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## **A Study of the Information Literacy Needs of Social Work Graduate Students at a mid-sized Canadian university**

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### **ABSTRACT**

This study consists of an analysis of the information literacy (IL) needs and levels of 44 social work graduate students at a mid-sized Canadian university using the Technology Acceptance Model. Students completed a quantitative questionnaire that included supplementary open-ended questions. Results showed that students who received a library tour and/or in-class library instruction were more knowledgeable and confident about library resources and services. The study clearly demonstrates that information literacy sessions should be essential components of graduate education. A comprehensive literature review of information literacy studies focusing on social work students is also provided, along with the current graduate social work modified Beile Test of Information Literacy for Education (B-TILED) assessment tool (Beile O'Neil, 2005). The authors recommend that information literacy surveys in Canada include the relevant required elements for the Institutional Quality Assurance Process (IQAP) and program learning outcomes. Given the lack of a Canadian national document for information literacy standards, such surveys should also reflect the components of ACRL's new *Framework for Information Literacy for Higher Education*. This study can serve as a model for replication at other universities, particularly those that are part of the Ontario Council of University Libraries and that have graduate social work programs.

**Keywords:** information literacy, social work graduate students, library instruction, embedded librarianship; liaison roles; B-TILED

### **INTRODUCTION**

The academic library is the gateway to a wide range of resources for students and faculty. There can be an overwhelming number of choices. The increasing emphasis on evidence-based practice in social work makes the acquisition of information literacy (IL) skills and abilities even more important for students, faculty and practitioners. In addition, changing standards for reviews of undergraduate and graduate programs mean that analysis and evaluation of programs, services and resources are now required rather than just descriptions of the same. The academic library must also reflect the values and meet the goals of its home institution and, in partnership with faculty,

make information literacy an integral part of the curriculum and accreditation processes on campus. This is particularly important for Canadian university accreditation schemes as few authors have examined the role of information literacy in institution-wide accreditation practices (Bradley, 2013).

## INFORMATION LITERACY STANDARDS

In 2000, the Association of College and Research Libraries (ACRL) Standards Committee and the ACRL Board of Directors reviewed and approved *Information Literacy Standards for Higher Education*. These Standards provided a definition for what constituted an information literate individual. Much has changed since these Standards were originally devised and ACRL has now developed a *Framework for Information Literacy for Higher Education*. Within this framework, information literacy is defined as: "...the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning." (Association of College and Research Libraries [ACRL], 2015, Introduction for Faculty and Administrators, para.1).

One of the major underpinnings of the new framework is collaboration among librarians, faculty and students and all of the many benefits that this entails for information literacy. The framework contains six frames consisting of: Authority is Constructed and Contextual; Information Creation as a Process; Information has Value; Research as Inquiry; Scholarship as Conversation; and Searching as Strategic Exploration (ACRL, 2015). Information literacy is viewed through these frames, "...each of which includes a concept central to information literacy, knowledge practices, and dispositions" (ACRL, 2015, Appendix 1: Implementing the framework, para.2). Students need to master the concepts and knowledge in each of the frames in order to gain expertise in their disciplines or professions (ACRL, 2015). The Framework is based on the concept of metaliteracy with information literacy seen as "...an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces" (ACRL, 2015, Introduction, para.4). It reflects the new realities of today's complex information environment by putting more emphasis on electronic resources; by accommodating a variety of learning styles and models; and by incorporating new realities such as blended learning and the flipped classroom (ACRL, 2015).

Saunders (2017) analyses the new framework from a social justice perspective and gives an overview of some of the reactions to it, both positive and negative. She also provides insight into the efforts made by ACRL to include social justice and anti-oppression perspectives and practices in the framework. However, she believes that more needs to be done and offers her own framework entitled "Information Social Justice" for consideration and discussion. She notes in the definition for her proposed framework:

Information is created within existing power structures, and those power structures can impact the production and dissemination of information, as well as distort, suppress, or misrepresent information. To understand and use information most effectively, users must be able to examine and interrogate the power structures that impact that information, and analyze the ways that information can be used to both inform and misinform (p. 67).

The increased emphasis on social justice and anti-oppression practices in information literacy theory, standards and practices, fits well with social work.

As noted in the new ACRL framework, successful information literacy programs require collaboration between librarians, course instructors and students and an understanding of the objectives, goals and outcomes of such programs by all involved. Gullikson (2006) found that not much had been written about the views and reactions of faculty to the original ACRL Standards in the library literature (p. 584). She conducted a study of faculty perceptions of the Standards at four Canadian universities. She found that some faculty viewed the language used in the Standards for information literacy outcomes as confusing or repetitive. Faculty were also more likely to be in agreement about expected information literacy outcomes for students prior to or in the first year of university than for other years. Gullikson (2006) recommended that further research be done to identify the information literacy outcomes that were of the most or least importance to faculty (p. 591).

Catalano (2010) describes a study that was undertaken to assess the information literacy skills and knowledge of graduate Education students at Hofstra University using the ACRL Standards. She notes that program accreditation is making standards-based information literacy skills increasingly important (p. 21). The study showed that the students were more skilled at evaluating information sources than anticipated but did need "...advanced bibliographic search skills and strategies that are often not addressed in traditional "one-shot" library instruction sessions" (p. 31). Catalano recommends multiple information literacy sessions or a one-credit course for graduate students throughout the program in order to meet their needs (p. 31).

Gordon and Bartoli (2012) discuss the collaborative efforts of a librarian and faculty member to integrate information literacy into a graduate counseling psychology program. Instead of using the ACRL Standards, they chose to use "discipline-based standards" from the Association of Counselor Education and Supervision (ACES) for their instructional goals (p. 23). By so doing, they hoped to emphasize the relevance of information literacy goals and skills to the workplace as well as to faculty and administrators. They found that this approach had much more appeal to faculty members and students and made them more aware of the relevance of information literacy for specific courses and disciplines (p. 37).

