

## **Guest Editorial: Celebrating the Two Year Anniversary and Announcing the Fifth Issue**

With all the supports from international LIS community and the dedications of our editorial team, the *International Journal of Librarianship* has been proceeding steadily. At this point, *IJoL* has published 4 issues and 45 articles. Among them, there are 4 editorial reports, 21 featured articles, 3 reports from the field, 2 commentaries, 7 book reviews, 3 articles on LIS education around the world, and 5 news reports. These articles covered a wide variety of topics including information literacy, digital resource discovery, makerspace, digital stewardship, social science data services in both public and academic libraries in Canada, China, Finland, South Africa, UK, and USA.

Below is a quick run-down of the fifth issue:

### **“Featured Articles” section**

Magliaro and Munro analyzed the information literacy needs and levels of 44 social work graduate students at a mid-sized Canadian university using the Technology Acceptance Model in their article titled “*Study of the Information Literacy Needs of Social Work Graduate Students at a mid-sized Canadian university.*” The analysis from this study provides a more holistic presentation of social work graduate students’ information literacy needs.

By telling the story of the Berlin State Library in the twentieth century in the article titled “From a Divided Library in a Divided City to One Library in Two Houses: A Centennial for a Great European Research Library Reunited and Restored,” Daniel William Kinney discussed the impact of different historical eras on the library as a cultural institution and how the library is once again serving international scholarship and preserving an important part of the world’s documentary heritage despite destruction of the building and the evacuation and loss of collections.

In their article, “*Shared Next Generation ILSs and Academic Library Consortia: Trends, Opportunities and Challenges,*” Liu and Fu reported two case studies of the adoption of Shared Next Generation ILSs in academic library consortia. One library consortium of 39 academic libraries in Oregon, Washington, and Idaho has completed the migration. The significant impacts, numerous opportunities and challenges from the shared next generation ILS on its member libraries have been discussed. The other library consortium of 21 university libraries in Ontario, Canada is currently launching and implementing the new system.

In her article “*New Developments of Chinese Government Publications and Library Collections,*” Xue discussed the scope of Chinese government publications, its availability in digital format, the types of publications libraries usually collect, and opportunities and challenges in collecting them.

Nero and He described the process and workflow of the quality control of cataloging tangible and

electronic resources in their library; and also discussed why quality control on cataloging is performed. The importance of training cataloging staff on current cataloging rules and practices as a preventive measure to reduce mistakes is an essential part of the process. The ultimate goal of quality control is to eliminate errors and ensure the library's resources are accessible.

### **Commentaries section**

In the paper titled "*Vocabulary Integration Reexamined*," Dr. Choi reexamined the issues and challenges in vocabulary mapping and integration between different controlled vocabulary systems. The paper outlined the history of the study of vocabulary mapping efforts and suggested a way in which the emerging practices on semantic issues and mapping problems can be articulated.

### **Library Associations Around the World**

In his article "*Promoting translational research within the global library and information community: access to research dissemination, promotion of timely issues, and professional development through IFLA Journal*," Professor Witt, the Editor of IFLA Journal described how IFLA Journal seeks to help bridge the gap between research and practice in the global LIS profession through an editorial process and publishing mandate by encouraging mixed methods approaches to research, and engaging librarians and their communities in the research process.

### **News section**

Michael Huang and *IJoL* Editor-in-Chief Guoying Liu reflected upon their conference experiences in *the 9th Shanghai International Library Forum (SILF 2018)*. This international conference promotes international interaction and collaboration among LIS community.

Lastly, I would like to thank all the editors and peer reviewers who worked tirelessly on this issue. I would also like to extend my gratitude and thankfulness to all the content contributors for this issue.

**Xiaoai Ren, Valdosta State University**



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

Jelena Magliaro and Sharon Munro

### 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.

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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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<b>Study</b>	<b>Participants</b>	<b>Purpose</b>	<b>Method</b>	<b>Results</b>	<b>Limitations</b>	<b>Recommendations</b>
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.
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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<.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<.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

Note:

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## From a Divided Library in a Divided City to One Library in Two Houses: A Centennial for a Great European Research Library Reunited and Restored

Daniel William Kinney

### Abstract:

The Berlin State Library—Prussian Cultural Heritage Foundation probably suffered more from the vicissitudes of the twentieth century than any other German cultural institution. It experienced the destruction of the building and the evacuation and loss of collections. Like Berlin, it was divided after World War II and was reunited after Berlin was reunited. In 2018, the library marks a century since the establishment of the Prussian State Library. But the legacy of the past century remains. Significant collections are still held in Eastern European libraries and the library must undertake the restitution of books acquired directly or indirectly through Nazi persecution. This article draws upon resources written in German and English to present the story of an important library that was under duress for much of the twentieth century. It discusses the impact of different historical eras on the library as a cultural institution and on the documentary heritage embodied in the library's rich collections. Although problems caused by these events remain, with reunification and restoration, the library is once again serving international scholarship and preserving an important part of the world's documentary heritage.

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## **From a Divided Library in a Divided City to One Library in Two Houses: A Centennial for a Great European Research Library Reunited and Restored**

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### **ABSTRACT**

The Berlin State Library—Prussian Cultural Heritage Foundation probably suffered more from the vicissitudes of the twentieth century than any other German cultural institution. It experienced the destruction of the building and the evacuation and loss of collections. Like Berlin, it was divided after World War II and was reunited after Berlin was reunited. In 2018, the library marks a century since the establishment of the Prussian State Library. But the legacy of the past century remains. Significant collections are still held in Eastern European libraries and the library must undertake the restitution of books acquired directly or indirectly through Nazi persecution. This article draws upon resources written in German and English to present the story of an important library that was under duress for much of the twentieth century. It discusses the impact of different historical eras on the library as a cultural institution and on the documentary heritage embodied in the library's rich collections. Although problems caused by these events remain, with reunification and restoration, the library is once again serving international scholarship and preserving an important part of the world's documentary heritage.

**Keywords:** Research Libraries, Germany, Berlin, International Librarianship

January 1, 2017 marked the twenty-fifth anniversary of the Berlin State Library—Prussian Cultural Heritage Foundation and the reunification of the former Prussian State Library, which during the Cold War was split into two separate libraries: the German State Library in East Berlin and the State Library, Prussian Cultural Heritage Foundation in West Berlin. Peter Whitehead (1976), who was a zoologist at the Natural History Museum, London, wrote that before the war, Berlin, together with Paris and London housed one of the very great European libraries (p. 7). The reunification of the former Prussian State Library ended almost half a century of division brought about by the devastation of the Second World War and the division of Berlin during the Cold War. Hans Stimmann (1997), former secretary of the Berlin Senate's Department for Urban Development, Environmental Protection, and Technology, wrote that nothing epitomizes more the deep-seated and difficult division of Germany and Berlin than the history of the Berlin State Library in the twentieth century (p. 75). In 1992, the East and West Berlin libraries became one library in two houses. The story of the Berlin State Library is the story of a phoenix among European research libraries. It rose from the ashes of World War II, survived the Cold War and the Berlin Wall, and, with the reunification of Germany and Berlin, returned to its former status as the largest research library in German-speaking lands. The events of the past hundred years have affected the library as a cultural heritage institution as

well as the world's documentary heritage embodied in the library's collections. The account that follows tells the story of the survival of a great European research library threatened by the tumultuous events and social upheaval of the twentieth century. It remains a timely example of the troubled fortunes of the world's cultural and documentary heritage in countries and regions ravaged by war and conflict.

### **HISTORICAL OVERVIEW (1661-1945)**

The former Prussian State Library was founded in 1661 and was known as the Library of the Elector until 1701 when it became the Royal Library. In the nineteenth century, Prussia began to place great importance on education. Wilhelm von Humboldt understood that libraries were essential to research and scholarship and he considered the Royal Library the central scholarly institute of his planned Berlin University (Kunze & Dube, 1961, p. 22). A new library building on Unter den Linden in the center of Berlin, which was considered "the best and most beautiful library building in the world," (Richards, 1984, p. 233) was dedicated in 1914 in the last royal ceremony before the First World War. After the abdication of Kaiser Wilhelm II in 1918 until the defeat of the Third Reich in 1945, the library was known as the Prussian State Library. Before the Nazi seizure of power, the Prussian State Library had a worldwide reputation based on its collections and services. The list of eminent librarians that served in the library has been described as a "hall of fame of librarianship" (Reichmann, 1962, p. 225). It had become the world-class library demanded by the great classicist and Nobel Prize winner Theodor Mommsen in speeches given before the Prussian House of Representatives in the 1870s (Mommsen, 1905).

The Third Reich (1933-1945) was a dark period in the library's history. Located in the capital city, the Prussian State Library was the dominant library in the nation and it was closely controlled by the Nazi Party. During the Third Reich, German libraries were subject to Nazi racial laws and ideology. The passage of a civil service law for the professions in 1933 required that library staff of non-Aryan descent or staff who were political opponents of National Socialism be dismissed. Georg Leyh, director of the University Library at Tübingen, characterized the impact of the law as a "moral earthquake" (Dosa, 1974, p. 59). As a result of this law, "many eminent librarians were harassed, demoted, dismissed, or imprisoned" (Dosa, 1974, p. 60).

The trauma caused to the library by the Nazis and the war would last for decades. In a report written in 1947, Leyh describes the destruction and devastation of German libraries as a catastrophe without comparison in the history of knowledge and the history of libraries (p. 5). Klaus-Dieter Lehmann (1997), former president of the Prussian Cultural Heritage Foundation, noted that no other cultural establishment in Germany suffered so long and intensively as the Prussian State Library. Almost three hundred years of tradition were shattered by bombing raids in 1944 (p. 59). These traditions had enabled the library to develop world-famous special collections of incunabula, manuscripts, rare books, and especially music materials and to assume a leadership role in German librarianship and library education. The library was first struck by a bomb on April 9, 1941. The damage to the building was not extensive, but it made the library administration very aware of the danger to the library's collections. During World War II, the library's collections were sent to thirty storage depots for safety from air raids. Approximately 850,000 volumes, almost 30 percent of the library's print collection, never returned to the library from storage (Schochow, 2003, p. 307). The Berlin State Library estimates that about 335,000 volumes, including the alphabetical book catalog, were destroyed (Breslau, 1995, p. 8).

Richard S. Hill, a reference librarian in the Music Division of the Library of Congress, wrote about the condition of the library building after visiting Berlin in June 1946. He reported that the library was hit by ten big bombs and innumerable fire bombs (p. 327). The worst damage was done on February 16, 1944 when a bomb hit the center of the building:

- The bomb came through the dome over the big, circular reading room, plunged unimpeded through the equivalent of six or seven open stories, and cut through three stack levels under the floor of the room. The explosion blew out half of the dome, and opened up three huge, roughly concentric rings in the successive floors of the stacks, leaving twisted remnants of the steel shelving showing as the rings get smaller at each descending level. It looks like a gruesome architect's model, with sections excised to show the construction within (Hill, 1946, p. 328).

The same air raid left the Music Division's reading room unusable. Damage to the library from other air raids included the destruction of the Incunabula Division, a large, triangular slice taken out of the building, and a rent in the ceiling through which the sky could be seen (Hill, 1946, p. 328-329). As Hill notes, had the library not evacuated its collections, the damage would have been "incalculable" (p. 328). Marta L. Dosa states: "Most of those who witnessed this devastation were convinced that the library had lost its leading position for decades to come" (Dosa, 1974, p. 167).

It was not until the present century that the damage done during the Second World War was repaired. The corner stone for the rebuilding of the library on Unter den Linden was laid in April 2006, and the topping-out ceremony for the library took place in February 2008. In March 2013 the new general reading room was opened, and in July 2013, the restored frame of the cupula over the main entrance that was destroyed in the air raid in 1941 was crowned with a wreath. After three-quarters of a century, the restored historic building once again graces the heart of Berlin. The architectural firm of H. G. Merz won an international competition in 2000 for the restoration of the building on Unter den Linden and the rebuilding of the reading room. Merz designed a glass cube to replace the original octagonal reading room. Light is an important element in the design of the reading room, which has been described as a "light cube." The building on Unter den Linden can once again assume its historical reputation as the "cathedral of knowledge" (Kress-Adams and Adams, 2013, p. 51). Images of the original reading room and the new reading room are on the library's website (<http://staatsbibliothek-berlin.de/>).

## **THE COLD WAR ERA**

Despite extensive damage to the building and the loss of collections and staff, the former Prussian State Library reopened on October 1, 1946 in East Berlin under the name Public Research Library. Rudolf Hoecker, who had previously worked in the Periodicals Division of the Prussian State Library and served as director of the Berlin University Library from 1930 until 1933, became the director. The Nazis forced Hoecker to resign from his position as director of the University Library because he was a member of the Social Democratic Party, which ultimately made him particularly acceptable to the Soviets (Hill, 1946, p. 330). The library on Unter den Linden was renamed the German State Library in 1954. During the years of the German Democratic Republic (1949-1990), the German State Library in East Berlin was once again dominated by political ideology: its mission was to serve the socialist society (Kunze, 1961, p. 73). The library's new mission was symbolized by Werner Stötzer's bronze



relief entitled "Questions of a Reading Worker" (also the title of a poem by Bertolt Brecht) and his bronze sculpture "Reading Worker" was installed in the library's fountain courtyard in 1961. The change from the library's tradition of serving primarily researchers and scholars to becoming a research library that also served the general public in a communist state required the ideological retraining of the staff (Dosa, 1974, p. 167). The Stasi, the East German secret police, even had the library bugged (Zimmer, 1990, p. 3).

There was censorship of library materials under the communist government as well. In the years right after the war, the work of the library was supported by the Soviet Military Authority, which ordered the removal of fascist and militaristic literature (Kunze, 1961, p. 56). Whereas the Nazis banned "decadent" and Jewish literature, the Socialist Unity Party, or the SED (Sozialistische Einheitspartei Deutschlands, or Socialist Unity Party of Germany) took anti-socialist literature out of circulation. Training and professional development of staff were directed towards the creation of a socialist work community (Kunze, 1961, p. 71). Party membership was important for advancement under the communist regime, just as it was under the Nazis.

Hoecker wrote to General Eisenhower in August 1945 requesting the return of collections stored in Hattorf in the district of Göttingen in Lower Saxony, but the collections stored in Hattorf and in other places in the American Occupation Zone (Banz Castle in Bavaria, and Laubach Castle and Arnsburg Abbey in Hesse) were sent to Marburg in West Germany. The collections stored in Beuron Abbey in Baden-Württemberg, which was in the French Occupation Zone, were sent to the university library in Tübingen in West Germany. Eisenhower's deputy General Lucius D. Clay did order the return of books that had been evacuated to Tepl in the Sudetenland and transported to Frankfurt am Main by American troops, who discovered them still in freight cars on a railroad siding. The approximately 350,000 volumes were stored in the Offenbach Archival Depot, and when Captain S. J. Pomrenze, the officer in charge of the depot, requested permission to store them elsewhere, Clay had them returned to Berlin (Hill, 1946, pp. 348-349). The American authorities in Berlin received a letter of thanks stating that the returned collections would form the basis for "the reconstruction of the library" (Schochow, 2003, p. 158). The collections housed in Marburg and Tübingen were returned to West Berlin in the 1960s. From 1968 until the reunification of the former Prussian State Library, the library in West Berlin was named the State Library, Prussian Cultural Heritage Foundation. In 1978, it moved into a new building on Potsdamer Straße designed by renowned architect Hans Scharoun. The East German view after the adoption of the law establishing the Prussian Cultural Heritage Foundation in 1957 was that the collections housed in the American and French zones were held in trust and that the West was depriving the German State Library of its rightful ownership of these collections through formal legalistic tricks (Schmidt, 1961, p. 85).

Hill wrote in his 1946 article that he wanted to apprise American scholars who believed that, since the war had ended, they could gain access to German library materials that it could be "at least a few months longer" before the political situation of a divided country that was hindering access to library collections would be solved (p. 327). But access to materials that belonged to the former Prussian State Library would be difficult throughout the Cold War. The West Berlin library's name and its refusal to return the collections to the library in East Berlin extended the Cold War to the now separate libraries with each claiming to be the successor of the Prussian State Library. Bach scholar Robert L. Marshall described the difficulties of conducting research in a divided Berlin:

In Berlin the priceless collection of music manuscripts, including vast numbers of autographs of Bach, Mozart, and Beethoven, is fairly divided

between East and West. But the catalogue of the manuscripts is still in East Berlin. What this means is that a user must first go to East Berlin—no easy matter itself—to get a call number for the item he needs, and then return to West Berlin to fetch it. The reason for this complication is that East Berlin claims that the manuscripts in West Berlin actually belong to them—since, before the war, they were all housed together on Unter den Linden—and were only separated and dispersed (with many of them remaining in the regions that now constitute West Germany) to avoid destruction during the bombing of the city during the war. Accordingly, there is little disposition on the part of the authorities in the East to cooperate with Western scholars looking for materials in West Berlin; and they refuse to answer inquiries on the phone (1990, p. 2).

