☐ I don't think they are very prepared
    - ☐ No, they are not prepared at all

11. How would you rate first-year students' academic research skills? (Their ability to find academic or scholarly information?)
    - ☐ Excellent - they almost always find what expect
    - ☐ Good - they usually find what I expect
    - ☐ Average - they find a combination of useful and un-useful results
    - ☐ Not very good - I'm usually disappointed with their results
    - ☐ Terrible - they never find what I expect
    - ☐ Not sure

12. Who do you think is responsible for first-year students learning the skills necessary to succeed at carrying out university-level research?
    Rank the following in order from 1 (most responsible) - 6 (least responsible)
    - ____ Professors
    - ____ Librarians
    - ____ The Students themselves
    - ____ Student Affairs (through their academic support programs)
    - ____ Friends or family
    - ____ Other students

13. In first-year classes, what percentage of research material do you believe students expect to find using Google?
    - ☐ 0-20%
    - ☐ 21-40%
    - ☐ 41-60%
    - ☐ 61-80%
    - ☐ 81-100%
    - ☐ Not sure

14. In first-year classes, what percentage of research material do you want/expect students to find using Google?

    - ☐ 0-20%
    - ☐ 21-40%

- ☐ 41-60%
- ☐ 61-80%
- ☐ 81-100%
- ☐ Not sure

15. You have just assigned a 10-page paper/assignment to an introductory class. Approximately how long would you expect students to spend on the research component of this assignment (before the real writing starts)?
    - ☐ 1-3 hours
    - ☐ 3-5 hours
    - ☐ 5-7 hours
    - ☐ 7-9 hours
    - ☐ 10+ hours
    - ☐ Not sure

16. How much time do you expect first-year students to spend reading each week in order to keep up with all their course work (not just your course)? Reading could be in print or online, but doesn't include general web browsing, e-mail or gaming.
    - ☐ 0-3 hours per week
    - ☐ 4-7 hours per week
    - ☐ 8-11 hours per week
    - ☐ 12-15 hours per week
    - ☐ 16-19 hours per week
    - ☐ 20+ hours per week
    - ☐ Not sure

17. How would you rate your first-year students' overall internet searching skills?
    - ☐ Excellent - they almost always find what I expect
    - ☐ Good - they usually find what I expect
    - ☐ Average - they find a combination of useful and un-useful results
    - ☐ Not very good - I'm usually disappointed with their results
    - ☐ Terrible - they never find what I expect
    - ☐ Not sure

18. Please indicate which of the following resources you expect (want) first-year students to use for research purposes. Check all that apply.

    Electronic Resources:
    - ☐ E-mail
    - ☐ IM/chat (Instant Messaging)
    - ☐ Google
    - ☐ Wikipedia
    - ☐ Library web site
    - ☐ Facebook, MySpace (or similar social networking sites)
    - ☐ MSVU's online library catalogue (Novanet)
    - ☐ Other online catalogue (public library)

- ☐ Databases like EBSCO's Academic Search to find articles
- ☐ Online journals
- ☐ Online magazines
- ☐ Online newspapers
- ☐ E-books (online books, reports)
- ☐ Scholarly, government, professional web sites
- ☐ General, popular web sites
- ☐ Films, documentaries, DVDs
- ☐ Virtual games
- ☐ YouTube (or similar video sites)
- ☐ iTunes (or similar music sites)
- ☐ Flickr (or similar photo sites)
- ☐ Blogs
- ☐ RSS feeds
- ☐ Podcasts

Print Resources:

- ☐ Journals
- ☐ Magazines
- ☐ Newspapers
- ☐ Books,reports from MSVU Library
- ☐ Books, reports from other universities (Dalhousie, SMU)
- ☐ Books,reports from the public library
- ☐ Encyclopedias
- ☐ Dictionaries
- ☐ Archival (historical) material

Other:

- ☐ Art
- ☐ Music
- ☐ Experts in the field
- ☐ Your own experiences
- ☐ Other: _____

19. Which of the following people do you expect first-year students to go to if they need help with their assignments? Check all that apply.
    - ☐ Professors
    - ☐ Librarians
    - ☐ Friends
    - ☐ Classmates
    - ☐ Student Services (Writing Centre)
    - ☐ Family
    - ☐ Other: _____