## **INFORMATION LITERACY AND ACCREDITATION**

Information literacy should be an integral part of academic programs and their accreditation processes, but this is not necessarily the case. Bradley (2013) discovered that little had been written about information literacy in relation to accreditation standards for various professions. She conducted a study of accreditation standards for three professions – social work, nursing and engineering – and looked for references to information literacy in the standards (p. 44). She found that the standards for professional programs for the UK and Australia paralleled the original ACRL Information Literacy Competency Standards more closely than was the case for Canada and the United States. Bradley believes that this is partly due to the absence of a national document for information literacy standards/guidelines in Canada, whereas the United Kingdom, Australia and the United States all have such documents (p. 63). However, she notes that this does not explain why the ACRL Competency Standards have not become a more integral part of accreditation processes in Canada (p. 64). She believes that the accreditation process is a prime opportunity for

librarians to demonstrate their value to programs and that they should play an active part in this process. She recommends that librarians and their professional associations become more involved with revising and integrating IL-related outcomes into accreditation standards for professional programs. She also holds that the reverse is true and that consideration should be given to including professionals and academics who are not librarians in the revision process of information literacy-related standards for librarians (p. 65).

## **SOCIAL WORK AND EVIDENCE-BASED PRACTICE**

Evidence-based practice has brought a new tenor to social work practice, making research an integral part of clinical work. Gibbs and Gambrill (2002) describe it as "...the conscientious, explicit and judicious use of current best evidence in making decisions about the care of clients" (p. 452). They note that "EBP is designed to create professionals who are lifelong learners who draw on practice-related research findings and involve clients as informed participants in decisions made" (p. 452). Lewis (2003) emphasizes the importance of social work research for policy and practice (p. 579), noting that the profession needs "...critically reflective social workers" who will "...develop and demonstrate the same sorts of skills and values that research in our field demands" (p. 585).

Not everyone is a proponent of evidence-based practice. Poole (2010) advocates for anti-oppressive and critical social work practices and worries about "...interests that welcome evidence-based and other modernist inventions meant to limit, control and prescribe" (p. 8). Herz and Johansson (2011) are concerned that the move towards evidence-based programs "...might be at the cost of losing social-psychological thinking about complex, liquid, and changing social and cultural conditions" (p. 41). Johnson, Whitfield, & Grohe (2011) discuss problem-based learning noting its applicability to social work because of "...the nature of "real world" problems that occur and the solutions that need to be obtained to meet the client's multiple information needs in solving problems or finding resolutions to situations" (p. 8).

Some writers, such as Lewis (2003), have expressed concern that research is predominantly the enclave of academics and that all stakeholders need to be involved (p. 580). Wheeler and Goodman (2007) echo Lewis's concerns noting the importance of information literacy skills and continuing education for health and mental health social workers so that they can be "...involved in the development of the very evidence that is increasingly driving the decision making and resource allocations in health and mental care" (p. 236). Mirabito (2012) examines the constantly changing and complex work environment that social workers find themselves in and advocates for research partnerships between academic and field educators in order to ensure that academic curricula reflect social work practice in agencies (p. 245).

## **INFORMATION LITERACY AND STUDENTS AND FACULTY**

The foundations of research skills are laid during professional training. Silfen and Zgoda (2008) reviewed the literature and found that little had been published about social work students and their information literacy needs. They note that the rise of evidence-based practice in social work has increased the importance of information literacy instruction for social work students and requires more attention from librarians in the literature (p. 104). Weetman DaCosta (2010) found

that material pertaining to information literacy tends to be published in the professional literature for librarians and that "...where articles were found in mainstream educational journals, most were written by library and information professionals" (p. 204). Lampert (2005) notes that "...specific recommendations and successful strategies for infusing subject specific information literacy skills into graduate studies are not prevalent in information literacy literature" (p. 7). Bellard (2007) finds that information literacy instruction for graduate students is often not incorporated into the curricula and "...remains sporadic at best and offered mainly in a variety of supplemental venues (e.g., online tutorials, assignment related instruction workshops, orientations)" (p. 495). Howard, McMillen, and Pollio (2003) believe that social work schools have not spent enough time "...teaching students the knowledge and skills they need to identify and effectively search the many available sources of practice-relevant information" (p. 19). The authors note that this may be due to inadequate training in this area for faculty members themselves and warn that "...Continued neglect of didactic efforts in this area will seriously hinder efforts to promote evidence-based practice" (p. 19). Lampert (2005) states:

When the current lack of entry-level graduate student information literacy skills is combined with the paucity of higher cognitive skills often displayed in student writing of literature reviews, the critical need for collaboration between librarians and discipline faculty becomes clear. This situation calls for the incorporation of information literacy skills training into graduate curriculum (p. 7).

Bingham, Wirjapranata and Chinnery (2016) describe a collaborative program developed by faculty and information professionals at the University of Auckland which "...aimed to cultivate third-year social work students' understanding of the research-practice nexus by actively inducting them into the use of EBP and relevant IL skills prior to their first practicum" (p. 202). In their concluding remarks, the authors strongly advocate for the integration of both in field work and courses, noting that this "...would embed the importance of the research-practice connection across the curriculum more forcefully and facilitate the development of more information literature EBP practitioners" (p. 209).

Bury describes a survey research study that "...investigates the information literacy (IL) instruction practices, attitudes and perceptions of university faculty at York University" (p. 45). This study was conducted across multiple disciplines. Results of the survey showed that faculty were concerned about the information literacy competencies of students, particularly lower-level undergraduates (p. 49) and that they also thought that the research skills of graduate students were not at a desired level (p. 51). A strong majority of faculty were in favour of students receiving information literacy instruction (p. 51) and also supported a collaborative model with librarians for teaching information literacy competencies (p. 53), but Bury notes that her study found that there was not a high rate of integration of information literacy instruction within courses (p. 59). She makes several recommendations including the need for librarians to take a stronger advocacy role in promoting and educating faculty about the benefits of information literacy instruction (p. 60).

As noted previously, not much work has been done about social work students and their information literacy needs. Table 1 gives an overview of several studies pertaining to information literacy and MSW students. A review of the literature clearly shows the need for integrating information literacy into social work curricula and for collaboration between faculty and librarians, librarians and students, and librarians and social work practitioners so that social workers can be effective researchers and practitioners.