And the two libraries were just over a mile apart!

There were, however, notable accomplishments during the time of the East German Democratic Republic. The change of the name from Public Research Library to the German State Library was intended to express the place of the library in German and international librarianship (Kunze, 1961, p. 66). From the start, great attention was paid to the acquisition of material from the Soviet Union and other socialist countries. Emphasis was placed on the natural sciences, technology, medicine, and agriculture. These disciplines were considered important for supporting a socialist society (Kunze, 1961p, 58). The Music Department was championed as an example of the library's international standing. In addition to its extraordinary collections, it cooperated with the RILM project (*Répertoire International de Littérature Musicale*), was a member of the International Association of Music Libraries (IAML), and participated in international congresses. The German State Library opened a new department for Children's and Youth books in 1951 that included books from all over the world (Kunze, 1961, pp. 62-63). It was a research collection that specialized in historic children's literature and the secondary literature in this area of study. Beginning in 1978, the library expanded the scope of the collection to include original illustrations for children's books and books for young adults.

In the *Festschrift* for the three-hundredth anniversary of the library, Kunze (1961) mentions three things that needed to be accomplished in the future: reuniting the almost two million volumes of the former Prussian State Library that were held in the West with the collections in East Berlin, the restoration of the domed reading hall destroyed in an air raid, and the application of technology and automation to the library's operations. (p. 75). These three goals would not be accomplished during the fifty-year history of the German Democratic Republic. By the 1980s, the economic problems of the German Democratic Republic were causing great difficulties for the German State Library in East Berlin. Librarianship in East Germany was outdated and ideologically restricted. Priceless volumes were stored in four concrete book towers for lack of space, and many books were moldy and unsalvageable. There was no electronic data processing for basic library functions, such as cataloging and circulation. The library lacked bookbinding capabilities for the preservation of the collections. Technology for information exchange and access to international databases was absent. Telephone lines were not stable and did not support such access (Zimmer, 1990, p. 2).

The day before the fall of the Berlin Wall on November 9, 1989, the president of the East German Library Association Karl-Heinz Jügelt presented the association's position on the renewal and reform of the library and information science system in East Germany to the East German Council of Ministers and the Central Committee of the SED, the East German Communist Party (*Bibliotheksverband der Deutschen Demokratischen Republik*, 1990). The

document began with a statement on the importance of the nation's library and information system to the progress of all areas of their socialist democracy. Despite the best efforts of all types of libraries, the growing demands from the fields of scholarship, education, and culture were not being satisfactorily met.

The document enumerated problems and issues that needed to be addressed to meet demands and modernize the library and information science system in the German Democratic Republic. Technology, equipment, furnishings, space, and buildings were at the top of the list. The technological capabilities of East German libraries were not at the same level as in Western countries, especially with regard to online catalogs, databases, and fax service. There was also the need for software and standards. As a consequence of these problems, East German libraries could not take part in international cooperative efforts and were falling further and further behind. In addition, foreign subject literature and data storage media were not sufficiently available or not at all available. The position paper stated that unless these problems were addressed, the result would be the inability of East Germany to compete internationally. The document called for increased financial support from the East German government and criticizes the low value placed on libraries by the SED. There is also mention of the low pay of librarians, which was behind that of other specialists. The report notes the urgent need for restoration, conservation, and preservation of rich cultural heritage collections and the necessary personnel, financial, and technical means to pursue UNESCO's appeal for national preservation programs. In 1990, the year of German reunification, Dieter Schmidmaier, the last director of the German State Library in East Berlin, wrote a position paper on the status and place of that library in a renewed East German library system that echoed the problems and issues described in the position paper published by the East German Library Association (Schmidmaier, 1990).

## **THE AFTERMATH OF THE SECOND WORLD WAR AND THE COLD WAR**

Today, the Berlin State Library remains greatly affected by events that occurred more than three-quarters of a century ago. Dominik Sackmann wrote in 1998: "The past is present. Nazism, the Shoah, and two world wars continue to reverberate even at the end of the twentieth century" (Sackmann, 1998, p. 160). That statement is still true almost two decades into the twenty-first century. The destruction of Europe's cultural heritage and the confiscation and looting of cultural treasures and artifacts by the Nazis continue to be important issues more than seven decades after the end of the Second World War. Books such as *The Rape of Europa* (Nicholas, 1994), *The Monuments Men* (Edsel & Witter, 2010), and *The Lady in Gold* (O'Connor, 2012) attest to the interest in these topics. A recent addition to the list of works is *Stolen Words: The Nazi Plunder of Jewish Books* by Mark Glickman (2016). Rabbi Glickman recounts how the Nazis raided homes, libraries, and other institutions to amass millions of books and other materials owned by Jewish citizens.

### **The Fate of the Treasures Evacuated from the Prussian State Library**

Some of the collections belonging to the Prussian State Library that were evacuated during the war became the spoils of war. Collections that were stored in areas that after the war became part of Poland have not been returned, and books transported out of Germany and the storage depots by the Red Army and distributed to libraries in Eastern Europe have also not been returned. Many of the Prussian State Library's greatest treasures were evacuated to Grüssau Abbey (today Krzeszów Abbey in Lower Silesia, Poland) in 1944 and transported to Kraków

in 1946. For over thirty years the fate of the collections stored in Grüssau Abbey was unknown. The fear was that these collections were destroyed in the war. More than 500 cases from the library's Manuscript Department containing manuscripts of some of the world's most important composers were stored in Grüssau. The treasure trove of music manuscripts included almost a quarter of the known surviving Mozart manuscripts, as well as manuscripts of Bach, Beethoven, Brahms, Haydn, Schubert, Schumann, Mendelssohn, Meyerbeer and others (Lewis, 1981, p. 37). The presumed loss of so many Mozart manuscripts had a profound impact on the publication of the *Neue Mozart Ausgabe* (Mozart, 1955-1991), the new edition of the complete works of Mozart. The authoritativeness and completeness of this new definitive edition of Mozart's works were threatened from the outset (Lewis, 1981, pp. 95-96).

The Varnhagen Collection, also stored in Grüssau, was important for the study of early German Romantic literature. The collection originally belonged to Karl Varnhagen von Ense and contained the papers of his wife Rahel Varnhagen, Goethe, Wilhelm von Humboldt, the Schlegel brothers, Heine, Hegel, Fichte and others (Hertz, 1981, p. 224). In the preface to her biography of Rahel Varnhagen, Hannah Arendt mentions that the extensive correspondence between Rahel Varnhagen and Pauline Wiesel contained in the Varnhagen Collection was the greatest loss to her book, because the letters were the most important source on Rahel Varnhagen's life after her marriage. Arendt also intended to include some letters and diaries in notes and in an appendix to her biography (1974, pp. iii-xiv). Among the other treasures stored in Grüssau were natural science watercolor paintings and oil paintings from a seventeenth-century Dutch expedition to Brazil that Count Johann Moritz von Nassau-Siegen gave to Friedrich Wilhelm, the Great Elector of Brandenburg, as a gift in 1652 (Lewis, 1981, pp. 25-26). Only sixty-two of the approximately two thousand drawings and paintings important to the fields of ethnology, zoology, and botany had been photographed (Whitehead, 1976, p.11). Manuscripts from the Oriental and East Asian Department, genealogical collections, personal papers, etc. were also included in the materials stored in Grüssau (Schmidt, 1961, p. 82). The mystery was finally solved in 1977 when it became publicly known that the Grüssau collections were in the Jagiellonian Library in Kraków.

Nigel Lewis (1981) tells the fascinating story of the evacuated Grüssau treasures in his book *Paperchase: Mozart, Beethoven, Bach...The Search for their Lost Music*. When it became known that these valuable collections were in the Jagiellonian Library, Poland's First Secretary Edward Gierek ceremoniously returned the manuscripts of Mozart's *Magic Flute*, the orchestral score (minus the choral finale) of Beethoven's *Ninth Symphony*, and five other manuscripts by Mozart, Bach, and Beethoven to East German General Secretary Erich Honecker after the ratification of a friendship treaty in May 1977. The remainder of the collections from Grüssau is still in the Jagiellonian Library. Werner Schochow (2003) has written an account based on primary sources of the evacuation and storage of the Prussian State Library's collections and the fate of the collections in the various storage depots after the war.

### **Overview of the Political Situation**

Poland suffered large-scale destruction and plunder of its cultural property during the Nazi occupation. The Polish government-in-exile and the Polish underground in occupied Poland coordinated efforts to register this cultural looting for future compensation demands. Karol Estreicher, an art historian and bibliographer at the Jagiellonian University, was the leader of this effort. Estreicher was chiefly responsible for the publication of *Cultural Losses of Poland* (Estreicher, 1944). It was an index of losses suffered by cultural institutions that could be used in determining compensation and restitution after the war (Sroka, 2012, p. 9). The Soviet Union also experienced severe cultural losses during the German invasion. In the 1990s

there were still strong sentiments about the war. The Russians too wanted compensation, even if it meant selling what was termed "trophy literature" on the antiquarian market (Sutter, 1994, p. 408). Similarly, the Polish viewpoint in the 1990s concerning the collections of the former Prussian State Library was that they are in the Jagiellonian Library as a result of the war that Poland did not start (Sroka, 2007, p. 660). Marek Sroka summarizes the stalemate between Poland and Germany with regard to the collections still in the Jagiellonian Library:

The fall of communism and the unification of Germany did indeed change the character of negotiations. Poland was no longer negotiating with one of two German states that were often in competition with each other. Moreover, the Polish government no longer had to be concerned that its foreign policy follow the dictates of the Soviet Union as it had for the previous fifty years. Paradoxically, this may have made future negotiations more challenging as Poland and East Germany (now the Federal Republic of Germany) were conducting their foreign policy as sovereign states for the first time since the end of World War II (2007, p. 659).

Thus, the greatest impediment to the return of collections still held in East European libraries remains the question of war reparations.

### **Treasures Returned, Treasures Retained**

The Prussian State Library experienced two kinds of expropriation of books and collections during the Third Reich and after the war. Whereas collections originally belonging to the former Prussian State Library became war plunder, the Nazis also confiscated books and collections from individuals and institutions and distributed them to German libraries. Cornelia Briel (2013) published an important study of the Prussian State Library's role in the Nazi confiscation of books. Since the Prussian State Library was central to the German library system, it was heavily involved in the acquisition and distribution of library materials stolen by the Nazis (Briel, 2013, p. 303).

The Washington Conference on Holocaust-Era Assets sponsored by the U.S. State Department and the U.S. Holocaust Memorial Museum in 1998 provided the impetus to investigate the issue of confiscated books still in the library's collections. In December 1999, the German federal government, states, and municipalities issued a joint declaration on the discovery and return of property confiscated as a result of Nazi persecution and still in the possession of public institutions (Kultusministerkonferenz, Germany, 1999). In February 2001, the Federal Commissioner for Culture and Media issued a set of recommendations that required libraries to search for Nazi-confiscated materials in their collections (Germany, *Beauftragte der Bundesregierung für Kultur und Medien*, 2001). This required a systematic analysis of the provenance of books that may have been confiscated by the state and National Socialist organizations from Jewish citizens and institutions, Communists, Social Democrats, Freemasons, church establishments, etc. and integrated into the collections of research and public libraries (Bödeker & Bötte, 2008, p. 6). As the successor to the Prussian State Library, the Berlin State Library has endeavored to identify books in its collection that were acquired directly or indirectly through Nazi confiscation, research their provenance, and return them to their rightful owners or their heirs. The quest to determine provenance and to restitute stolen property includes searching the Yad Vashem Names Database. Books that are possible Nazi stolen property have clues to their provenance documented in the online catalog and are listed in the International Database of Lost Art in Magdeburg.

Examples of success include the return of the private library of Rabbi Leo Baeck to his granddaughter in New York in April 2006 and the return of a collection of music archival

materials that belonged to the pianist Arthur Rubenstein to three of his children on May 5, 2007 in New York (Hollender, 2006, pp. 32-37)). Confiscated or stolen books were sometimes inventoried as gift books (Pudler, 2008, p. 149 n.8). An examination of the records for gifts enabled the Berlin State Library to return 330 books confiscated from the Potsdam Masonic Lodge (Schneider-Kempf, 2013, p. 8). In 2010, the Berlin State Library returned two volumes printed in the seventeenth century that came from the library of Wilhelm-Friedrich, count of Lynar, who was hanged as a result of his participation in the July 20, 1944 failed attempt on Hitler's life and whose family was dispossessed by the Nazis. (Staatsbibliothek zu Berlin—Preußischer Kulturbesitz, 2010, p. 16).

With regard to the issue of collections of the former Prussian State Library still held by other libraries, the General Director of the Berlin State Library Barbara Schneider-Kempf (2014) reports that there has recently been some cooperation between the Berlin State Library and the Jagiellonian Library with digitization projects (p. 7). The strengthening of such partnerships with Eastern European libraries is part of the Berlin State Library's strategic plan, as is research into the history and provenance of books stolen by the Nazis (Staatsbibliothek zu Berlin—Preußischer Kulturbesitz, 2015). Since 2009, the library has participated in a series of dialogues with Russian librarians on the return of collections evacuated during the war and transported to the Soviet Union by the Red Army and on the return of books taken from Russian libraries during the German invasion (Schneider-Kempf, 2013, pp. 2-3).

## **THE BERLIN STATE LIBRARY REUNITED AND RESTORED**

In accordance with the German unification treaty, the German State Library in East Berlin was placed under the trusteeship of the Prussian Cultural Heritage Foundation in 1990 and reunited with the State Library, Prussian Cultural Heritage Foundation on January 1, 1992. The conception for the reunification was one library in two houses. It was seen as a way to merge the libraries rationally, economically, and as quickly as possible (Cope, 1999, p. 44). Neither building could house the collections with room left for future growth and adequate space for staff and users. Moreover, the two buildings symbolized the old and the modern Berlin and were located in the heart of the city near three universities and research and cultural institutions. No alternative to the concept of one library in two houses was considered viable by concerned parties, staff, and users (Jammers, 1997, p. 43). But the costs of restoring the old building led the Office of the Federal Auditor General to question the concept (Cope, 1999, p. 45). The general director of the East Berlin library, Dieter Schmidmaier, feared that the high cost of renovations to the war-damaged building on Unter den Linden would place the library low on the list of priorities because of the need to renovate so many public buildings in East Berlin (Eberhart, 1990, p. 616-617). R. L. Cope blames these problems on the SED's bad record in curating the cultural assets taken over from the former Prussian state. The library on Unter den Linden was in many ways left in the same condition as it was when the war ended in 1945, and the reunited library was facing the kinds of problems not dealt with in West Germany since the time of postwar reconstruction. (Cope, 1999, p. 54). The alternative of locating all the collections in the Scharoun building on Potsdamer Straße was examined (Cope, 1999, p. 46), but it was not considered feasible based on cost, functional considerations, and capacity (Jammers, 1997, pp. 46-47). The final costs would eventually need to include the reconstruction of the central reading room destroyed in the war and the demolition of the book storage towers built where the reading room would be located. It should also be kept in mind that the time span between the reunification treaty on October 3, 1990 and the merger of the two libraries on January 1, 1992 allowed a little more than a year for planning the merger.

As originally planned, the library building on Unter den Linden was to be a library for historical research and the building on Potsdamer Straße a modern research and lending library and information center, but several departures from the concept were necessary for practical reasons (Jammers, 1997b, pp. 294-296). The library created nine special collections. The building on Unter den Linden houses music, maps, and a new department for historical prints. The Manuscripts Department, the East European Department, the Oriental Department, and the East Asian Department are in the library on Potsdamer Straße. The combined serials collections from both libraries formed a new department located in a storage unit in Berlin Westhafen. The Children's and Young Adults' Department is temporarily housed in Westhafen.