Table 1: **Summaries of some recent information literacy studies with social work students and faculty**

<b>Study</b>	<b>Participants</b>	<b>Purpose</b>	<b>Method</b>	<b>Results</b>	<b>Limitations</b>	<b>Recommendations</b>
Bellard (2007)	198 MSW students	Looking at the information literacy needs of non-traditional MSW students as conveyed through their feedback about a mandatory information literacy workshop	Pre and post questionnaires; in-class observation and hands-on exercises	Students over-rate their research skills and have difficulty locating, critically evaluating and citing materials. More instruction needed.  Majority of participants indicated that information literacy workshops should be integrated into the curriculum.	No longitudinal evidence.  The information literacy workshop focuses on basic information gathering techniques.	Longitudinal studies to assess graduate level information literacy programs.  Further study of perceptions and expectations of students and faculty about graduate level information literacy  More collaboration between librarians, teaching faculty and administrators so that curricula match the needs of nontraditional graduate students.  Pre-assessment of students' abilities through the assigning of a short research paper prior to admission to graduate school. Borderline students to take a basic information literacy workshop  Incorporate information literacy sessions into the curriculum.

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Brustman et al. (2007)	104 MSW students	Improve information and computer literacy skills of MSW students	Series of required workshops closely tied to the ACRL information literacy standards done by University at Albany librarians in collaboration with faculty in the School of Social Welfare.  Surveys and assessment tests administered to measure students' understanding and rating of workshop content. Classroom observations.	Workshops have made students more aware of library resources and services pertaining to social welfare and how to use both efficiently and effectively.  Social work students are now the highest users of reference services.	Small size of library classroom resulting in more classes and heavier workload for librarians.  Getting the students to take the classes early in the MSW program.	More promotion of the workshops by librarians and faculty  Use a database to track student completion of the workshops.  Develop a WebCT version of the Social Welfare Research Seminar  Expand the study to other institutions.  Emphasize the strengths and differences of social welfare resources and clearly outline the library's interlibrary loan process.

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Ismail (2009)	100 traditional and nontraditional students in the MSW program at Marywood University comprising of 55 weekend students; 7 part-time; 16 full-time; and 22 satellite students	To get feedback from currently enrolled traditional and nontraditional students about their library use and needs and to compare same.	Conducted a survey, available online and in print which included open-ended questions, multiple choice questions and rating scales. Survey gathered demographic information and feedback about student needs, use and satisfaction regarding library services and resources.	Additional/improved assistance needed for nontraditional students including weekend assistance. Nontraditional MSW students have specific library needs that may differ from other students. Reference e-mail/chat service was the least used resource.	Low response rate to survey.	<p>Follow-up study of nontraditional students consisting of focus groups and/or a survey to gain more insight into their preferences for seeking library assistance and the impact of student demographics on those preferences.</p> <p>Create a separate gateway for remote and/or nontraditional students.</p> <p>Librarians need to organize formal library instruction sessions for satellite students and explore other options for providing library assistance.</p>

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Johnson, Whitfield & Grohe (2011)	10 faculty participants from a variety of disciplines. One of the faculty participants then incorporated what he had learned into the syllabus for an MSW course.	To show the benefits of collaboration between librarians and faculty members for improving students' information literacy skills.	Program with three phases: a) Workshop about the ACRL guidelines and information literacy b) Collaboration and then a midterm presentation by librarians and faculty c) Teaching a class using the improved syllabus and the final presentation A pre- and posttest were given to get baseline measurements for students' information literacy-related knowledge.	Noticeable improvement in the quality of the students' papers. Study shows the positive impact of collaboration between librarians and faculty for both the faculty and the students	Small sample size.	Increase sample size and have a more diverse population.  More content in future for librarian participants.  Use this study as the basis for future research on information literacy collaborations between faculty and librarians.

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Johnston (2010)	100 first year Social Work students (on and off campus)	To provide the students with information literacy and research skills through an online module set up in Blackboard and to assess the efficacy of the same.	Participation in a compulsory online information literacy module and evaluation of the same through a survey; focus groups; observations and task results.	Majority of students liked and used the tutorial. They learned new techniques and skills for their assignments; could complete it at their convenience; and thought that the quality of their assignments was improved by it.	Only 25 students out of 100 completed the survey – 13 on-campus students and 12 off-campus).	<p>Develop and support the online information literacy tutorial.</p> <p>Build information literacy content into the social work program.</p> <p>Have face-to-face training available for those who want it.</p> <p>Further assess the effectiveness of the module.</p> <p>Continue to develop information literacy skills for all disciplines.</p>

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<b>Study</b>	<b>Participants</b>	<b>Purpose</b>	<b>Method</b>	<b>Results</b>	<b>Limitations</b>	<b>Recommendations</b>
Kitchin et al. (2013)	26 second year MA social work students	Evaluation of a self-audit tool aimed at promoting information literacy, information technology, information and study skills	Data was collected regarding students' experiences with this tool through a small-scale evaluation study.	Students found the identification and evaluation of information skills to be helpful. They also appreciated the self-directed learning approach engendered by the audit. The results showed that the students lacked confidence about their information skills prior to second year.	Study was dependent on student self-reports of confidence and so was limited to students' perception of their progress. This was a small-scale evaluation study.	More attention needs to be paid in postgraduate programmes to developing students' abilities to find, incorporate and use information.  Examine, develop and evaluate the provision of information skills for social work programmes at all levels.

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Silfen et al. (2008)	55 MSW students at Boston College	To use a citation study to identify the information literacy needs of graduate social work students and the role that librarians can play in promoting evidence-based practice.	Small study of journal citations in graduate social work students' reference lists for a required paper to determine the quality of their sources.	Students need instruction that focuses on evidence-based searching skills and that will help them to find peer-reviewed articles and sources that are research-based.	Correlational analyses were limited – additional research needs to be done. Small number of participants.	<p>Increase the number of participants and citations studied.</p> <p>Have a control group for the next study.</p> <p>Spend less time on the mechanics of searching databases and more time focusing on the retrieval of high-quality information.</p>

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Sizemore et al. (2008)	Undergraduate social work students – no number given.	Pilot project using constructivist learning theory to teach research skills to social work students who were looking at social policy responses to social problems.	Increasingly focused instruction moved from formal class group meetings to small groups of students to individual students. Collaboration with faculty on improving assignments and learning outcomes.	Qualitative evidence indicates positive changes in students' experiences with the research process and knowledge related to the course content.	No data specified.	Incorporate the use of Web 2.0 tools in order to connect with students through a variety of resources.  Combine this with face-to-face contact with librarians.

## **SOCIAL WORK AT THE UNIVERSITY OF WINDSOR**

The University of Windsor is a mid-sized university in the City of Windsor in southern Ontario, Canada and is very close to the Windsor-Detroit border. The University has a wide range of undergraduate and graduate programs containing more than 15,000 full and part time students. The School of Social Work at the University of Windsor is a dynamic and thriving institution, offering several BSW and MSW program options. The Advanced Standing MSW program is one year in duration and is for students who have an Honours BSW degree. The Regular Track MSW program takes two years of full-time study to complete and is for students with a four-year Honours degree in a related social science discipline or helping profession. The School of Social Work has also developed an Off-Campus MSW for Working Professionals program with Regular and Advanced Tracks. Another exciting development is the MSW/JD program. This is a joint degree program with the Faculty of Law that allows students to attain a Juris Doctor and an MSW degree in three years if they have a BSW degree and in four years if they have an Honours degree in a related field. The School of Social Work also has a PhD program with a focus on civic engagement.

The School of Social Work at the University of Windsor has been very supportive of library services and resources. The Social Work librarian has office space in the School of Social Work and spends one full day a week at the School providing research help to students and faculty. She provides information literacy sessions and also goes to Mississauga and Oshawa with the instructors and coordinators for the MSW Working Professionals Program to participate in orientation sessions for new students. She serves as the library representative on the School of Social Work's Council and has a web page on the School of Social Work's website.

## **PURPOSE OF THE STUDY**

The purpose of this study was to examine data pertaining to the information literacy levels and needs of graduate students in social work at the University of Windsor. The quantitative data was collected at the very beginning of the semester for each program, in order to ascertain the students' knowledge, abilities and experience with information literacy at the start of their graduate studies. Participants in the study volunteered to complete a quantitative questionnaire that included supplementary open-ended questions. Some students also took part in semi-structured follow-up interviews which included observation of the participants' behavior whilst completing specific tasks.

## **METHODOLOGY**

This study examined the information literacy needs and levels of 44 social work graduate students from a total sample of 201 graduate students by using a quantitative questionnaire that included supplementary open-ended questions (Appendix A) (Magliaro, 2011). The quantitative component consisted of the adapted quantitative instrument called "The Beile Test of Information Literacy for Education" (B-TILED) (Beile O'Neil, 2005), which is used to measure a pre-service student's

(student teacher candidates in-training) IL (information literacy) skills. Questions #7,8,10, 12,13,15,18,19,21,23,24, and 26 were slightly modified in order to reflect Canadian and relevant social work content as well as “to target appropriate standards, performance indicators, and outcomes” (Magliaro, 2011, p.64). As IL encompasses components that go beyond what B-TILED is intended to measure, the instrument was modified to measure IL needs of Master of Social Work students. It was also extended through the use of supplementary, open-ended questions based on the Davis, Bagozzi, and Warshaw (1989) Technology Acceptance Model (TAM). TAM is a particularly useful model for studying the IL and information competency of graduate students, because it utilizes a behavioral component to explain the end-user’s behaviours. It should be noted that the main assumption behind TAM is that specific beliefs (i.e., perceived usefulness and perceived ease of use) are primary determinants for the adoption of information technology and information systems (IT/IS) (Lu, Yu, Lio, & Yao, 2003). Perceived usefulness is described as the extent to which one believes that utilizing the system will improve one’s performance, whereas perceived ease of use reflects the belief that utilizing the system will be effortless (Davis et al., 1989; Venkatesh & Davis, 2000). Thus, one of the key goals of TAM is to measure the impact of external variables on internal beliefs, attitudes, and intentions (Davis et al., 1989; Lu, Yu, Lio, & Yao, 2003). Based on the modified B-TILED and extended TAM, the survey research questions were formulated encompassing quantitative questionnaire that included supplementary open-ended questions.

Part 1A: Quantitative Research Question:

- a. Which graduate profile variable best predicts graduate students’ IL?

Part 1B: Qualitative Research Question:

- b. How do graduate students perceive the usefulness and ease of use of library services?

## RESULTS

This study examined the IL needs of Master of Social Work students through the use of a quantitative questionnaire that included supplementary open-ended questions. The questionnaire consisted of three parts: (i) questions geared towards establishing a profile of a graduate student; (ii) modified B-TILED instrument (Beile O’Neil, 2005); and (iii) open-ended questions (Technology Acceptance Model [TAM], Davis et al., 1989). The first part of the survey encompassed 12 questions, capturing the profile variables of various graduate students. The second section focused on questions related to the students’ perceived ability to search library databases and the Internet to find information. It also looked at students’ past experiences with library instruction. The last part of the survey included the TAM open-ended questions. This part explored “*Usefulness and Ease of use*” by requiring responses regarding “*Library Instructions, Library Experience Instructional Needs and Software Usage*”.

The original criterion-related validity of the survey was noted by comparing the results on a 22-item B-TILED written test with the original Morner’s (1993) 8-item in library test. The Cronbach’s alpha for Master of Social Work modified B-TILED survey was .658. A total of 44 social work graduate students (21.9%) out of 201 completed the survey. Thirty-nine were female (88.6%), 41 (93.2%) were full time students and 23 (52.3%) were first year students. Thirty (68.2%) graduate students were enrolled in major course work and a special research project. Seventy-five percent of the students were between 20 and 29 years of age. A total of 23 (52.3%) graduate students had taken less than 6 courses; had completed a Bachelor of Arts degree; had participated in a library

tour and had in-class library instruction. There were no international graduate students and 84.09% indicated that English was their first language (see Appendix B Table 1a). However, the majority of students (79.5%) did not have one-to-one instruction with a librarian at the very beginning of semester. In addition, the majority of students (88.6%) noted that graduate students need instruction on how to use library information resources in their subject areas (see Appendix B - Table 1a & Table 1b).