The planned distribution of books between the two houses was based on publication dates. Since the building on Unter den Linden was to be a library for historical research, books published from 1501 until 1955 were to be housed there, and books published from 1956 on would be housed in the building on Potsdamer Straße (Landwehrmeyer, 1993, pp. 55-57). One complicated problem that needed to be dealt with at the outset was the different catalogs. Although the public catalog of the Prussian State Library had been destroyed, the East Berlin library possessed a catalog of the prewar collection with abridged entries that was intended for internal use. This catalog included items that were in West Berlin, lost, or destroyed. The West Berlin library had no catalog of the prewar collection and had to recatalog the prewar items in its collections. The retrospective conversion of the card catalog and the creation of an online catalog was an imperative (Landwehrmeyer, 1993, pp. 57-60). There were cards in an old form of German handwriting that many staff and users could not decipher. The cataloging records dating before 1890 were not standardized, but later entries followed the Prussian Instructions. Identifying duplicate records in the parallel catalogs was an important consideration. The project resulted in an online catalog that greatly improved access over the handwritten cards and made the holdings of the library available on the Internet (Hartwig, 2006).

The reunification of the East and West Berlin successors of the Prussian State Library was not without personnel issues and problems. The cultural differences between East and West Berliners that was common in Berlin at the time was a source of friction and misunderstanding. Different mindsets had developed over five decades of separation. In a contemporary account of the reunification of the libraries, a West Berliner stated that in East Berlin librarianship was practiced as the West Berliners did thirty years previously and that the East Berliners needed to become familiar with the American style of librarianship. An East Berliner felt slighted by the perceived attitude of superiority exhibited by the West Berliners and noted that they in East Berlin ran a national library with far less means than in the West. (Rückert, 1991, p. 4). To make matters worse, the East Berliners received unequal pay for the same work. Different processes and areas of responsibility needed to be integrated and duplicate work eliminated. Departments needed to be combined and restructured. The staff of the combined serials department faced the fundamental question of what was considered a serial for the purposes of the new department (Zeller, 1999, p. 88). The new organizational structure was primarily that of the West Berlin library, because there were features of the library in East Berlin that were specific to the communist system (Jammers, 1997a, pp. 40-41). Jammers holds that the staff deserve recognition for what was accomplished during the difficult transition (Jammers, 1997b, p. 40). Cope hopes for a better future for the library, because "the achievements of its staff over earlier decades merit no less" (Cope, 1999, p. 55).

Since the reunification of the library, the call for the application of advanced technology and national and international cooperation made by Dieter Schmidmaier and others has been met in full measure. The many digitization projects undertaken by the Berlin State Library evidence the library's creative use of technology and show that it is both a partner and a leader

at the international level. The library has been recognized by other nations and entities, which substantiates its worldwide reputation.

The field of East Asian scholarship is one area in which the Berlin State Library has had a significant impact from its founding in the seventeenth century. Guido Auster (1961) and Werner Knopp (1999) describe the development of the library's East Asian collections. The library has continued this tradition into the current century by dedicating itself to the acquisition of digital resources in East Asian studies. One of the first achievements in this area was the award-winning *Internet Guide for Chinese Studies* maintained by the Sinological Institute at Leiden University and supported by the Berlin State Library, Heidelberg University, and the German Research Foundation. The Berlin State Library has developed virtual subject libraries, which Ann Lipp has described as the digital face of the library's special collections. Lipp highlighted *CrossAsia*, the virtual subject library for East and South Asia (Lipp, 2011, p. 59). In 2009, Minister of General Administration of Press and Publication Liu Binjie presented General Director Barbara Schneider-Kempf with the gift from the Chinese government of an expensive database in Chinese studies, which was made available on *CrossAsia* and which greatly increased the library's offerings of electronic reference sources and newspapers from China. With this gift, the Chinese government recognized and supported the library's long history of developing its East Asian collections (Chinesische Datenbank, 2010, p. 86). The Berlin State Library began digitizing material from its East Asian collections in 2009. The project to digitize East Asian materials is a good example of the library's efforts at international cooperation. The library collaborated with the Jagiellonian Library on this project, and the East Asian collections of the former Prussian State Library now housed in Kraków were reunited virtually with the collections in Berlin (Siebert, 2011, p. 61).

The "Europeana 1914-1918" digital collection is an example of the international leadership role of the Berlin State Library. As part of the centenary commemoration of World War I, the library led a consortium of ten national libraries from eight European countries, including the Bibliothèque nationale de France and the British Library, and two additional partners in the development of a common virtual collection on World War I comprised of letters, diaries, photographs, music, newspapers, and other items from the special collections of national libraries. The online collection of about 400,000 sources presents a comprehensive overview of life on the front and in the homeland. The Berlin State Library contributed 6800 digital objects to the collection.

## CONCLUSION

Karol Estreicher, the proponent of restitution for Poland's cultural losses, wrote in his diary in 1940 that the cultural heritage of a nation is essential for its survival (Sroka, 2012, p. 6, n.8). UNESCO established the Memory of the World Programme to raise awareness of the world's documentary heritage and to foster its preservation. The program is an international undertaking based on the concept that documentary heritage is an important part of the world's cultural heritage and transcends political and chronological boundaries. International protection of the world's cultural and documentary heritage is critical to the survival of civilization. UNESCO had already promulgated the Hague Convention in 1954 as a legal instrument that obligates the signees to protect cultural heritage in times of armed conflict.

The ordeal of the Berlin State Library during the past one hundred years demonstrates the importance of the UNESCO Memory of the World Programme. Indeed, the library is included on the list of libraries in *Memory of the World: Libraries and Archives Destroyed in the Twentieth Century* published by UNESCO (*Memory of the World*, 1996, p. 10). Damage



to the cultural property of any nation damages the cultural heritage of all humankind. There is a need for international protection of our global cultural and documentary heritage. To publicize the universality of the program, UNESCO's Memory of the World Programme has established the *Memory of the World Register* of items that are a part of the cultural heritage of all. The Berlin State Library has four items from its collections on the register: the autographs of Bach's *B-minor Mass* and Beethoven's *Ninth Symphony*, a placard of Martin Luther's *Ninety-five Theses* printed in Nuremberg in 1517, and the Hebrew Bible used by Luther in making his German translation of the Bible.

Edmund Burke (1791) likened history to a great volume unrolled for our instruction so that we can learn from past errors (p. 209). The story of the Berlin State Library provides an example of how susceptible libraries and other cultural institutions are to social and political upheaval and to the consequences of war. The Berlin State Library was often mentioned together with the Bibliothèque nationale de France and the British Library as three of the greatest libraries in Europe. Seen in this light, the story of the library provides an understanding of the magnitude of harm done to the world's documentary heritage in the twentieth century by the events described above. There is significant and meaningful documentation to tell this story in detail (Schochow, 1989, p. xi). Further research and publication would underscore the importance of the Memory of the World Programme. Publications in English would reach a wider audience. In Berlin, the old library building has been restored, but the debates about cultural loss, war reparations, and restitution still affect the library (Sroka, 2007, p. 651).

The former Prussian State Library, now the Berlin State Library–Prussian Cultural Heritage Foundation, is famous for its rich collections, exceptional services to its users and to the international community of libraries and scholars, and for its highly qualified and accomplished staff. It is once again one of the world's preeminent research libraries (Staatsbibliothek zu Berlin--Preußischer Kulturbesitz, 2015, p. 7). Its survival is a testimony to the importance placed upon research libraries as cultural and documentary heritage institutions. The Berlin State Library is also a symbol of a reunited Germany. The building on Unter den Linden and the Scharoun building on Potsdamer Straße are registered architectural monuments. Its two houses, once in two different worlds separated by a wall, are now united in the world of books and knowledge (Garber, 1997, pp. 87-88).

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## Shared Next Generation ILSs and Academic Library Consortia: Trends, Opportunities and Challenges

Guoying Liu and Ping Fu

### Abstract:

Next generation Integrated Library Systems (ILSs) have been maturing and adopted by more and more academic libraries. Many academic libraries have joined a consortium to collaboratively move towards a shared next generation ILS that sustains a deeper collaboration. Has this been a trend for academic libraries to share the new system in consortia? This article examines the adoption of the leading products in next generation ILSs to reveal the trend. Two case studies are conducted on A) a pioneer consortial adopter and B) a newly formed partnership on shared next generation ILSs, for further investigations on the impact on consortial members, the challenges the new shared system may cause, and the opportunities it brings to academic library consortia and their members.

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## Shared Next Generation ILSs and Academic Library Consortia: Trends, Opportunities and Challenges<sup>1</sup>

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### ABSTRACT

Next generation Integrated Library Systems (ILSs) have been maturing and adopted by more and more academic libraries. Many academic libraries have joined a consortium to collaboratively move towards a shared next generation ILS that sustains a deeper collaboration. Has this been a trend for academic libraries to share the new system in consortia? This article examines the adoption of the leading products in next generation ILSs to reveal the trend. Two case studies are conducted on A) a pioneer consortial adopter and B) a newly formed partnership on shared next generation ILSs, for further investigations on the impact on consortial members, the challenges the new shared system may cause, and the opportunities it brings to academic library consortia and their members.

**Keywords:** Integrated Library Systems, Next Generation Integrated Library Systems, Library Services Platforms, Consortia, Academic Libraries, Collaboration

### INTRODUCTION

#### Library Consortia

Library consortia are groups of two or more libraries that “partner to coordinate activities, share resources and combine expertise” (Rosa and Storey, 2016, p93). Partnership, or collaboration, is the main purpose of a consortium. Other names have been used for collaborating libraries in library literature as well, such as cooperatives, networks, collectives, and alliances (Horton, 2015). In this article, we adopt the term consortium and/or consortia for libraries that collaborate with each other to achieve common goals.

Library consortia have existed for over a century. Their scope, type and size are varied. The collaboration of libraries can be at the local, regional, national or international level. Some consortia serve exclusively one specific type of libraries, such as academic or

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public, while others include multiple types. Many of them started as academic only and later expanded to include public, special and other types of libraries. (Bostick, 2001; Horton, 2015). The size of a library consortium could be as huge as Online Computer Library Center (OCLC) which had over 22,000 members in 2012 (Horton, 2015), or be very small like Keio-Waseda Consortium which only consists of two members (ProQuest, 2018).

Library consortia's activities are varied as well. A 2006-2007 American Library Association (ALA) national survey on consortia revealed that the most common services and activities within consortia are communication, resource sharing, professional development, consulting and technical assistance and cooperative purchasing. Other less common activities include automation, networking and other technology services, etc. (Davis, 2007). A more recent examination by Rosa and Storey (2016) found that American libraries all face the challenges of funding, evolving role of the library, and the changing nature of scholarly communication. They are "more connected than they have ever been in the history of library and information science" (p85). Resource sharing, cooperative acquisitions and e-content licensing, as well as shared online catalog are among the most used services in library consortia.

### **Next Generation ILSs**

Library automation has experienced several phases of development since its beginning in 1960s (Borgman, 1997). Earliest library systems were created to provide a specific function or resolve a particular issue, such as circulating materials or creating catalog cards. The following efforts are to integrate these separate pieces of software into one system, the Integrated Library System (ILS). A standard traditional ILS normally contains the modules of cataloging, circulation, serials management and open public access catalog (OPAC). This type of systems were designed for print resources management. With the advances of information technology, library automation products based on server/client emerged on the market around mid-1990s. In the meantime, electronic resources started to grow. However the main functional modules of ILSs remain unchanged. A number of add-on library systems were developed to address various library needs beyond what a traditional ILS can meet, such as link resolvers, electronic resource management systems, digital asset management, institutional repositories and discovery interfaces. (Breeding, 2013; Liu, 2015)

The year of 2011 witnesses the start of a new cycle of library automation - the emerging of next generation ILS. Meanwhile, Breeding (2011b) proposed a concept of Library Services Platform (LSP) to differentiate the next generation ILS from the traditional ILS. In this paper, we use next generation ILSs for the new emerging systems to emphasize its integration feature and avoid any confusion it may cause because both LSPs and next generation ILSs have been used often in library literature and libraries. The next generation ILSs are able to manage all forms of library collections including print, electronic and digital resources. They can introduce pertinent workflows according to the type of resources (print or electronic), the call of services (local or remote) and the acquisitions models (purchasing or licensing) (Breeding, 2011b; Liu, 2015). The new systems shall also take advantage of cloud computing and other latest technologies and architectures (Grant, 2012).

Alma from Ex Libris and WorldShare Management Services (WMS) from OCLC are the two earliest products that have been developed from ground up in this area (Wilson, 2012). Since their launch in 2012, both products have been maturing. By the end of 2016, Alma has been adopted in over 800 libraries and WMS in over 400 libraries. Other two products active in current market are Sierra by Innovative Interfaces and FOLIO, an open source initiative supported by EBSCO (Breeding, 2016; Breeding, 2017b). Sierra took a different approach from Alma and WMS. It reused many Millennium system functions rather than creating original innovations (Grant, 2012). Sierra has been installed in over 600 libraries since it was introduced in 2011. FOLIO entered the market in 2016 and is currently under development (Breeding, 2017b).

### **Academic Library Consortia and Library Automation**

“The growth of information technology has increased the importance of consortia” (Kopp, 1998, p.7). Library automation started around 1960s when most of the early academic library consortia were formed (Borgman, 1997; Kopp, 1998). Libraries were motivated to collaboratively develop systems and share automation techniques to computerize manual, labor-intensive operations to improve overall efficiency. Automating large-scale technical processing was the primary concern of large consortia at the time (Bostick, 2001; Kopp, 1998).

In 1970s and 1980s, computer hardware became less expensive and the automated library systems emerged. ILS was born combining automated back room operations (Borgman, 1997). It became unnecessary for libraries to cooperate to acquire automated systems. Libraries tended to focus on the development and implementation of their local ILSs rather than consortial activities. As a result, the growth of consortia slowed down to some degree (Kopp, 1998).

By the late 1980s to 1990s, most libraries had “achieved certain levels of local systems and networking sophistication” (Kopp, 1998, p.14). Combining with fiscal, political and other factors, academic library consortia re-flourished with an emphasis on acquiring and providing access to electronic resources via the Internet as well as sharing physical resources (Kopp, 1998; Potter, 1997).

From the 1990s into 2000s, many libraries had their own separate standalone ILSs in house. However, the development of cloud computing pushed libraries to reconsider the remotely hosted library systems supported by vendors and consortia (Machovec, 2014). Next generation ILSs were introduced. In his 2011 automation market report, Breeding (2011a) predicted that more libraries would consider adopting the cloud based, multi-tenant automation products as well as participating in shared automation systems in consortia to save cost. Libraries have become “willing to look at much more profound and fundamentally ground-breaking collaborations” and demand automation vendors to offer collaborative functionality to support library success (Horton, 2012a, p.130). In 2011, Orbis Cascade Alliance (OCA) decided to create a “truly shared integrated library system” for all of its 37 member institutions (Horton, 2012b, para. 3.). This would allow for deeper collaboration among its members, including unified collections and shared technical services. According to an OCLC survey (2013), in response to what the most valuable aspect of joining a consortium is, 12% of U.S. library consortia leaders chose a shared ILS,

which is on par with e-content purchasing and third to professional networking (30%) and cost savings (23%).

In his regular column in the *Collaborative Librarianship*, Ayre (2015) illustrated all compelling features for library consortia to collaborate deeper by adopting shared next generation ILSs. It was stated that all sharing activities and services would be streamlined and simplified, including user access and staff workflow. A shared system would save individual member libraries not only on hardware, software and licenses costs but also personnel for system administration, cataloging, collection development, and even selections and acquisitions.

Would it be a new direction for academic libraries to collaboratively select and manage shared next generation ILSs? This article aims to analyze the trends, impacts, opportunities and challenges for academic libraries in the shared next generation ILSs.

## LITERATURE REVIEW

A great deal of research articles and presentations have addressed the topic of next generation ILSs and consortia in library literature. Although the concept of next generation ILSs is still relatively new in the profession.

OCA is a pioneer of library consortia in the adoption of shared next generation ILSs. It has served as a model for many other academic library consortia (Helmer, et al., 2012). From system selection and migration to its impact on the library operations and various functional areas, librarians and other researchers from OCA have contributed a number of papers sharing their experiences and insights of a shared next-generation ILS in a large academic library consortium.

Cornish, Jost and Arch (2013) detailed the process for selecting a shared next generation ILS for all 37 OCA members, including the foundational steps, Request for Information (RFI), teams and processes of Request for Proposal (RFP), and negotiation with suppliers.