After performing seven one-way analyses of variance (ANOVA) for significance at the .05 confidence level, there was a significant difference  $F(1,42) = 4.710$ ,  $p < .05$  between those participants who were in their first year of study ( $M = 12.57$ ) and those who were in their second year of study ( $M = 14.67$ ), as well as those students who had completed less than six courses ( $M = 12.57$ ) and those who had completed more than six courses ( $M = 14.67$ ). In addition, there was a significant difference  $F(1,42) = 6.692$ ,  $p < .05$  between those participants whose last degree was a Bachelor of Arts ( $M = 14.47$ ) and a Bachelor of Social Work ( $M = 12.29$ ) (see Appendix B - Table 1a & 2a).

Part 2 of the modified B-TIELD survey consisted of six questions about the graduate students' self-perceived ability to do electronic searches and about their past undergraduate/graduate experiences with library instruction at their current institution. On a scale of 1 to 5, the majority of students rated themselves as a 4 out of 5 in terms of their ability to search the library databases and the Internet (Appendix B - Table 1b). With regard to students' past undergraduate/graduate experiences with library instruction at their current institution, after performing five one-way analysis of variance (ANOVA) for significance at the .05 confidence level, there were a significant difference  $F(1,42) = 6.133$ ,  $p < .05$  between those students who had taken a library tour ( $M = 14.70$ ) and those who did not ( $M = 12.33$ ) participate. There was also a significant difference  $F(1,42) = 4.116$ ,  $p < .05$  between those students who had library instruction sessions ( $M = 14.65$ ) and those who did not receive such instruction ( $M = 12.67$ ) (see Appendix B Table 1b & 2b)

Part 3 of the survey contained open-ended questions on the usefulness and ease of use of library services. The participants provided feedback for the following three elements: (i) the perceived usefulness of library instruction at the undergraduate and graduate levels; (ii) the graduate students' need for instruction on the use of library resources and services; and (iii) the use of specific library resources. With regard to perceived usefulness of library instruction, 10 students (22.7%) had never received undergraduate library instruction while 21 students (47.8%) had never received graduate library instruction. A total of 26 graduate students (59%) identified themselves as moderate users of academic library resources and services. However, a large majority of 88% ( $N = 39$ ) students indicated that graduate students need instruction on how to use library information resources in their subject areas. They had mostly used Scholars Portal ( $N = 24$ ) but had not used RefWorks ( $N = 38$ ) nor Foxy Leddy ( $N = 42$ ). As a point of clarification, RefWorks is a bibliographic citation management tool and Foxy Leddy allowed library patrons to search several library resources at one time. After performing one-way analysis of variance (ANOVA) for significance at the .05 confidence level, there was a significant difference  $F(1,41) = 4.992$ ,  $p < .05$  between those participants who found library resources easy to use and accessible ( $M = 14.43$ ) and those who did not find this to be the case ( $M = 12.13$ ) (Appendix B - Table 3a and Table 3b).

## ANALYSIS OF THE STUDY

This data analysis provides a more holistic presentation of social work graduate students' IL needs. Magliaro (2011) further developed the B-TILED survey to accommodate 10 graduate departments including social work (Appendix A). The responses to the quantitative research question - *Which graduate profile variable best predicts graduate students' IL?*- showed significant differences for "year of study", "# of courses completed" and "last degree completed". The first year graduate students who are entering graduate programs may come from a variety of institutions and so may have a range of experiences or lack thereof with information literacy instruction. Students who completed more than 6 courses (some might be at the thesis stage) and had Bachelor of Arts degrees did have higher IL results. Responses to the qualitative research question - *How do graduate students perceive usefulness and ease of use of library services?* – showed statistical significance for "library tour" and "library instruction" and "ease of use". This indicates the necessity for providing such services on an ongoing basis and the importance of targeting such services to entry level graduate students.

## SURVEY LIMITATIONS

The demographic data gathered did not include information about the institutions at which the graduate students completed their previous degrees. So it is not clear as to which institutions provided the social work graduate students with library instruction. Therefore, it is necessary to provide information literacy instruction at the start and throughout the graduate program. Future surveys should include more specific demographic information about the social work students and should specify which of the four main streams they are pursuing (Advanced Standing MSW On-Campus; Regular Track MSW On-Campus; Advanced Standing MSW for Working Professionals Off-Campus; and Regular Track MSW for Working Professionals Off-Campus). Data from the distance education MSW Working Professionals Program was not collected.

Another limitation is that the B-TILED survey might not reflect the full breadth of skills and knowledge expected of graduate students (Beile O'Neil, 2005). For example, Standard Four was not included because it was not conducive to the multiple-choice format since it pertains to group work. Future surveys should include the updated ACRL standards. Information gleaned from IQAP reviews and Social Work program outcomes can help to develop a more comprehensive survey. Social work focus group meetings with graduate students, faculty and librarians would also be helpful.

## CONCLUSION

There is much to be gained from this study. Indeed, Magliaro's (2011) original dissertation, which is the basis for this paper, has already been referenced in three recent doctoral dissertations (Ayoub, 2016; Bishop, 2015; Dumouchel, 2017). Our review of the literature has indicated that very few projects of this nature have been done with social work students. So this research will not only provide information to our immediate campus community about the information literacy levels and needs of graduate students in social work, but it also serves as a first step towards developing more comprehensive information literacy assessment surveys. Analysis of the data and

conclusions gleaned from this study may lead to recommendations regarding the design of discipline-specific program instruction or workshops focused on increasing information literacy levels of social work graduate students. The ultimate goal would be to revise and modify the current instrumentation, so that future studies of a similar nature can better analyse and serve the information literacy needs of social work graduate students. It is clear from this study that providing at least one standardized mandatory information literacy instruction session at the beginning of a student's graduate career as well as compulsory subject-specific information literacy instruction throughout - face-to-face, online and/or blended - would benefit many graduate students. Finally, this data analysis serves as a model study that can be implemented at other universities, particularly those that are part of the Ontario Council of University Libraries (OCUL) consortium, such as the University of Windsor.

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## Appendix A: Part 1: Survey Instrument – for Graduate Students

This questionnaire aims to compare the information literacy skills of graduate students in the selected graduate programs. The questionnaire is divided into three parts:

**Part 1-** we ask you to provide background information about yourself.

**Part 2-** we ask you to indicate the answer that best applies to you.

**Part 3-** we ask you to elaborate on your experiences with library services.

### Part 1: Demographics

Please complete the following by **placing a checkmark (√)** in the appropriate spaces:

**1. Gender:** Male \_\_\_\_\_ Female \_\_\_\_\_

**2. Student Status:** Full-Time \_\_\_\_\_ Part-Time \_\_\_\_\_

**3. Year of Study:** 1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4+ \_\_\_\_\_

**4. Program of Study - Department:** \_\_\_\_\_

(e.g. MA - Psychology, PhD - Education)

**5. Program of Study:** (use checkmark √):

Course work only \_\_\_\_\_

Course work and special research project \_\_\_\_\_

Course work and thesis \_\_\_\_\_

**6. Total number of courses currently completed in this programme** \_\_\_\_\_

**7. What is your age range?**

\_\_\_\_\_ 20-29

\_\_\_\_\_ 30-39

\_\_\_\_\_ 40-49

\_\_\_\_\_ 50-59

\_\_\_\_\_ 60+

**8. Are you an international student?** YES \_\_\_ NO \_\_\_

**9. Year of completion of your last degree:** \_\_\_\_\_

Indicate your **last completed** degree: \_\_\_\_\_

**10. Start year of your current degree:** \_\_\_\_\_

**11. Do you work or have you worked (in the last 5 years) in a library-related position?**

YES \_\_\_ NO \_\_\_

**12. Is English your first language?**

YES \_\_\_ NO \_\_\_

**Part 2: Please circle the answer that best applies to you (only ONE answer)**

1. Overall, on a scale 1-5, where **1 means low ability** and **5 means high ability**, how would you rate your ability to search library databases to find information? (Circle one)

1.....2.....3.....4.....5

2. Overall, on a scale 1-5, where **1 means low ability** and **5 means high ability**, how would you rate your ability to search the Internet to find information? (Circle one)

1.....2.....3.....4.....5

**Please indicate whether you have experienced any of the following since you began your studies at the University of Windsor.**

3. Have you attended an organized tour of the academic library?

- a. Yes
- b. No

4. Have you attended a library instruction session held in your classroom?

- a. Yes
- b. No
- c. None was organized.

5. Have you attended a library instruction session held in the academic library?

- a. Yes
- b. No

6. Have you had one-on-one intensive instruction with a librarian?

- a. Yes
- b. No

7. Which of the following characteristics best indicates scholarly research? (Circle one)

- a. Available in an academic library
- b. Indexed by Social Service Abstracts
- c. Reviewed by experts for publication
- d. Written by university faculty

8. In a graduate course you are examining the topic of 'child development'. You are not familiar with this topic and you want to find a brief history and summary about it from a social work perspective. Which of the following sources would be your first choice to consult?

- a. A book on the topic, such as *Child development: A case study*.
- b. A journal article
- c. General web site (via Google)
- d. A social work encyclopedia, such as *Encyclopedia of Child Development*

9. Research or periodical databases are designed to include items based on which of the following criteria?

- a. Found on the Internet
- b. Not found on the Internet
- c. Owned by your library
- d. Relevant subject matter

10. Social Service Abstracts is the most appropriate database to use to locate:
- Social work article citations, publications and documents
  - Social work publications from 1877 to current
  - Full-text social work articles
  - Ontario Ministry of Education Statistics
11. Most research and periodical databases have basic and advanced searching interfaces. Which of the following can be done ONLY in advanced searching? (Circle one)
- Add Boolean or search connectors between terms
  - Enter multiple search terms
  - Search by keyword
  - Search multiple terms by field
12. Research studies in social work are generally first communicated through (Circle one):
- Books published by social work associations
  - Social work encyclopedia entries
  - Newsletters of social work associations
  - Professional conferences and journal articles
13. You have been assigned to write a short class paper on effective instruction techniques for explaining child welfare to English as Second Language (ESL) students. Your professor indicated three recent scholarly sources would be sufficient. Which strategy is best to locate items? (Circle one)
- Search a general database for journal articles
  - Search social work and education databases for journal articles
  - Search the library catalog for books
  - Search the library catalog for encyclopedias
14. Select the set of search terms that best represent the main concepts in the following: “What are the health risks associated with the use of drug therapy for hyperactive students?”
- Drug therapy, health risks, hyperactivity
  - Drug therapy, health risks, students
  - Drug therapy, hyperactivity, students
  - Drugs, hyperactivity, therapy
15. Select the option that best represents synonyms and related terms for the concept “university students.”
- Universities, adult learners, community colleges...
  - Gen X, students, undergraduates...
  - Graduate students, undergraduate students, post-secondary students...
  - University, adult learners, educational attendees...
16. While researching a paper on character education, you find that it is also sometimes called *values education* or *moral education*. You decide to look for information on the subject in a research database, and to save time you write a search statement that includes all three terms.

Which of the following is the best example to use when you have fairly synonymous terms and it does not matter which of the terms is found in the record?

- a. Character and values and moral
- b. Character or values or moral
- c. Character, values and moral
- d. Character, values or moral

17. You are using a research database that uses an asterisk (\*) as its truncation symbol. When you type in *read*\* you would retrieve records that contained which of the following words?

- a. Examine, peruse, reader, reading
- b. Peruse, read, reader, reading
- c. Read, reader, reads, readmit
- d. Read, reader, reading, reapply

18. You have a class assignment to investigate how group work impacts student learning. A keyword search in Social Service Abstracts on “group work” has returned over 600 items. To narrow your search, which of the following steps would you perform next?