Steve Shadle at the University of Washington Libraries presented the migration experience to the next generation ILS and a single shared catalog in OCA, including the motivation for the consortial migration, the implementation process and lessons they have learned (Shadle and Davis, 2016). Stewart and Morrison (2016) from the same institution further examined the consortial migration and its impact on acquisitions workflows and collection building in the shared system. Shared ILS migration is also investigated from a technical services perspective by the staff from another OCA library (Zhu and Spidal, 2015).

The consortially shared ILS has also changed the library operations in OCA (McKiel and Dooley, 2014). Librarians from pioneering libraries in the OCA looked at the acquisitions policies and workflows in the new system (Spring, Drake and Romaine, 2014). The challenges and opportunities for collaboration on acquisitions have also been discussed (Spring et al., 2015). Romaine and Wang (2017) analyzed the serials and electronic resources management (ERM) functionality and workflows in a shared ILS. The discovery end accompanied with a next generation ILS and its impact on library database usage is

included in the literature as well (Evelhoch, 2016). In addition, Fu (2017) investigated the impact of next generation ILSs on the U.S. library consortia.

Literature sees newer articles coming from other consortia who have selected or are interested in a shared next generation ILS. Deng, Sotelo and Culbertson (2018) at the University of California, San Diego, conducted literature review and a survey on cataloging consortial collections in preparation for the upcoming migration to the next generation ILS in the consortium. Five trends have been identified, including the outlook that local library catalog is not dead yet, as well as several approaches for consortial cataloging.

Cote and Ostergaard (2017) from the Treasure State Academic and Information Services (TRAILS) Consortium examined the role of electronic resources librarians in the process of consortial migration to next generation ILSs. They concluded that the North American Serials Interest Group (NASIG)'s Core Competencies for electronic resources librarians "provide a framework from which to approach" the next generation ILS implementation (p. 228).

Consortia from other regions or countries, such as Hong Kong, Canada and South Africa, are also interested in this topic. Eight universities in Hong Kong in the Joint University Librarians Advisory Committee (JULAC) started a new adventure in 2013 aiming to collaborate on a shared next generation ILS. After several years of planning, consultation and RFP process, JULAC selected Alma and Primo in 2016 and went live with the shared system in July 2017. Major challenges they encountered include merging bibliographic records, user account authentication, user-initiated borrowing, data migration, and multilingual authority control, etc. Opportunities are also presented to participating libraries, such as shared cataloging, shared collection development, shared workflow, expertise and training (Chan and Lam, 2016; Lam, 2017).

In 2016 Library Technology Conference, Anika Ervin-Ward and Amy Greenberg (2016a) presented the Ontario Council of University Libraries (OCUL) Collaborative Futures (CF) project. The OCUL CF project aims to collaboratively adopt a shared next generation ILS. The OCUL Case Study section in this article will detail its goals, approaches and status along with the discussion on challenges and opportunities of this provincial project in Canada.

In South Africa, Mfengu (2014) interviewed senior library management teams in four institutions of Cape Library Consortium and found that these institutions were willing to adopt the next generation ILS in the next five years. They were in a process of preparing for this move in terms of staff and infrastructure change. The member institutions would like to take advantage of consortial approach and still function individually.

Machovec (2014) listed the following challenges facing consortial solutions of next generation ILSs: selecting a system, determining costs, defining levels of collaboration, security, scalability and performance of the solution, and the integration with other library applications. Although Alma is the dominating product selected by home institutions of the authors of the related literature, Machovec (2014) did name a couple of examples other than Alma, such as the Private Academic Libraries of Indiana (PALNI) who migrated to WMS and MOBIUS consortium who have upgraded to Sierra.

Rarely does research in the literature target the trend of academic library consortial adoption of the next generation ILSs. More investigations from various perspectives and environments would provide further expositions on the impacts, challenges and opportunities of such a substantial joint adventure for academic libraries around the world.

## METHODS

To identify the trend for academic libraries to adopt a shared ILS within a consortium, the authors of this article collected and analyzed the number of academic library consortia that have moved to a shared next generation ILS in the past few years.

Marshall Breeding's annual product reports are a good source for the adoption number of next generation ILSs. The library automation statistics tracked on the Library Technology Guides (<https://librarytechnology.org/>) are another source of data for this article.

However, these sources do not provide separate information on academic consortia. The press releases on individual products have been collected and reviewed for the analysis. In the next generation ILS market, only Alma, WMS and Sierra have sufficient installations in libraries to be meaningful for this study (Breeding, 2017a). Although WMS has gained sizable market in academic libraries, it "has had few selections by large academic libraries or consortia" (Breeding, 2017b, 2<sup>nd</sup> para. under Academic Libraries/OCLC). There is little information on academic libraries adoption of WMS either on library literature or on the Internet. It lacks literature on Sierra as well. The Press Center of Innovative Interfaces (<https://www.iii.com/press-center/>) contains news releases on the selection and migration of Sierra by libraries but the data are available only from 2016. It appears the number of press releases is not complete for all library adoptions of Sierra.

Good news is that it looks like all press releases on Alma adoption since 2011 are preserved and accessible via the News and Events on the Ex Libris website (<http://www.exlibrisgroup.com/press-releases/>). The number of total adoptions of Alma on the press releases also agrees with what has been presented in Marshall Breeding's reports and statistics (Breeding, 2018a; Breeding, 2018c). In addition, the number matches what is described in the internal document of the Ex Libris' response to OCUL CF RFP for a next generation ILS in January 2018 (one of the authors of this article sit on the OCUL CF RFP Requirements and Evaluation Working Group). Therefore, data collected via the press releases on Alma adoption on the Ex Libris website are quite reliable.

This article reviews all available data on the adoption of Sierra (from January 5, 2016 to April 9, 2018) and Alma (from January 6, 2011 to April 3, 2018) on the Internet. The analysis mainly relies on Alma's adoption data during 2011-2018 with a particular focus on the consortial adoption. All adoption numbers from the websites of Ex Libris, Innovative Interfaces, and Library Technology Guides are collected and verified during April 1-15, 2018.

In addition to the analysis on the adoption number, two cases, OCA and OCUL, under different stages of consortial adoption of a next generation ILS are studied to provide in-depth analysis on the impact of shared next generation ILSs on consortia and their

members as well as the challenges and opportunities to them. OCA is the pioneer in this area in the world, who have gone live with Alma for a couple of year; whereas OCUL is among the first consortia in Canada aiming for a completely shared next generation ILS, and is currently selecting a shared system.

### Adoption of Next-Gen ILSs in Academic Library Consortia

#### Data from Library Technology Guides by Marshall Breeding

Table 1 lists the number of consortia respondents and the total number of all respondents to the annual International Survey of Library Automation in 2012-2017. The respondents come from all types of libraries primarily in English speaking countries (Breeding, 2018d). The data include a variety of library automation products, such as traditional ILSs and next generation ILSs.

Some comments in the 2017 survey state they are part of a consortial shared system, but responded as individual libraries (Breeding, 2018b).

Table 1 shows that the number of consortia respondents from 2012 to 2017. Although it appears that during 2012-2017, the number of consortia respondents to the annual library automation perceptions survey goes up gradually (see Figure 1), the percentage of consortia respondents among the total number of respondents (both consortial and individual respondents) does not support such trend (see Figure 2).

Year	Consortia	Total
2012	97	3,032
2013	91	3,003
2014	95	3,143
2015	127	3,459
2016	116	4,042
2017	142	3,992

Table 1. Number of Respondents (Consortia and Total)

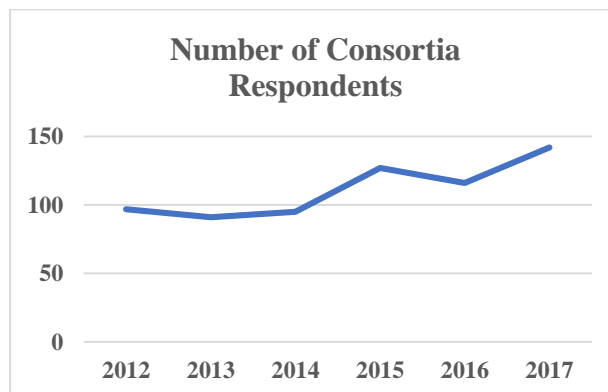


Figure 1. Number of Consortia Respondents

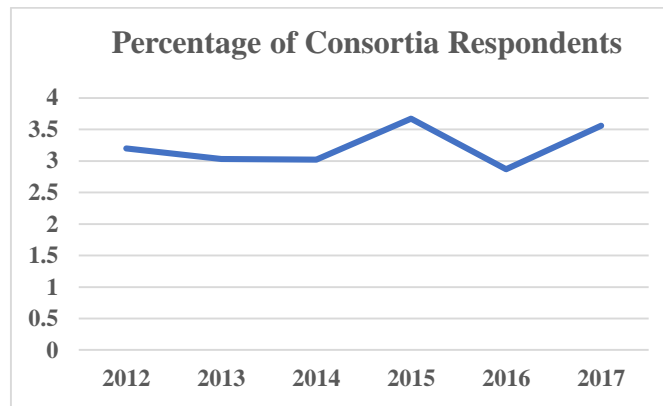


Figure 2. The Percentage of Consortial Respondents

Based on the Integrated System Turnover maintained by Marshall Breeding (2018a), Figure 3 illustrates the number of academic libraries who have selected Alma, Sierra or WMS in 2010-2017. Alma appears starting to lead the market after 2015.

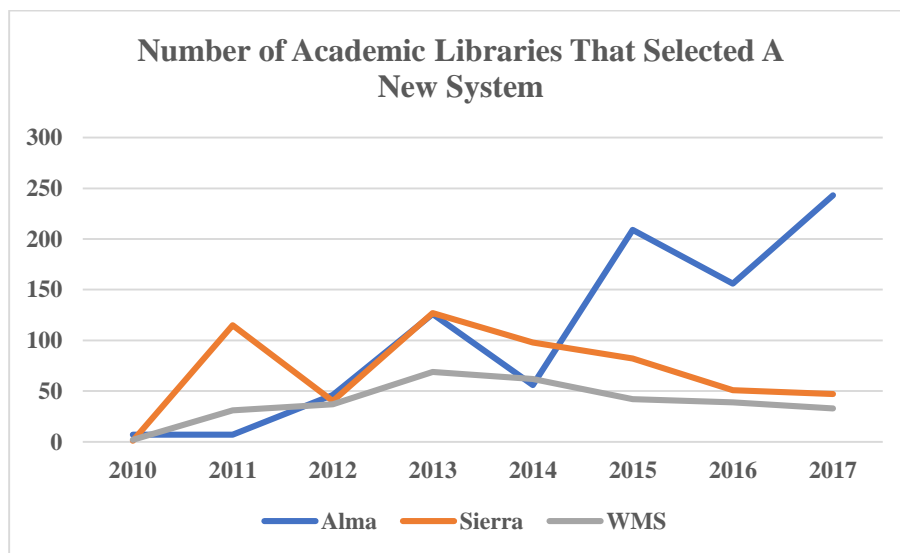


Figure 3. Number of Academic Libraries That Acquired a New ILS/LSP 2010-2017)

### Press Releases for Alma Adoption

The Press Releases from News & Events on the website of Ex Libris (<http://www.exlibrisgroup.com/press-releases/>) were examined for the product Alma since its beginning, January 6, 2011 when the first announcement was released on Alma.

Table 2 displays the number of consortia who have selected Alma in 2011-2017.

Year	Number of Consortia Selected Alma
2011	2
2012	2
2013	3
2014	7
2015	7
2016	11
2017	10

Table 2. Number of Consortia Selected Alma

Figure 4 shows the continual growing number of consortia that have selected Alma as their shared next generation ILSs in the past few years. It indicates that academic libraries are more likely working together to select a shared next generation ILS.

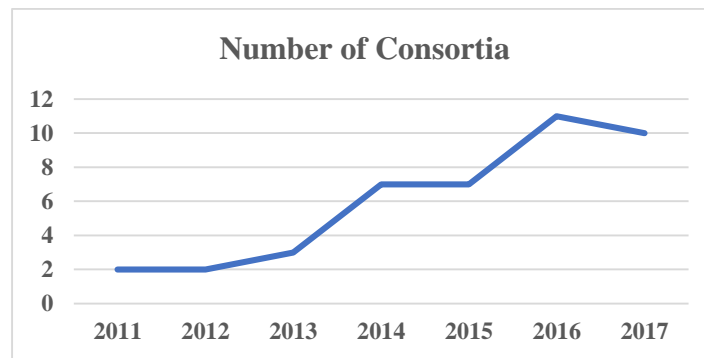


Figure 4. Number of Consortia That Have Selected Alma

The press releases on the year of 2018 have also been reviewed carefully. Till April 3, 2018, five individual institutions and three consortia have selected Alma in the year of 2018. The three consortia include two Japanese universities, and seven university members of Michigan Shared System Alliance, and 64 campuses in the State University of New York. There are 78 academic libraries have selected Alma in total in 2018, and among them 73 are part of a consortium who selected the product together. That means among Alma adopters, about 94% academic libraries have joined a consortium for a shared next generation ILS in 2018.

## CASE STUDIES

### Case Study 1 - OCA: Experience, Impacts, Opportunities and Challenges

OCA is a library consortium of 39 academic libraries in Oregon, Washington, and Idaho, serving faculty and the equivalent of more than 280,000 full-time students. From January 2013 to January 2015, the then 37 OCA libraries completed migration from three different locally hosted ILSs and four different discovery platforms to a shared next generation ILS,



Alma, and a single discovery platform Primo. The Alliance and its member libraries took a multi-year process for exploring systems options, creating policies and standards for data cleaning, planning and organizing the migration, and creating collaborative programs and teams after migration. The Alliance created numerous working groups to perform collaborative tasks at each stage of the project.

Through analyzing the OCA programs, documents, reports published on the OCA websites, conference presentations authored by the OCA members and delivered at the Ex Libris Users of North America conferences, in-person interview, and journal articles authored and published by librarians and professionals of the OCA member libraries, we find, particularly, from a member institution's perspective, the shared next generation ILS has made significant impacts and generated numerous opportunities and challenges on almost all aspects, particularly on the following areas of the OCA and its member institutions:

### ***Resource Sharing***

According to the OCA Alliance-Wide Summit Borrowing 2017 and Summit Lending 2017, there were a total of 312,874 borrowing requests and a total of 261,372 lending requests received among its 39 institutions in 2017. The fill rate was 80% and 93% respectively. Our study shows that the new shared system has greatly improved users' access to information through resources sharing in the OCA libraries. Compared to the previous OCA's resource sharing system called Summit, the new Summit seamlessly integrated consortial borrowing and lending systems and interlibrary loan system with the shared ILS Alma and front end system Primo. The new Summit allows patrons to easily search and request library materials owned by consortial members or other libraries outside the consortium through a single Primo user interface. Every member library can follow the same procedures and policies to achieve efficiency and predictability.

During an in-person interview, Erin Bledsoe, a senior circulation staff at Central Washington University, who participated in the OCA Alliance Resource Sharing Implementation Team, responded that the new shared ILS brought significant benefits to both patron and library staff. She emphasized that the new shared ILS "allows the user to access all of the library and consortial holdings; physical, electronic and digital, by searching in one search box." Patrons "no longer have to interface with third party vendor (i.e. WorldCat)." The new system provides "real-time availability, not requestability." The shared best practices also "allow for similar experiences throughout consortium." Erin Bledsoe added that "detailed audit trail can help staff troubleshoot problems. General messages and notes can be used to indicate damage, multiple parts." She recognized that shared creation of documentation and best practices are helpful for staff training and professional development.

### ***Discovery and User Experience***

Our study shows the new shared next generation ILS provides a single high-quality, web-based discovery and delivery platform for all consortium member institutions. It enables discovery of resources, regardless of format or resource type, in local or consortial collections and beyond. It enables member institutions to customize the search experience by controlling for preferred formats and locations and implementing individual

institution's needs and brand components. The new Primo interface has become a central portal for access to unique local information resources, including digital collections from member libraries. It provides users with a web-based portal for assistance in conducting searches on the internet, evaluating the quality of information resources, learning how to use various databases and linking them to library resources throughout the consortium. It also provides users with the advantages of a union catalog, such as consistent query interpretation across multiple libraries with quick response time across a large number of library records. It supports efficient computerized library services, including up to the minute information about the availability of library materials, circulation information, journal collection status, and computerized checkout. It offers access to an array of online user-initiated services, such as the ability to review materials checked-out, renew books, and request books from other libraries.