- a. Add ‘impacts’ as a keyword and combine with ‘group work’
- b. Add ‘student learning’ as a keyword and combine with ‘group work’
- c. Limit search results by date
- d. Limit search results by publication type

19. The following citation is for:

Massaro, D. (1991). Broadening the domain of the fuzzy logical model of perception. In H. L. Pick, Jr., P. van den Broek, & D. C. Knill (Eds.), *Cognition: Conceptual and methodological issues* (pp. 51-84). Washington, DC: American Psychological Association.

- a. A book
- b. A chapter in a book
- c. A journal article
- d. A Social Service Abstracts document

20. Your professor suggested you read a particular article and gave you the following citation: Shayer, M. (2003). Not just Piaget, not just Vygotsky. *Learning and Instruction* 13(5), 465-485. Which of the following would you type into the library’s catalog to locate the actual article?

- a. Author search: Shayer
- b. Journal title search: *Learning and Instruction*
- c. Journal title search: Not just Piaget, not just Vygotsky
- d. Subject search: Piaget and Vygotsky

21. The following item was retrieved from a Social Service Abstracts database search. What kind of source is it?

Title: Public Attitudes towards Multiculturalism and Bilingualism in Canada

Author(s): Dasko, Donna.

Publication Year: 2003

Abstract: The purpose of this study was to examine Canadian public attitudes toward multiculturalism and bilingualism.

Notes: Presented at the Annual Conference – Canadian and French Perspective on Diversity (Ottawa, April 10-14, 2003).

Number of Pages: 24

- a. A book
- b. A book chapter
- c. A conference paper
- d. A journal article

22. Using this result from an Internet search engine, who is the “owner” of this Web site?  
*State policies on planning, funding, and standards. Does the state have technology requirements for students?* <http://www.edweek.org/reports/tc98/states/fl.htm>

- a. Business or commercial entity
- b. College or university
- c. Other organization
- d. State government agency

23. While conducting research on the Canadian legislative system, you find the following story on the Internet:

*BMJ* 2001; 322:1200 (19 May)

Canada's parliament calls for tighter water standards

Alarmed by growing fears of widespread pollution of drinking water, Canada's parliament has passed a resolution calling for a national law setting out enforceable national standards for water quality.

Forty six people have recently become infected with cryptosporidium in the small farming town of North Battleford, Saskatchewan, and three deaths were at first thought to have been caused by the parasite. The province's chief medical health officer later said that cryptosporidium was not the cause of two of the deaths but may have played a minor part in the third.

(Source: The *BMJ* is published by BMJ Publishing Group Ltd, a wholly owned subsidiary of the British Medical Association)

Given this, the following action is in order:

- a. You can use the story as it is obviously from a reputable news source
- b. You decide to investigate the reputation of the publisher by looking at their Web site
- c. You decide to investigate the reputation of the publisher by looking at other Web sites
- d. You should not use the story because Web information is not always trustworthy

24. Which of the next four sentences may be used as a citation?

- (1) Technology use in the schools is often characterized as a potentially dehumanizing force.
- (2) Perhaps the fear that the virtual world may lead to passivity and isolation, at the expense of literal social interaction, is valid.
- (3) Certainly, educators must ask *which* uses of technology result in increased learning and a better quality of life.
- (4) To address these issues, Hunter (2005) has proposed that “students should work in groups with the computer peripheral and the teacher acting as a facilitator” (p.25).

- a. 1
- b. 2
- c. 3
- d. 4

25. When is it ethical to use the ideas of another person in a research paper?

- a. It is never ethical to use someone else’s ideas
- b. Only if you do not use their exact words
- c. Only when you give them credit
- d. Only when you receive their permission

26. You are planning conference presentation. Browsing the Internet, you find the report “Child Abuse: Recognize it, Report it, Prevent it” by the Ontario’s provincial government. If you distribute 30 copies of the report to the other conference attendees, which of the following copyright choices is the proper action?

- a. Permission is not needed as the report is from a government agency.
- b. Permission is not needed as the report was found on the Internet.
- c. Permission is not needed as you are only distributing 30 copies.
- d. Permission to distribute 30 copies of the report must be acquired.

27. You have an assignment that requires you to use course management software to practice setting up a class grade book. Your school has purchased the software and loaded it in the computer lab, but you have a difficult time getting to the lab due to work conflicts. A friend loans you the software and you load it on your computer. Is this legal?

- a. No, because this action constitutes a violation of copyright.
- b. Yes, because it is already freely available in the lab.
- c. Yes, because it is education software and therefore able to be shared.
- d. Yes, because your friend owns it and can share as he wants.

28. Browsing a weekly news magazine, you come across an article that discusses the future of space exploration. As you are teaching this topic you decide to make copies of the article and share it with your class. Which of the following concepts makes it legally permissible to reproduce portions of works for educational purposes without permission?

- a. Copyright
- b. Fair use
- c. Freedom of information
- d. Intellectual freedom

**Part 3: Please elaborate on your experiences with library services in general.**

*Usefulness and Ease of use*

1) Library Instructions

How many times have you been given instruction on how to use library resources by librarians?

At the undergraduate level:	0	1	2	3+
At the graduate level:	0	1	2	3+

2) If you were given library instruction at the undergraduate level:

(a) What kind of instruction did you receive?

.....

(b) Did you find the instruction useful? (Elaborate)

.....

2a) If you were given library instruction at the graduate level:

(a) What kind of instruction did you receive?

.....

(b) Did you find the instruction useful? (Elaborate)

.....

3) Library Experience

Circle the number that best reflects your experience with academic library resources and services.

<b>1</b>	<b>2</b>	<b>3</b>
<b>little experience (limited use)</b>	<b>some experience (moderate use)</b>	<b>extensive experience (frequent use)</b>

(a) Describe some of the experiences you have had with academic library services and resources:

.....

4) Instructional Needs

(a) Do you think that graduate students need instruction on how to use library information resources in their subject areas?