However, Zebulin Evelhoch (2016), an e-resource librarian from Central Washington University, one OCA member, through his analysis, noted that "the first year post-migration (2015) compared to the two years pre-migration (2013-2014) saw a decline in web page views of database (A-Z) web pages, journal full-text article requests, and database record views and result clicks. The implementation of Primo thus had a noticeable negative impact on both direct database access and overall electronic resource usage during the first year post-migration" (p16). However, for the second year and third year after go-live, the access numbers were back to normal. Our study suggests that patrons need to be educated and trained to be familiar with a new discovery system during the transition of migration from a traditional OPAC.

### *Shared Content*

Our study finds that the new shared ILS allows the consortium to continually assess, manage, and develop initiatives that broaden access by providing cost-effective sharing, licensing, and description of such content. For example, for databases and e-journals acquisitions and subscriptions, member libraries can identify resources of interest and the Alliance works with the vendor, negotiating discounts, coordinating trials, licensing and invoicing. The OCA Electronic Resources Program is run on an opt-in/opt-out model. Subscriptions are started and purchases made when a sufficient number of libraries commit. The consortium launched its first consortial demand-driven acquisitions (DDA) e-book purchase program in 2011 facilitated by a partnership with YBP and ProQuest and funded by the consortium membership. The DDA program ended in 2017. Currently the consortium adopted the Evidence-Based Acquisitions model, partnered with Wiley and Taylor & Francis. Another shared content project is Oxford University Press Frontlist Purchase. Our study finds the new shared ILS increases leverage in negotiations with library vendors and other system service providers. It saves labor and overhead costs by centralizing management of contractual agreements.

### *Collaborative Technical Services*

Our study finds that OCA's Alma implementation differs from a stand-alone institution's version. According to the OCA Strategic Agenda, the OCA wanted to "manage and build the combined collections of members as one collection"; however, the shared bibliographic

database environment still allows OCA member institutions to retain some local control and to provide a place for local order and holdings records. In order to accomplish this, Ex Libris created a three-layer system. The first layer, called the Institution Zone (IZ), houses local institutional holdings, inventory, and order records. Each OCA member institution has its own IZ. The second layer, called the Network Zone (NZ), which houses the bibliographic records of OCA's member libraries, separate but linked to the local/institutional repository (IZ) for each OCA member. While the third layer, called Community Zone (CZ), composed of e-resource records, the Alma Knowledge Base (KB), is available to all Alma users, not only for OCA members. The three-layer system made it possible and easier for OCA member institutions to work closely on collaborative technical services such as the ebook, Chinese, Japanese, and Arabic cataloging pilots. These technical services were difficult when more than 30 local ILSs were in use and workflows varied across the consortium. Thus, the shared next generation ILS opened up new opportunities and made collaboration in acquisitions, cataloging, collection development, circulation, systems, and other areas easier to achieve. It allows libraries to streamline staff operations and realize cost savings through sharing standardized bibliographic and authority records.

As a result of this type of collaboration, since the implementation of the shared ILS, the consortium members have worked together and developed a number of bibliographic records polices and shared ILS operational policies, best practices, procedures & workflows, normalization rules, NZ account configuration & procedures and guidelines. The consortium member libraries also share a single normalization rules for converting source records in Alma and publishing to Primo.

### ***Systems***

The maintenance and upgrades of the OCA shared ILS are centrally managed by the vendor. The cloud shared ILS lessens the necessity for each library to maintain the full complement of experts and hardware to operate their own. Our study shows that systems staff at OCA member libraries have more time to develop local applications and support customizations. The shared ILS enables sharing customization and distributed testing of new release, central monitoring, deploying and publishing. The systems staff of the OCA member institutions also collaborated on user roles management, systems authentication, systems configuration, Alma/Primo API development, primo new UI customization, resource sharing configuration, integration with other systems, etc. It enables the OCA Systems Program Manager and the Alliance Systems Team to provide centralized library automation support and services to various types of libraries in the OCA.

### ***Unique & Local Digital Content***

Each OCA member institution has its own archival collection, institutional repository and other unique digital repositories. The new shared ILS enables the alliance to consider aggregating its member institutions' local and unique digital content. In order to achieve this goal, the OCA formed a few of working groups on archival collection, digital content metadata standards, preservation and aggregation. The OCA Council approved an

AADC/DPLA proposal proposed by the Content Creation & dissemination Team in February 2016. AADC stands for Aggregate Alliance Digital Content and DPLA stands for the Digital Public Library of America, a national-level portal for digital content from libraries and other cultural heritage institutions with value-added search and browse features. The AADC/DPLA project allows all Alliance members to share digital objects in Primo and DPLA. The project adheres to national standards for library automation and digitization to ensure compatibility and transferability of records and links members to regional, state, and national library networks which increase the OCA member institutions' visibility and brand awareness by providing open access to their unique and local content via the DPLA.

### **Case Study 2 - OCUL CF Project**

OCUL is an academic library consortium of 21 university libraries in Ontario, the largest province in Canada. It has been existing for over 50 years for the collaboration and cooperation among Ontarian institutions to enhance services to students, faculty and researchers in Ontario and beyond. The collaboration activities in OCUL include group purchasing, shared digital information infrastructure, collaborative planning and professional development, etc. (Ervin-Ward and Greenberg, 2016a; OCUL, 2018a; OCUL, 2018b)

One example of shared systems is the SFX link resolver. Academic libraries in the OCUL consortium implemented a shared SFX in 2004 (Cheung, Thomas and Patrick, 2010). Each institution has its own instance while Scholars Portal maintains the central instance. Institutions relied on SFX for e-resource managing and linking for many years since then. Other innovation or collaboration based on SFX have been developed, such as the integration of SFX with Evergreen open source ILS for the unified view of print and electronic serials created by a local member, the University of Windsor, and the OCUL Usage Rights Database implemented consortially for institutions to display licensing terms on various databases to users in library catalog, journal A-Z list or other search interfaces (Liu and Zheng, 2011; Scholars Portal, 2017).

With the emergence of discovery layers and next generation ILSs, libraries in OCUL started to adopt other link resolvers or knowledge bases. It became a big burden for libraries to maintain multiple knowledge bases and link resolvers. Libraries began questioning the future of SFX and some other services offered by the consortium (Ervin-Ward and Greenberg, 2016a). From 2012, the OCUL Technical Advisory Group initiated discussions on cloud computing and web scale library systems across the province. A Unified Resources Management (URM) Summit was held in Toronto in February 2013. As a result, the OCUL Collaborative Approaches Task Force was established to identify potential opportunities by the new type of systems (Ervin-Ward and Greenburg, 2016b). In the meantime, one OCUL member, the University of Windsor contracted with Alma as an early adopter. University of Windsor is the first university in Ontario that selected a next generation ILS. Alma replaced several separate systems at the University, including Evergreen open source ILS, SFX and Syrup, a homegrown course reserve system (Liu, 2015).

With the efforts of the OCU Collaborative Approaches Task Force and consultations with OCU members, the OCU Collaborative Futures (CF) project was launched in 2014. The OCU CF project “aims to maximize the existing expertise and resources of OCU members while fostering a deeper and more comprehensive collaborative venture among Ontario’s academic libraries” (Ervin-Ward and Greenberg, 2016b, p2). More specifically, the CF project intends to implement a shared next generation ILS where members can collaborate to effectively manage electronic and print resources as well as to have a sustainable system for the management and preservation of OCU print resources. The project consists of the following three phases:

The first phase is the feasibility study. Steering committee and several working groups were formed collaboratively to develop shared vision and collaboration framework; conduct market research, financial analysis, and business process and workflow analysis; and develop communications plan. Models of collaboration for systems, workflow and collections are also investigated. An Request for Information (RFI) was created and sent to various vendors in the market as well as companies or organizations that support open source solutions, including OCLC (MWS), Innovative Interfaces (Sierra), ProQuest (Intota), SirsiDynix (Symphony), Ex Libris (Alma), Equinox Software (Evergreen) and Kuali (Kauli OLE), etc. The findings show that most solutions are incomplete, and few products are quite mature at that time. Many can be installed in consortial environments however the level of consortial support varies dramatically. This phase completed in July 2015 (Ervin-Ward and Greenberg, 2016a; OCU, 2018c).

The second phase is in the period of August 2015 to fall 2016. It focuses on system requirements development and procurement preparations. There are 18 institutions opted-in to participate in this phase. Further investigation and planning have been conducted on the shared next generation ILSs and possible deeper collaboration among members. (OCU, 2018b).

From winter 2017, CF enters phase three, the procurement and implementation at libraries. Thirteen institutions agreed to move forward with the shared system and another three libraries indicated continual interest with their decision forthcoming. A governance structure has been established. Four working groups were formed including Communications, Memorandum of Understanding and Governance, Requirements and Evaluation, and Shared Policy Work Group. An Expert Advisory Network was also developed to include individuals who are responsible for different areas of the OCU CF project at local libraries. By end of 2017, an RFP has been issued for the shared system. The project team have been evaluating the responses to select a supplier. Data migration and system implementation will be following the selection. Deeper collaborations based on the shared next generation ILS are expected among participating libraries in near future (OCU, 2018b).

In late summer of 2018, OCU CF announced that the Alma and Primo were chosen as the solution after a long course of investigation, evaluation and negotiation. The new system is expected to be launched for all participating institutions in December 2019. Currently the consortium and its members are actively preparing for the upcoming implementation in early 2019.

It is quite challenging for such a large scope collaboration project among Ontario's academic libraries. These libraries vary a lot in terms of Full Time Equivalent (FTE) student population, library collections size and existing local ILSs. For example, in the consortium, York University has over 52k FTE student population while Algoma University has only about 1.2k FTE students. York University Libraries hold near 3.4 million of bibliographic records, however Algoma University Library only contains about 137k bibliographic records. The current systems used in the participating members spread a wide range as well, including eight different ILS solutions, four discovery layers, and a variety of institution repositories, e-reserves, learning management systems, student information systems, and financial systems across the province. The priorities and preferred timelines to move to a shared new system are quite different among these campuses. In addition, there is a mini consortium within the participating libraries, the TriUniversity Group of Libraries (TUG) (<https://www.tug-libraries.on.ca/>). It is a big challenge for the OCUL CF consortium to determine the cost sharing and collaboration model, and agree on various policies and workflows. This newly formed partnership articulates a number of outcomes from the shared system as follows:

- *Shared records, cataloguing and electronic resource management*
- *Shared record loading (bibliographic records)*
- *Shared discovery*
- *Shared patron services and policies*
- *Shared analytics, acquisitions and collection management* (University of Ottawa, 2017, p42)

The shared system will foster the deeper collaboration among Ontarian academic libraries to leverage local resources and services for users to experience “a large, diverse Ontario-wide library collection” (Ervin-Ward and Greenberg, 2016a, slide 10).

## CONCLUSIONS

The next generation ILSs have been getting mature since its inception around 2011. It's been adopted by many academic libraries in the world. Academic libraries have a long history of collaboration in various activities to provide information services to students, faculty and other researchers. Due to the advancements of information technology and the budget restriction, academic libraries tend to work together on collective purchasing, shared professional development, and many other activities.

The next generation ILSs allow for deeper collaboration among libraries. The adoption data of next generation ILSs, especially Alma, indicate that more and more academic libraries are joining together to collaboratively investigate, select and implement a shared next generation ILS. Academic consortia are under different stages in moving to next generation ILSs. The case study on OCA, the pioneer adopter of Alma, reveals that a shared next generation ILS has significant impact on all aspects of library operations and services in OCA, especially in the areas of resource sharing, discovery and user experience, shared content, collaborative technical services, systems, as well as unique and local digital content. It also poses both challenges and opportunities to individual members in all these areas. The study on the OCUL CF project shows the challenges and opportunities of a

shared next generation ILS to the newly formed partnership within OCUL consortium. The participating libraries are significantly different in terms of sizes, resources, services, existing systems and priorities. It is challenging for such a heterogeneous consortium to collaboratively move to a shared next generation ILS. However, the shared new system will foster deeper collaboration among the members to achieve their common goals.

In the future, a comprehensive investigation on all institutions who have adopted next generation ILSs would help provide a complete picture on the trends of the consortial adoption of next generation ILSs by academic libraries. Surveys and interviews on library staff from various perspectives and environments would further the understanding on the impacts, challenges and opportunities of shared next generation systems.

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## New Developments of Chinese Government Publications and Library Collections

Susan Xue

### Abstract:

Chinese government publications constitute a significantly large portion of print and digital information output in China. This material genre is critical to the operation of the country, to people's lives, and therefore, is important to research and scholarly work. Overseas scholars rely heavily on libraries to access and use Chinese government publications, however, collecting this type of materials has been a challenge since the scope of Chinese government publications has not been clear, and the collecting channels have been limited. This paper intends to discuss the scope of Chinese government publications, its availability in digital format, the types of publications library normally collects, and opportunities and challenges in collecting them.

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# New Developments of Chinese Government Publications and Library Collections<sup>1</sup>

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## ABSTRACT

Chinese government publications constitute a significantly large portion of print and digital information output in China. This material genre is critical to the operation of the country, to people's lives, and therefore, is important to research and scholarly work. Overseas scholars rely heavily on libraries to access and use Chinese government publications, however, collecting this type of materials has been a challenge since the scope of Chinese government publications has not been clear, and the collecting channels have been limited. This paper intends to discuss the scope of Chinese government publications, its availability in digital format, the types of publications library normally collects, and opportunities and challenges in collecting them.

**Keywords:** Chinese government publication, Government information policy, Digital government information, Collection development, Government website

## INTRODUCTION

For many years, there has not been a clear definition for “government publication” in China. It was therefore not clear what constitutes government publications, except for perhaps laws and regulations, which clearly were issued and published by the government. This situation lasted until 2008, when the Chinese government issued the *Regulation of the People's Republic of China on the Disclosure of Government Information* (hereinafter referred to as “*Regulation*”). For the first time, government information was officially defined as “the information produced or acquired and recorded or kept in certain forms by administrative organs in the process of performing their duties (‘政府信息·是指行政机关在履行职责过程中制作或者获取的·以一定形式记录·保存的信息’)” (State Council, 2008). This definition specifies four

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fundamental aspects of Chinese government publications: publisher or compiler; producing process; the nature and content are, and the format. First, publisher or compiler should be a government administrative body; second, a government publication shall be produced or acquired during or for government operations; third, the nature and content of government information embody the will of the government and are guidelines to its operations; fourth, the format of government publications can vary.

The term of government information has been used interchangeably with government publications (Ministry of Culture, 2010). The term of government information has been used more often in recent years, likely because government publications have been increasingly produced in digital format. In this paper, the term of government publication will be used interchangeably with government information, to reflect this trend.

By the definition above, Chinese governments at all levels have published massive official publications, just as many other countries' governments have done. The *Regulation* cited above requires central ministries and provincial governments to compile a catalog of the information they disclosed; many have done so and posted such catalogs on their government websites. The *Regulation* also provides a list of government information that should be made available to the public. In the Chapter Two of the *Regulation*, twenty-three types of government information produced by national, provincial, city, county and township governments are required to be disclosed to the public. In principal, they fall in these four categories: government information that concerns vital interests of citizens, corporate bodies and organizations; government information that requires awareness and participation of citizens; government information that illustrates the organizational structure, functionality and operational procedure of a government body; and other government information that is required by law and regulations to be disclosed to the public (State Council, 2008).

The author reviewed twenty randomly selected government websites to gain insight of the scope of government information and the level of compliance with the *Regulation*. Those selected government bodies are the National People's Congress, the State Council, Ministry of Education, Ministry of Civil Affairs, Ministry of Justice, Ministry of Commerce, Ministry of Agriculture and Rural Affairs, National Health Commission, Shandong Province, Anhui Province, Liaoning Province, Zhejiang Province, Hubei Province, Guangdong Province, Beijing City, Shanghai City, Ningbo City, Fuzhou City, Kunming City, and Lanzhou City. All websites reviewed publish their information online, and about ninety-five percent of the government publications are comprehensive. Combining findings from various official government websites and comparing to the list from the *Regulation*, this paper intends to discuss the scope of the Chinese government publications and its increasing availability in digital format, the types of publications libraries normally collect, and the opportunities and challenges in collecting them.