YES \_\_\_\_\_ NO \_\_\_\_\_

Please explain.

.....

(b) Which library services and resources do you need the most help with to meet your graduate student information needs?

.....

(c) What library resources do you use most in your subject area (e.g. WilsonWeb, Scholars Portal, Project Muse, CBCA, etc)?

.....

5) Specific software use:

(a) Explain the purpose of the “Get It” button as in  ?

.....

(b) You click on the “Get It”  button and receive the following message: “No full-text available.” What do you do next?

.....

(c) Do you use RefWorks – Online Research Management, Writing and Collaboration Tool?

YES \_\_\_\_\_ NO \_\_\_\_\_

If yes, for what purpose do you use RefWorks?

.....

(d) Do you use the Foxy Leddy LibX Toolbar – a toolbar that allows you to quickly search the University of Windsor's Library resources?

YES \_\_\_\_\_ NO \_\_\_\_\_

If yes, for what purpose do you use the Foxy Leddy LibX Toolbar?

.....

(e) Do you find library resources easy to access and use?

YES \_\_\_\_\_ NO \_\_\_\_\_

If not, please specify some main difficulties you have encountered.

.....

(f) List the ways in which you think library services could be improved to better suit graduate students' needs.

.....

***Thank you!***

***Voluntary contact information***

If you wish to participate in a qualitative follow-up study, please leave your name, phone number or email:

Name: \_\_\_\_\_ Telephone number: \_\_\_\_\_

E-mail: \_\_\_\_\_

**Appendix B:***Table 1a**Descriptive Statistics for IL Results for Master of Social Work Students**Part 1A: Modified B-TILED survey: Quantitative Research Questions*

Variable	Variable Categories:	N	%	B-TILED <i>M</i>	B-TILED <i>SD</i>
Gender	Male	5	11.4%	12.60	5.771
	Female	39	88.6%	13.69	3.001
Student Status	Full-Time	41	93.2%	13.61	3.434
	Part-Time	3	6.8%	13.00	2.000
Year of Study	First Year	23	52.3%	12.57	3.847
	Second Year	21	47.7%	14.67	2.309
Program of study (Master's students only)	Course work only	14	31.8%	13.43	3.817
	Course work and special research project (Major Paper)	30	68.2%	13.63	3.168
Age Group	20-29	33	75.00%	14.00	3.021
	30-39	5	11.36%	14.20	3.033
	40-49	4	9.09%	12.75	3.500
	50-60+	2	4.55%	6.50	2.121
# of Courses Completed	Less than 6 courses	23	52.3%	12.57	3.727
	6 or more courses	21	47.7%	14.67	2.517
Last Completed Degree	Bachelor of Arts	23	52.3%	14.74	2.416
	Bachelor of Social Work	21	47.7%	12.29	3.783
English as First Language	Yes	37	84.09%	13.68	3.010
	No – EAL (English as Additional Language)	7	15.91%	13.57	5.033
<b>Total</b>		<b>44</b>		<b>13.57</b>	<b>3.344</b>

*Table 1b**Part 1B: Open-ended TAM questions: Qualitative Research Question**Descriptive Statistics based on the Graduate Student's Past Experience at the Library**Instructions at the Current Institution*

Variable	Variable Categories:	N	%	B-TILED <i>M</i>	B-TILED <i>SD</i>
Ability to search Library Databases	2	3	6.82%	12.33	1.155
	3	12	27.27%	12.33	4.960
	4	25	56.82%	14.24	2.368
	5	4	9.09%	14.00	3.559
Ability to search the Internet	2	1	2.27%	11.00	.
	3	5	11.36%	11.60	5.459
	4	22	50.00%	13.50	3.391
	5	16	36.36%	14.44	2.337
Library Tour	Yes	23	52.3%	14.70	2.530
	No	21	47.7%	12.33	3.733
Classroom Instruction	Yes	23	52.3%	13.74	3.922
	No	12	27.3%	13.17	3.215
	None was organized	9	20.5%	13.67	1.803
Library Instructions	Yes	20	45.5%	14.65	2.455
	No	24	54.5%	12.67	3.749
One-on-one instructions	Yes	9	20.5%	13.89	2.315
	No	35	79.5%	13.49	3.584
Instructional Needs	Yes	39	88.6%	13.54	3.417
	No	5	11.4%	13.8	3.033
Total		44		13.57	3.344

Table 2a

*Part 1A: ANOVA Results for IL Results for Master of Social Work Students*

Variable	df	MS	F	Sig.
Gender	1	5.288	.467	.498
	42	11.322		
Student Status	1	1.039	.091	.764
	42	11.423		
Year of Study	1	48.477	4.710	.036*
	42	10.293		
Program of study	1	.400	.035	.853
	42	11.438		
# of Courses Completed	1	48.477	4.710	.036*
	42	10.293		
Last Completed Degree	1	66.075	6.692	.013*
	42	9.874		
English as First Language	1	2.687	.236	.630
	42	11.384		
Total	43	480.795		

\*p&lt;.05

Table 2b

*Part 1B: ANOVA Results for IL Results for Master of Social Work Students*

Variable	df	MS	F	Sig.
Library Tour	1	61.259	6.133	.017*
	42	9.989		
Classroom instruction	2	1.347	.116	.891
	41	11.661		
Library Instructions	1	42.912	4.116	.049*
	42	10.426		
One-on-one instructions	1	1.164	.102	.751
	42	11.420		
Instructional Needs	1	.303	.026	.871
	42	11.440		
Total	43	480.795		

\*p&lt;.05

Table 3a

*Ease of Use ANOVA Mean results*

Variable	Variable Categories:	N	%	B-TILED <i>M</i>	B-TILED <i>SD</i>
Ease of Use	Yes	28		14.43	2.741
	No	15		12.13	3.962
Total		43		13.63	3.344

Table 3b

*Ease of Use ANOVA results*

Variable	df	Mean Square	F	Sig.
Ease of Use	1	51.456	4.992	.031*
	41	10.307		
Total	42	480.795		

\*p&lt;.05

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