## **THE SCOPE OF CHINESE GOVERNMENT PUBLICATIONS**

The scope of Chinese government information or publications is very broad. To make the massive publications easier to understand, this paper attempts to categorize them by the functionality or nature of administrative duties: laws and regulations, national plans and policies, statistics, documents related to policies issued at ministries, regional and lower

levels, documents issued at all levels related to operational procedures, requirements and implementation.

## Laws and Regulations

Laws are prepared and enacted by the National People's Congress (NPC), the legislative body of China. Regulations can be issued by any of the following government bodies: the Communist Party of China Central Committee and its General Office, the State Council, ministries and other institutions of the central government, provincial government, municipal governments, local people's congress, county governments, Supreme People's Court (SPC), Supreme People's Procuratorate (SPP), local judicial bodies, and military institutions. Regulations include a number of different types of documents, as they are usually enforced by a regulatory agency formed or mandated to carry out the purpose or provisions of a legislation.

Laws and major categories of regulations are listed below:

- Law 法律. Examples: Supervision Law of the People's Republic of China 中华人民共和国监察法; Constitution of the People's Republic of China (2018 Amendment) 中华人民共和国宪法 (2018 修正). In 2008, the National People's Congress Standing Committee regulated that in general, legislative bills are required to collect comments and feedback from the general public through major news media and NPC's website. Feedback and suggestions are summarized and published in NPC Gazettes.
- Resolution 决议. Resolutions are normally issued by the NPC or the State Council. Example: Resolution of the Standing Committee of the National People's Congress on Intensifying Legal Publicity and Education 全国人大常委会关于加强法制宣传教育的决议.
- Regulation 条例. Regulations can be issued by central government ministries, provincial governments and its bureaus, municipal governments and its divisions. Examples: Regulation on the Implementation of the Environmental Protection Tax Law of the People's Republic of China 中华人民共和国环境保护税法实施条例; Interim Regulation of the People's Republic of China on Value Added Tax (2017 Revision) 中华人民共和国增值税暂行条例 (2017 修订); Regulation of Shanghai Municipality on the Protection of the Rights and Interests of Overseas Chinese (09- 14-2016) 上海市华侨权益保护条例.
- Rule 规则. It can be issued by the central government and ministries as well as local governments. Examples: Rules for the In-flight Security of the Public Air Passenger Transport (2017) 公共航空旅客运输飞行中安全保卫工作规则 (2017).
- Provision 规定. It can be issued by governments at county and above level. Example: Provisions on the Administrative Reconsideration involving Land and Resources (2017 Revision) 国土资源行政复议规定 (2017 修订).
- Decree 命令. It is normally issued by the central government and ministries. Example: Decree of the State Council Concerning the Use of Uniform Legal Measures in the Country 国务院关于在我国统一实行法定计量单位的命令.
- Order 条令. It can be issued by the central government and ministries. Example:

Order on Rewards for the People's Policemen of Public Security Organs 公安机关人民警察奖励条令.

- Decision 决定. It can be issued by governments at all levels to communicate a decision on regular operational issue. Example: Decision of the Ministry of Transport on Revising the Measures for the Supervision and Administration of the Safety Production of Highway and Water Transportation Projects (2016) 交通运输部关于修改《公路水运工程安全生产监督管理办法》的决定 (2016).
- Notice 通知. It can be issued by governments at all levels, normally to notify subordinates a particular matter. Example: Notice of the State Administration for Industry and Commerce and the State Administration of Taxation on Strengthening Information Sharing and Joint Regulation 工商总局、税务总局关于加强信息共享和联合监管的通知.
- Announcements 公告. It can be issued by governments at all level to communicate a decision on a particular issue. Example: Announcement of the State Administration of Taxation on Issues concerning the Collection and Administration of Consumption Taxes on Refined Oil 国家税务总局关于成品油消费税征收管理有关问题的公告.
- Opinion 意见. It can be issued by governments at all level. Example: Opinions of the State Administration of Taxation on Standardizing Administrative Examination and Approvals and Improving Administrative Examination and Approval Work 国家税务总局关于规范行政审批行为改进行政审批有关工作的意见.
- Measure 办法. It can be issued by government at all levels, generally applies to management issues. Example: Measures for the Administration of the Utilization of Insurance Funds 保险资金运用管理办法.
- Reply 批复. It can be issued by government at all levels, but more often at the central government and provincial government level, as it replies to subordinate bodies. Example: Official Reply of the State Council on Approving the Cancellation of the Control Line of Shenzhen Special Economic Zone 国务院关于同意撤销深圳经济特区管理线的批复.
- Letter 函. It can be issued by government at all levels, and commonly used for operational matters. Example: Letter of the General Office of the State Council on Approval of the Establishment of the Inter-Ministerial Joint Meeting System for Market Regulation 国务院办公厅关于同意建立市场监管部际联席会议制度的函.
- Interpretation 解释. It is normally issued by the central government, the Supreme People's Court and the Supreme People's Procuratorate for further explanation of law or decision on cases. Examples: Interpretation of the Supreme People's Court on Application of the Administrative Litigation Law of the People's Republic of China 最高人民法院关于适用《中华人民共和国行政诉讼法》的解释; Interpretation of Article 104 of the Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China by the Standing Committee of the National People's Congress 全国人大常委会关于《中华人民

共和国香港特别行政区基本法》第一百零四条的解释.

### National Plans and Policies

This type of documents plays a critical role in economic development, government operations, and all aspects of people's lives. A number of different types of documents are included in this category:

- National economy and social development plans and policies, example: Outline of the 13th Five-Year Plan for the National Economic and Social Development of the People's Republic of China 中华人民共和国国民经济和社会发展第十三个五年规划纲要 2016-2020.
- Special project plans and policies, example: The 13th Five-Year Plan for the Development of National Environmental Protection Standards 国家环境保护标准“十三五”发展规划. The 13<sup>th</sup> Five-Year Plan for the Development of Railway 铁路“十三五”发展规划. The 13<sup>th</sup> Five-Year Plan for the Development of Informatization in Countryside 十三五”全国农业农村信息化发展规划.
- Other national policies, example: China's Arctic Policy 中国的北极政策.
- White papers, example: Judicial Transparency by People's Courts 中国法院的司法公开.

### Statistics

Statistics constitute a large portion of government information. Enterprises and institutions may also produce statistics; however, official statistics are the only resource that carries authority and has been systematically collected nationwide at all administrative levels. Official statistics concern all aspects of national economy at macro and micro scale, it also concerns people's daily life. It promotes informed decision-making by government officials, monitors the overall economic and social development, and provides critical information to scholars in social sciences, science and humanities disciplines. Some of the major types of statistics are listed below:

- Census data. Examples: population census 人口普查, economic census 经济普查, agricultural census 农业普查, industrial census 工业普查, basic unit census 基本单位普查, the third industry census 第三产业普查.
- National statistics that cover 25 categories ranging from national account such as GDP to the development of regional sectors, example: China Statistical Yearbook 中国统计年鉴
- Provincial, municipal and other regional statistical yearbooks that cover categories similar to national statistics, example: Beijing Statistical Yearbook 北京统计年鉴, Xinjiang Production and Construction Group Statistical Yearbook 新疆生产建设兵团统计年鉴.
- Subject statistics at national and lower levels, example: China Civils' Statistical Yearbook 中国民政统计年鉴, 《2015 年全国收费公路统计公报》; Beijing Input-Output Table 北京投入产出表.
- Statistical Bulletins produced by the central government ministries, provincial and



municipal governments, examples: Statistical Bulletin of the Ministry of Human Resources and Social Security 人力资源和社会保障事业发展统计公报; Statistical Bulletin of Ministry of Education 教育部教育发展统计公报; Statistical Bulletin of Investment in Science and Technology in Jilin Province 吉林省科技经费投入统计公报; Statistical Bulletin of Average Wages in Urban Institutions in Shenzhen 深圳市城镇单位平均工资数据公报.

- Surveys conducted by national and provincial statistics bureaus, examples: China Countryside Statistical Survey 新中国农村统计调查; 2000-2011 Shanxi Statistical Survey 2000-2011 山西统计调查.
- Budgetary plans and reports from governments at all levels, example: Collection of Budgetary Plans for Selective Provinces and Cities in 2015 部分省（区、市）财政预算报告汇编2015.
- Financial accounts report from governments at all levels, example: Report on the Final National Accounts in 2016 by the Central Government 关于2016年中央决算的报告.

### **Documents Related to Plans and Policies Issued at Regional and Lower Levels**

This type of documents includes a wide range of publications and information, and has been issued by central ministries, provincial, municipal and county government bodies. They are ranging from regional plans to interpretation of policies and regulations.

- Regional plans and policies, example: General City Plan for Beijing (2016-2035) 北京城市总体规划 (2016年—2035). The Plan for Costal Line Protection and Utilization Plan for Zhejiang Province 浙江省海岸线保护与利用规划.
- Annual report on government operations, example: Report on Government Operations for Shandong Province 2018 山东省政府工作报告 2018. Report on Government Operations for Shanghai City 2018, 上海市政府工作报告 2018.
- Report on implementation of regional or provincial plan, example: Report on the Implementation of the 13<sup>th</sup> Five Year Plan for Utilizing Foreign Investments by Anhui Provincial Government 安徽省“十三五”利用外资和境外投资规划实施进展情况. Report on 2016 Governing by Law for Guangdong Provincial Government 广东省人民政府关于2016年法治政府建设情况的报告.
- Regional or provincial policy on important economic or political issues, example, Support the Development of Digital Economy (Anhui Province) 支持数字经济发展若干政策 (安徽省). Policy on Further Expanding Opening and Utilizing Foreign Investments for Guangdong Province 广东省进一步扩大对外开放积极利用外资若干政策措施.
- Interpretation of regional or provincial policies, example: Explanation for the Policy of the 13<sup>th</sup> Five Year Plan for Public Health in Anhui Province 安徽省“十三五”卫生与健康规划政策解读. Explanation for Measures of the Protection of Intellectual Property in Liaoning Province 辽宁省知识产权保护办法解读.

## Documents Related to Operational Procedures, Requirements and Implementation

Governments at all levels issue documents for their daily operations. There are many different types of documents included in this category: proposing or implementing projects or activities, reviewing and approving requests, plans for dealing with emergency, and announcing appointment or removal of officials. Major types of documents are listed below:

- Report on implementing an order from upper-level government bodies, example: Shandong Province's Report on Implementing the 8th Decree of the State Archives Administration 关于贯彻落实国家档案局8号令情况的报告 (山东省).
- Notice on implementation of plans, example: Jiamusi City's Plan for Dealing with Major Emergency of Road Accidents 佳木斯市立即启动重大交通事故应急预案.
- Appointment or removal of officials, example: List of Shandong Province's Approval of Appointment and Removal of Officers 山东省人民政府任免的工作人员名单.
- Approval and implementation of major projects, example: Approval of the Relocation of Haerbin Railway Freight Port by Heilongjiang Provincial Government 黑龙江省人民政府关于哈尔滨铁路货运口岸迁址的批复.
- Implementation of policies and measures concerning people's lives such as education, social services, health care, and employment issues. Example: Implementing Measures for the Prevention and Resolution of Medical Disputes in Anhui Province 安徽省医疗纠纷预防与处置办法.
- Measures for requisition of land, housing demolition and compensation and similar cases. Example: Measures for Adjusting Comprehensive Prices of Requisition of Land by Shandong Provincial Government 山东省人民政府关于调整山东省征地区片综合地价标准的批复.
- Reports on distribution and use of funding and donation for disaster relief. Example: Report on Disaster Relief Donations by the Bureau of Civil Affairs of Haikou City 海口市民政局关于赈灾捐款接收情况的报告.
- Announcement or reports on land use plan at village and township level. Example: Announcement for Taking back the Use Right for Eleven State-owned lands (Fushun County, Liaoning Province) 关于收回11宗国有土地使用权的公告 (辽宁省抚顺县).
- Reports on family planning, example: Report on Health and Family Planning Work in 2016 and 2017 Plan by the Health and Family Planning Department of Jingmen City 荆门市卫生计生委2016年工作总结和2017年工作计划.
- Details about service charges for administrative services, reasoning and criteria. Example: Anhui Highway Toll Rates, issued by the Department of Transportation of Anhui Province 安徽省高速公路收费标准- 安徽省交通运输厅.
- Announcement or report on government procurement, items and criteria. Example:

Announcement on Landscape Project of Dashi Street of Guangzhou City 广州市大石街市政绿化养护工程结果公告.

- Requirements, documents, conditions, procedure, length of time for applying for administration permits or licensing. Example: Approval Procedure of Business License for Telecommunications by Zhejiang Communications Administration 电信业务经营许可证申请审批 – 浙江省通信管理局.
- Notice of approval of application for a project or service, example: Approval of Establishment of Shanxi Zhongsheng Firm of Tax Accountants 关于新批准设立山西中昇税务师事务所的公示.
- Reasons and occasions for imposing fines. Example: Announcement on Imposing Administrative Penalty – Daxing Office of Beijing Administration for Industry and Commerce 行政处罚决定书 – 北京市工商行政管理局大兴分局公告.

## PUBLISHING OF CHINESE GOVERNMENT PUBLICATIONS

Before the *Regulation* taking effect in 2008, there were no laws or regulations specifically determining how Chinese government publications should be published, except one regulation on publishing laws and regulations. The State Council issued a regulation in 1990 stating that no individuals are allowed to compile and publish laws and regulations. Laws should be compiled by the NPC, regulations should be compiled by the State Council, military regulations should be compiled by the Central Military Commission, departmental regulations should be compiled by responsible departments, and local regulations should be compiled by local NPCs and local government (State Administration for Industry & Commerce of China, 1990). There was another document issued by the former General Administration of Press and Publication stating that without approval, any publishing house should not publish government white cover report (政府白皮书) (General Administration of Press and Publication, 1998). The major regulation concerning publications - *Regulation on the Administration of Publication* (2016 Revised) (State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China, 2006) stipulated that how publishing and publications should be approved and managed in general, but nothing specifies if government publications should be approved and managed differently. In practice, laws and regulations and statistics tend to be published by designated publishing houses, such as China Law Press and China Statistics Press.

Regulated by these orders, only certain types of government documents have been published in print format. One major type is gazettes, which carry laws and regulations, as well as feedback on proposed laws and regulations, appointment and removal of officials, decisions, notices, reports, and other policy documents. Major gazettes include:

- Gazette of the Standing Committee of the National People's Congress of the People's Republic of China 人大常委会公报.
- State Council Gazette 国务院公报.

- Gazette of the Supreme People's Court 最高法院公报.
- Gazette of the Supreme People's Procuratorate 最高人民检察院公报.
- Gazettes of ministries and commissions 各部委公报.
- Gazettes of provincial governments 各省政府公报.
- Gazettes of municipal governments 各市政府公报.

While the regulation about publishing laws and regulations is still valid, the *Regulation* in 2008 mainly focuses on publishing government information online, as government information goes digital. It clearly stipulates channels of publishing or releasing government information. This will greatly improve the availability of government publications when implemented widely. One major requirement that the *Regulation* emphasizes is that governments at all levels should “actively” publish their information follow these requirements:

- Administrative offices should actively publish government information through government gazettes, government website, press conference, newspapers and televisions.
- Governments at all levels should designate a reading room in archives and public libraries, and actively provide government information to these institutions. Equipment should be provided to facilitate public's access to government information.
- Individual government offices are responsible for their own information publishing. Laws and regulations should be published by following certain regulation.
- In general, government information that is required to be released to the public by law should be published within 20 working days.
- Individual government offices should compile and publish their own catalog of government publications and keep it up-to-date. Catalogs should classify information by category, include document title, abstract, date and index. It should also include institution name, office hours, contact information and email.

In 2017, the State Council issued a notice to provide further guidelines on developing official government website. It regulates the management responsibility, rule for domain name for government website, functionality and maintenance of government websites. It further specifies how government information should be published, and particularly emphasizes that governments at all levels should publish information accurately and in a timely manner. Laws and regulations should have effective and expiration dates and should be searchable; statistics should be kept up-to-date and downloadable; and operational procedures should be accurate and indicate who is the issuing authority (The State Council, 2017).

## CHINESE GOVERNMENT PUBLICATIONS AND LIBRARY COLLECTIONS

Libraries used to collect Chinese government publications in traditional ways and formats through publishers and book vendors, and publications are in print format. Now that government publications are published both in print format and increasingly in digital format, the way that library collects government publications needs to be re-considered. The fact that Chinese government publications go digital will greatly increase their availability and provide more accesses to scholars and the general public. It also has enormous impacts on how library should collect and manage those materials.

### Current Practice of Collecting Government Publications

It has been a tradition that library collects some of the Chinese government publications, as they are important information resources for scholars in social sciences, humanities and science disciplines. The main types of government publications that many libraries normally collect are:

- Gazette of the Standing Committee of the National People's Congress
- State Council Gazette
- Collections of laws
- Collections of national regulations
- Selective collections of national plans and policies
- National population census data
- Statistical yearbooks and surveys

Since there was no clear definition for “government publications” before 2008, only those core publications, including laws, regulations and statistics listed above had been published in print format by designated publishing houses. Publishers were either not authorized to compile government publications other than those core documents or not clear about what else can be compiled as government publications. Therefore, many important policies and documents were not available for libraries to collect in old days, ultimately, not available to scholars and other users. Required by the *Regulation*, nowadays, not only those core publications have been available in digital format, other types of government publications such as regional/local regulations and policies are also available in print and digital formats. Commercial publishers and aggregators have also developed valued-added databases based on officially released information and data. These new practices have prompted the vigorous development of government information publications, and therefore provide libraries with more government information to collect, and users with easier access to such information.

### Opportunities and Challenges in Collecting Digital Government Publications

Digital publishing has developed very fast in China, many scholarly publications are available in digital format, including born-digital and digitized publications. Going along with this trend,

government information goes digital, which is a critical step forward, for the transparency of government administrative operations and services. The development of digital government information since the 2008 *Regulation* has direct impact on libraries in several aspects.

Opportunities provided by this new trend benefit both libraries and users: First, the *Regulation* makes it clear what the scope of government information is and what types of documents or information are openly available; second, individual government offices are required to compile and publish a catalog of their information, which provides a useful tool for library to view and select; third, major types of government publications are required to be published through official government websites, which provides great convenience for library to aggregate those documents; last but not least, the visuality and browsability of government information make it easier for librarians to provide research consultation to scholars. Instead of viewing many hard copies of books, librarians can easily browse and search relevant government websites for information. Libraries in China as well as overseas have utilized advanced technology and matured online catalog platform for managing library collections, they are in a good position to further build Chinese government publications in digital format.

It takes time for Chinese governments at all levels to implement the *Regulation* and other requirements, fully develop their website, and publish their publications, documents and data at a full scale. Currently, libraries also face challenges in collecting and using government publications in this new era.

First, there are too many individual government websites, it is impossible to search each and every individual website, in an occasion when someone is researching on a nationwide topic. The National Library of China has developed a central platform: *Chinese Government Public Information Online* (<http://govinfo.nlc.cn/>). It is a great tool to get started in aggregating government information; however, as many central government offices and local governments may not yet provide their documents and data to this platform, the information there is far from being comprehensive. Based on local academic community's needs, libraries may need to create their own digital government publication collection by subject, region or issuing agencies. Documents from different sources in different formats and different versions will need value-added work in aggregation.

Second, many, if not all, government offices compile and publish their own catalogs, which is a huge difference than before. However, it is not easy for libraries to fully use them as catalogs are sometime organized in different ways and publication are classified in a way different from library's practice. There have been studies in library and information literature on how government publication catalogs should be compiled. Researchers praise this positive development (Chen, 2013; Zheng, 2011); however, they focus more on how to improve the usability of these catalogs by standardizing classification and metadata and enhancing searching functionality (Bai, 2013; Zhang, 2009). Libraries may need to take action in integrating and re-compiling some of the government publications catalogs based on local academic community's needs.

Lastly, librarians need to gain professional knowledge of Chinese government publications through professional training. Individual copies of Chinese government publications may have been in some libraries for a long period of time; however, many librarians may not realize that those books are actually government publications, or are unsure whether they are officially published or not. Since digital government publications have become much more

widely accessible via government websites now, the brand and identity of those websites would help define the nature of government publications. Librarians would learn from their daily work in collecting government documents and serving scholars, and gain professional knowledge of this publication genre.

## CONCLUSION

The *Regulation of the People's Republic of China on the Disclosure of Government Information* and the guidelines on developing government website released in 2017 set the direction and requirements for publishing or releasing government information. Now that there is a definition for "government information" and there are also requirements for publishing government information online, libraries and scholars would benefit greatly from the new policies. Based on the increased availability of government information in digital format, libraries need to actively build digital Chinese government publications, develop a richer collection based on previously built print collection. While relying on the *Chinese Government Public Information Online* developed by the National Library of China and government websites, libraries need to consider developing their subject or regional collections to meet local academic community's needs. Libraries may also need to consolidate or integrate catalogs produced by various government offices for their own local academic needs. By collecting and using more published government publications, librarians would develop their professional knowledge and serve scholars in a more efficient way.

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## Is it Necessary: Quality Control in Cataloging?

Muriel D. Nero and Jia He

### Abstract:

Catalogers and technical services departments have always struggled with how much is too much when creating and enhancing bibliographic records as well as with what physical processing is needed to make these materials shelf-ready for timely circulation. Along with these decisions, catalogers also must address what quality control measures, if any, should be in place to guarantee resources are discoverable in the OPAC and discovery service. The authors of this paper describe their process and workflow for the quality control of tangible and electronic resources; they also discuss why quality control is performed. The importance of training cataloging staff on current cataloging rules and practices as a preventive measure to reduce mistakes is an essential part of the process. The ultimate goal of quality control is to eliminate errors and ensure the library's resources are accessible.

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## **Is it Necessary: Quality Control in Cataloging?**

Muriel D. Nero and Jia He

The Marx Library of the University of South Alabama, Mobile, Alabama, USA

### **ABSTRACT**

Catalogers and technical services departments have always struggled with how much is too much when creating and enhancing bibliographic records as well as with what physical processing is needed to make these materials shelf-ready for timely circulation. Along with these decisions, catalogers also must address what quality control measures, if any, should be in place to guarantee resources are discoverable in the OPAC and discovery service. The authors of this paper describe their process and workflow for the quality control of tangible and electronic resources; they also discuss why quality control is performed. The importance of training cataloging staff on current cataloging rules and practices as a preventive measure to reduce mistakes is an essential part of the process. The ultimate goal of quality control is to eliminate errors and ensure the library's resources are accessible.

**Keywords:** cataloging, quality control, technical services, cataloging staff training

### **INTRODUCTION**

Quality control is most often found in the business world; indeed, some companies have an entire department committed to the quality control of their products. The Marx Library Cataloging Department of the University of South Alabama uses a similar process of quality control to examine cataloged materials for errors before they are transferred to the Circulation Department for shelving, transferred to other locations, or used to fulfill hold requests for specific titles. At this academic library, the students and faculty are the customers, and the Cataloging Department's purpose is to comply with the component of the library's mission statement that states that one of the goals of the library is to "provide access to research materials at a level appropriate for successful academic performance" (University of South Alabama, n.d.). Performing quality control inspections on cataloged materials provides assurance that students and faculty will have access to the materials they need to complete course assignments and research endeavors.

This paper will begin with a description of the workflow and processes involved in quality control and explain why this is a valuable part of this department's operations. The bibliographic review process for books, DVDs, and e-books and the physical inspection of the tangible resources for the shelves are the main components of the quality control checklist. This includes examining the bibliographic, holdings, and item records in the Voyager Cataloging module as well as checking OCLC to ensure the Marx Library symbol (ACM) has been added to the correct record. Some of the steps for examining the physical processing include checking barcodes, spine labels,

and the LC Classification (Library of Congress) call number written on DVDs or inside books. Another aspect requires inspecting the physical processing of books done by GOBI Library Solutions from EBSCO. Although time consuming, quality control is important to ensure all cataloged items meet the current cataloging standards and follow local practices for the cohesion of the collection. This practice also ensures the discoverability of resources via the university libraries' online catalog SOUTHcat, and the EBSCO Discovery Service.

## LITERATURE REVIEW

With the phrase "quality control," most people think of businesses or large companies mass-producing products and the inspection of these manufactured goods before they go to consumers. Therefore, the research process for this paper began by specifically searching for the literature on quality control as it pertains to libraries. The search yielded articles spanning three decades, with the earliest publication in 1983 and the latest in 2015, and addressing some aspects of quality control on the following topics: cataloging or technical services, cataloging standards, library catalogs, cataloging evaluation, outsourcing, database quality, metadata quality, bibliographic quality, authority control, continuing education for staff training, and tools to measure quality.

In most of the articles reviewed, the authors discussed how to define quality control, the purpose of quality control, and the role of catalogers in providing quality control. Quality is not easily defined, it has two aspects: extent and accuracy. "Extent" refers to how much information is provided in the bibliographic record, while "accuracy" refers to the correctness of what is supplied by the cataloger (Graham, 1990). Schultz-Jones, Snow, Miksa, & Hasenyager (2012) expand extent and accuracy to include the details of the bibliographic record, compliance with cataloging standards, workflow of the processes, and user success in finding records.

For the Marx Library Cataloging Department, the quality control process is a fusion of these two definitions with the examination of the MARC fields of bibliographic records as well as the physical processing of physical items for circulation. By doing this, a standard is created that helps build and establish a cohesive and uniform database of resources. Sheeran (1996) shares this same opinion about maintaining a cohesive collection by saying "If libraries are going to continue to provide accurate, efficient access to the materials that they collect, then the database must be maintained in a cohesive, correct manner." Catalogers are essential players in the operation and organization of libraries. Although what they do is behind the scenes, the cataloger's data driven work of inputting crucial elements in the correct MARC fields allows materials to be discoverable in the OPACs. As Harmon (1996) states, "If a cataloger does not put the data in the record, the machine is not going to pull it out."

Paiste (2003) goes beyond the typical reasons for quality control and examines many other factors for total quality management. There is more to quality control than detecting and eliminating errors. It is a continuous process that involves assessing, evaluating, planning, and improving your current activities. Libraries and librarians are service oriented and want to meet the needs of the patrons; therefore, assessing patron needs and expectations, and then implementing the necessary changes will increase patron satisfaction. Paiste (2003) also emphasizes the need for continuous improvement and strategic planning. This allows for examination of production and service to improve the efficiency of quality control activities. One

tool to achieve continuous improvement is prevention. The emphasis should be on having knowledge of the cataloging rules and standards to prevent making mistakes and to self-check before the inspection process. "In a total quality environment, the goal is to perform tasks correctly the first time. Rather than review arbitrary quantities of cataloged materials, prevention should be emphasized" (Paiste, 2003). McGurr (2011) reiterates this sentiment on prevention by expressing the need for cataloging departments to be watchful of the workflow practices and not wait for a crisis to happen before changes are made.

At the center of the library is the bibliographic database. Catalogers are responsible for the bibliographic database and their work must be of high quality to provide access to the library's resources (Sheeran, 1996). As noted by Alberto Petrucciani (2015), libraries are the only social institution responsible for the "control, organization, communication, and preservation of information about the published output of human knowledge and expression."

## **BACKGROUND**

The University of South Alabama has an enrollment of more than 15,000 students and offers bachelors, masters and doctoral degrees for over 100 academic programs. Besides the Marx Library, the University has three other libraries on campus: the Biomedical Library, the Mitchell College of Business Learning Resource Center, and the Doy Leale McCall Rare Book and Manuscript Library, which is housed in the Marx Library. For this paper, the Marx Library's Cataloging Department will be the focus of the bibliographic and physical quality control process for the Marx Library, the Mitchell College of Business Learning Resource Center, and the Doy Leale McCall Rare Book and Manuscript Library.

The Marx Library has a book budget of \$200,000, which also includes the purchase of DVDs and single title e-books. This flat budget has been in effect for several years prior to the 2013/2014 fiscal year, which for the University of South Alabama begins on October 1 and ends on September 30. The Marx Library subject librarians begin ordering at the beginning of the fiscal year, and are expected to spend half of the allotted funds by the end of January with the rest being spent by July 1. The majority of materials requested by faculty and purchased by the Marx Library subject librarians support the university's undergraduate programs. Although some purchases support graduate and doctoral programs, these higher level programs tend to request fewer monographs and are in favor of more costly purchases such as journals and databases.

## **THE MARX LIBRARY CATALOGING PERSONNEL**

Currently, the Cataloging department of the Marx Library is comprised of two librarians: the Head of Cataloging, and the Cataloging Electronic Resources Librarian. The full-time staff includes an LTA II (Library Technical Assistant) and an LTA I. For most of 2014, there was one librarian and three full-time staff because the Head of Cataloging retired in January of 2014. In 2015, the personnel changed again to two librarians and three fulltime staff. After a staff retirement in the beginning of 2015, the department was back to four, the current personnel. The department also has two student assistants who are scheduled to work 20 hours a week.

Because this is a small unit, each person has specific and shared cataloging responsibilities. The Head of Cataloging, and the Cataloging Electronic Resources Librarian perform most of the original cataloging as well as copy cataloging for monographs, serials, government documents, and archival resources. The Cataloging Electronic Resources Librarian is primarily responsible for cataloging electronic resources such as e-books and streaming videos. The cataloging of DVDs, the only remaining media collection in the Marx Library, is also under the purview of the Cataloging Electronic Resources Librarian. The Head of Cataloging performs original and complex copy cataloging for all materials regardless of format. The LTA II and LTA I both perform copy cataloging of all print materials but are not responsible for copy cataloging electronic resources or DVDs.

The LTA II is the leader of the quality control inspection process, and the librarians serve as backup inspectors. The LTA II also supervises the student assistants who are responsible for the physical processing of materials. The LTA I takes the lead for cataloging government documents and filters materials that need original cataloging to the librarians. The LTA I also monitors and orders the necessary supplies for physical processing, such as the covers to laminate paperbacks. The LTA II has been in the Cataloging Department since 1980 and has witnessed the evolution of what is considered quality control for the department. Initially, quality control only focused on making sure the LC call number on the spine label matched what was written in the books. Several factors made it necessary to include other steps in the quality control process: the migration to a new ILS (Integrated Library System), the creation of more location holdings, and the training of new cataloging staff.

## CATALOGING AND PHYSICAL PROCESSING

During the cataloging process, catalogers follow these basic steps for copy cataloging: 1) searching by ISBN (International Standard Book Number), author, title, or other command line search in OCLC Connexion Client; 2) selecting and examining the record and making necessary changes such as updating records that do not meet the current cataloging rules and practices, RDA (Resource Description and Access); 3) updating the OCLC holdings to add the Marx Library OCLC symbol to record; 4) exporting the OCLC record to Voyager Cataloging module to overlay the order record; 5) performing authority control of name and subject headings; and 6) saving the record to the database. For original cataloging, the bibliographic record is created in OCLC Connexion Client, and then imported into the Voyager Cataloging module. After the bibliographic record is completed and saved, the holdings record is created to display location and call number, as well as to indicate the number of volumes for multivolume book sets or DVDs. The final steps include adding the barcode to the item record and denoting permanent location and item type. The item record also has fields to add the enumeration (volume number), chronology (month/s), and year of the work. This is also where the items status is noted. The item status remains “in process” until it is removed by the circulation department for shelving.

After the catalogers have completed the cataloging of books, these materials are placed on one of two trucks. Books that have no call number labels or need a corrected call number are placed on one truck, and books that need full physical processing are placed on the other truck. DVDs are placed on a separate truck from the books. This separation of materials allows the student assistants

to easily discern what needs to be done to the items. If during the cataloging process, a cataloger finds a problem with the physical processing of a book from GOBI, the problem is corrected in the Voyager cataloging module, the book is flagged, and the problem noted so the student will know to make the necessary physical correction. For instance, sometimes the LC call numbers need to be corrected. Most often it is simply a date that needs to be changed because the publication for the paperback edition is different from the hardcover edition.

Government documents and books for the archives are not placed on these trucks because they do not go through the physical processing. For example, books for the Doy Leale McCall Rare Book and Manuscript Library do not receive barcodes or any of the physical processing. Books and media for government documents only receive barcodes and no other physical processing. The SuDoc classification labels are created and applied in the Government Documents Department because these materials are acquired by the Head of Government Documents who assigns the SuDoc classification.

Books ordered from GOBI include minimal physical processing. Before making the transition to GOBI, the library used Baker & Taylor. With Baker & Taylor, the library outsourced all physical processing including the laminating of paperbacks. When Baker & Taylor dropped the academic market, the Marx Library had to switch to GOBI. Since the cost to laminate paperbacks from GOBI was substantially higher; therefore, it was more cost effective to have this done in-house by the student assistants. Currently, the Marx Library pays \$2.67 per book for the following: supply and apply 3M strips, supply and apply date due slips, and generate and apply labels. When materials are not purchased from GOBI, the two student assistants provide all the physical processing which includes the following depending on the item: applying ownership stamps, generating spine labels, affixing date due slips, inserting security strips, laminating paperbacks, and PAM (pamphlet) binding. The catalogers apply the barcodes to books and media during the cataloging process.

For DVDs, the physical processing involves applying barcodes and date due slips to the inside of the DVD case and writing the LC or assigned number on the DVD. However, spine labels are only created for nonfiction titles because they receive LC Classification while feature films do not.

## **QUALITY CONTROL INSPECTION**

After the students have completed a truck, the LTA II begins the full quality control inspection. The process begins with checking the bibliographic, holdings, and item records in the Voyager Cataloging module, and in OCLC Connexion Client to ensure Marx Library's OCLC holding symbol is on the correct record. The second phase examines the student's physical processing. During this second phase, any errors are noted on a checklist and returned to the cataloger for bibliographic corrections or to the student for physical corrections. An example of a correction that needs to be made by a cataloger is if the LC call number written in the book or on the DVD does not match what is on the holdings record. For physical corrections, the LC call number on the item could be missing volume numbers for multivolume sets if the volume number is covered-up by the placement of the spine label.

For many years, this detailed quality control process was done but not recorded to track errors. The LTA II was simply reporting the number of trucks being inspected, but there were no actual book counts. In 2014, the new Head of Cataloging realized the truck number does not reflect the amount of work the LTA II was doing. In May 2014, the LTA II began counting the number of books going through the quality control inspection. From May to December 2014, 3384 books went through the quality control process; in 2015, the number was 5508; in 2016, it was 3663; and in 2017, a total of 4766 books went through this process.

## **E-BOOKS**

Between 2014 and 2017, the Marx Library subscribed to or purchased over 67,309 e-book titles from twelve vendors including ProQuest Ebook Central, EBSCO, Springer, Project Muse, JSTOR, Wiley, Sage, Taylor & Francis, Science Direct, IGI Global, Oxford Scholarship Online, and ACLS. Among these e-book titles, approximately 90 percent were large vendor packages and 10 percent were individual titles. The quality control process for e-books, whether they are in a large vendor packages or individual titles, is specifically focused on the bibliographic and holdings records; there are no item records for these titles. The Cataloging Electronic Resources Librarian is solely responsible for providing the quality control inspection of e-book records.

For the large e-book vendor packages, MarcEdit is the software used to edit the records. Its basic GUI (Graphical User Interface) is designed for a non-coder and provides many convenient analysis and conversion capabilities that do not require any direct knowledge of programming or scripting (University of Illinois at Urbana-Champaign, n.d.). In other words, MarcEdit is not only easy for people to use, but it can also perform some complicated editing tasks on the e-books' Marc records. With MarcEdit, MARC fields are deleted, added, and validated to accomplish the quality control of the large vendor e-book packages.

In some instances, print and e-books may share the same ISBN number; therefore, the 020 fields for ISBN numbers are deleted to prevent e-book records from overlaying existing print bibliographic records in the catalog. For the purpose of clarity and uniformity, non-Library of Congress subject headings (6xx Fields) are deleted. In addition, all classification fields are deleted such as the 050 field for LC or 082 for Dewey Decimal Classification. Electronic resources do not need an LC call number because they are not tangible items to be shelved, and we have found that displaying call numbers for e-books only causes confusion for students who, after seeing the number, go look for the item in the stacks.

Further quality control processing of e-book records includes the application of RDA to the bibliographic records, since the Marx Library adopted and applied RDA as their cataloging standard in 2013. Currently, most vendor provided MARC records follow RDA. The RDA Helper in MarcEdit is available to correct any issues.

For the consideration of local control and e-book ownership, the University of South Alabama library proxy is added to the Electronic Location and Access (856 field) of each record to place the access restrictions. In MarcEdit, Marc Validator is used to check and verify the accuracy of fields for all records in the e-book package file. If any errors are detected, the

Cataloging Electronic Resources Librarian will locate the records and fix the fields until no errors are found in the e-book package file.

After the editing, the e-book package file is ready to be uploaded to Voyager. Before the loading process, some e-book records from the package file are randomly selected as test records to check if they are displayed correctly and are accessible in Voyager. If everything goes well, the e-book package file will be split into two separate files. For example: for a 500 records e-book package file, it will be separated in two files: one contains 100 records, the other contains 400 records. The smaller file with 100 records will be sent to the Computer Center where it will be uploaded for a test run before the complete file of records is uploaded to the library catalog. If no problems are found, the entire e-book package file will be uploaded to the Marx Library e-book collections. This process and workflow is also used for the streaming videos.

## **TRAINING CATALOGING PERSONNEL**

Staff training is essential to maintain the quality of cataloging work. By understanding staffs' and students' professional levels, cataloging proficiency levels, and working patterns, the Cataloging Department is able to offer different training sessions to empower them to contribute to the quality cataloging workflow. Without staff training, bibliographic errors would stymie the cataloging portion of the workflow. Hider & Tan (2008) define errors by their cause such as "non-application of a rule, misinterpretation of information on sources, poor subject analysis, non-recognition of a piece of information, miscoding, incorrect typography, and so on." These are all avoidable errors if professionals "are prepared to update their knowledge and skills regularly to meet new metadata challenges and opportunities in the twenty-first century" (Park, Tosaka, Maszaros & Lu, 2010). This coincides with Khurshid's (1997) Total Quality Management (TQM) philosophy which states quality cataloging greatly depends on the competency of the catalogers. This expertise is acquired by training and development and should be supported by libraries.

To make sure staff is able to learn the newest cataloging information and practices, they are encouraged to view cataloging webinars and attend workshops when feasible. The Head of Cataloging only requires staff to report the date and title of the webinar and the information to be covered. The Head of Cataloging also uses this to report on staff professional development during annual staff evaluations. The Head of the Cataloging Department and the Cataloging Electronic Resources Librarian also conduct cataloging workshops to help staff understand the newest developments concerning cataloging standards and practices. From 2015 to 2016, two workshops were held that covered topics such as Toolbar and Options on OCLC Connexion Client, RDA rules and standards, Voyager cataloging functions, and cataloging reference tools and resources. Follow-up instructions or demonstrations take place during the monthly department meetings when necessary.

## **STUDENT ASSISTANT TRAINING**

Most student workers do not have any library work experience before they come to work in the Cataloging Department. Because their job responsibilities are solely physical processing, they do



not need cataloging experience but they do need to be detail oriented. In addition, most of them were born in 1990s so it is easy to train them to work with technology such as using the software to print the spine labels. Plus, they have a strong motivation to gain work experience which will benefit their academic or career development in the future. With proper training, they can handle the physical processing work very well and help improve the output of cataloged materials.

The LTA II is responsible for training the student assistants. She has worked in the Cataloging Department for more than 30 years and has been an integral part of the physical processing of materials and the training of student assistants. Usually, the training sessions take several days and depend on the student's class schedule as well as the quantity of materials available for physical processing. The training sessions include demonstrations of applying call number labels, date due slips, security tapes on different materials, PAM binding, and laminating paperbacks.

Chen (2008) states "under the influence of today's new trends in the cataloging area along with technological changes, a transformation of the pattern of employment in the library's technical services is already underway." To keep the quality of the cataloging work under this employment pattern, well designed training programs and workshops will not only benefit the career development of professionals and paraprofessionals, but they will also improve the quality of cataloging work.

## **WHY QUALITY CONTROL?**

The processes and workflows for quality control have been described in detail, so why quality control is performed needs explanation. Undoubtedly, the major reason is to ensure access to our abundant collection of print and electronic resources. Library resources would be in circulation much faster without quality control, but there is greater potential for a variety of mistakes to render the library's catalog useless.

Over the years, a host of issues have been uncovered due to the lack of quality control in the early years of the Marx Library. Books with misspelled words or incorrect subfield indicators in the MARC title field for titles that begin with an article, "A," "An," or "The," have disappeared from the OPAC and discovery service side of searches. The wrong LC number has sent users on the hunt for a book never to be found or shelved in a very different subject area. A barcode was applied to only the first volume of a multivolume set and there was no barcoded record of the existing volumes. Name and subject authority control, was inconsistent so multiple instances of names or subjects were displayed during a search. Different formats of titles shared the same bibliographic identity which confused users on what format they were looking for. A prime example of this issue was a DVD version of a title was placed on the same holding as the VHS tape version.

Outsourcing some of our physical processing has greatly expedited the wait time for new books to enter circulation. However, this does not mean these books are 100% mistake free. It is still necessary for catalogers to check the prescribed LC call number as well as to make sure the book is not part of a series that adheres to a different local LC structure or a juvenile title that does not follow our local LC practice. Propas & Johnson (1998) make the case for librarians to

implement their own checks to make sure the quality of vendor services is acceptable and for professional librarians to “continue to maintain the intellectual understanding of what constitutes bibliographic integrity and quality.”

Because we have instituted a detailed quality control process and greatly improved staff training, these mistakes no longer happen or the issue is caught and corrected before library users have access to the resource. As cataloging personnel dwindles and technical services staff are asked or required to leave their comfort areas to work in public services, there is the temptation to let some things go. However, the inspection of the bibliographic and physical quality of the resources should not be one of those processes that falls by the wayside; it's too important. Without the bibliographic inspection of records, easily corrected errors or misunderstanding of rules go unrevealed and cataloging staff continue to commit erroneous mistakes. Bade (2008) contends that library users are not looking for a perfect record but simply want to find what they are looking for. However, in order for library users to find the best information for their research, the cataloging records should be in high quality and mistake free, and the format of the resources should be clearly discernible to the user.

In summation, Hanson & Schalow (1999) give the most convincing statement on why the Marx Library Cataloging department performs quality control: “Delivering quality in technical services requires that we strive to meet what often seem to be competing expectations from our customers: rapid availability of library materials as well as detailed and accurate cataloging and processing of those materials.” Ultimately, it is the responsibility of the cataloging team to perform quality control to identify problems, implement solutions, and take ownership of the bibliographic integrity of the collection.

## CONCLUSION

At this juncture, the Marx Library Cataloging Department will continue to follow its current workflow and procedures for quality control. Despite a smaller book budget and a small cataloging staff compared to other academic institutions, the Cataloging Department is, nevertheless, able to provide an effective level of quality control for cataloged materials. However, several factors could initiate changes to the current process, such as a dramatic increase in the book budget and the attrition of cataloging librarians and staff due to retirement or other reasons without rehiring for these positions. The department's motto is that the quality of work is more important than the quantity of work produced. Our motto is similar to Khurshid's (1997) Total Quality Management (TQM) philosophy on doing it right the first time. It is fruitless to rush the cataloging process only to boost monthly output statistics if the work is riddled with mistakes. If more emphasis is placed on training and the reasons why things are done in a certain way, output will increase naturally and without mistakes. This encourages the cataloging librarians and staff to take pride in their work and to seek opportunities to increase their cataloging knowledge and skills. Paiste (2003) refers to this as building a “culture of quality” which embodies the following aspects: holding a systems (departments, libraries, institutions) view, pride in workmanship, valuing and empowering employees, and personal learning.

Additionally, inspecting the physical processing of materials is as important as inspecting the data in the bibliographic, holdings, and item records. An error free record is the ultimate goal; however, if the call number or barcode do not match the right item, this item is rendered inaccessible. The quality control of cataloged materials is a comprehensive process that follows a set of workflow to ensure the accuracy of the bibliographic, holdings, and item records. The physical processing must coincide with the information in these records so the library's collection is accessible to students, faculty, and researchers.

In conclusion, the loss of quality control would be harmful to the integrity and accessibility of the library's resources. "The battle to maintain quality must go on, error must be kept to a minimum" (Soules, 1983). As Sheeran (1996) said, "the bibliographic database is at the center of the library, and, in order to provide effective access to the library materials, it must necessarily be a high quality." The Marx Library Cataloging Department will continue to provide some level of quality control to maintain a cohesive collection and to adhere to the library's mission statement to provide timely and efficient access to resources.

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## Vocabulary Integration Reexamined

Yunseon Choi

### Abstract:

Several thesauri have been published in various domains, or in the same subject domain. This heterogeneity caused the significant incompatibility of transferring or sharing data among different systems and databases. Therefore, thesaurus integration is a solution for handling this incompatibility issue. To achieve interoperability between different thesauri, mapping systems have been developed for establishing equivalents between terms in different thesauri. However, there is still ambiguity in term semantics and hierarchical relations used in thesauri. The purpose of this paper is to reexamine the issues and challenges in vocabulary mapping and integration between different controlled vocabulary systems. The paper outlines the history of the study of vocabulary mapping efforts and suggests a way in which the emerging practices on semantic issues and mapping problems can be articulated.

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## Vocabulary Integration Reexamined

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### ABSTRACT

Several thesauri have been published in various domains, or in the same subject domain. This heterogeneity caused the significant incompatibility of transferring or sharing data among different systems and databases. Therefore, thesaurus integration is a solution for handling this incompatibility issue. To achieve interoperability between different thesauri, mapping systems have been developed for establishing equivalents between terms in different thesauri. However, there is still ambiguity in term semantics and hierarchical relations used in thesauri. The purpose of this paper is to reexamine the issues and challenges in vocabulary mapping and integration between different controlled vocabulary systems. The paper outlines the history of the study of vocabulary mapping efforts and suggests a way in which the emerging practices on semantic issues and mapping problems can be articulated.

**Keywords:** vocabulary mapping, controlled vocabulary, thesaurus, interoperability, ontologies

### INTRODUCTION

A thesaurus is a tool for vocabulary control, and it is the most complex type of controlled vocabulary in use in the library and information science professions. Thesauri are often called subject headings in the library context, and generally follow the standards for thesaurus construction using broader term (BT), narrower term (NT), and related term (RT) (NISO, 2017). By guiding indexers and searchers about which terms to use, a thesaurus can help improve the quality of retrieval. Thesauri have been published in various domains, or in the same subject domain. This caused the significant incompatibility of transferring or sharing data among different systems and databases. Thesaurus integration is a solution for handling with this incompatibility issues. Thesaurus reconciliation goes through several processes including mapping, switching, merging, and integration. And thesaurus mapping is a central process for thesaurus reconciliation where terms, concepts and hierarchical relationships between concepts are identified (Doerr, 2001). To achieve interoperability between different thesauri, mapping systems have been developed for establishing equivalents between terms in different thesauri. However, there is still ambiguity in term of semantics and hierarchical relations used in thesauri. This paper reexamines the problems of thesaurus integration and merging, in particular focusing on issues related to vocabulary mapping. This paper provides a review of the challenges and issues of thesaurus integration and provides a brief account of projects that have investigated the integration and/or

merging of controlled vocabularies and different structure in various domains. This paper concludes with a path to exploring the future thinking of research for vocabulary mapping and integration.

## CHALLENGES FOR VOCABULARY INTEGRATION

The purpose of thesaurus integration is to integrate various indexes of a collection of documents into a single tool for indexing and retrieving (Aitchison, Gilchrist, & Bawden, 2000). Several thesauri have been published in various domains, or in the same subject domain. UNESCO thesaurus, Getty Art and Architecture Thesaurus (AAT), ERIC Thesaurus, and AGROVOC have been used in digital libraries (Sunny & Angadi, 2017). The examples of thesauri with traditional knowledge include Library of Congress Name Authority file for personal and corporate names and Getty's Thesaurus of Geographic Names (TGN) for place names (Sunny & Angadi, 2017). This heterogeneity caused the significant incompatibility of transferring or sharing data among different systems and databases. Therefore, thesaurus integration is a solution for handling this incompatibility issues.

The main differences in controlled languages in the same field include specificity, exhaustivity, compound terms, synonyms, and inter-relationships (Aitchison, Gilchrist, & Bawden, 2000). For example, there are different levels of specificity and exhaustivity between thesauri in describing the same subjects. In addition, there are different levels of hierarchical structures among thesauri. Doerr (1996) also points out the remaining heterogeneity between different thesauri such as different word use (i.e., language level and terminology degree) and different coverage (i.e., the scope of thesaurus).

### **Integrating Different Languages and Different Cultures**

The central process of thesaurus mapping is establishing vocabulary equivalence (Chan & Zeng, 2002). There are various levels of vocabulary mapping: terminological level (subject heading), semantic level (authority record), and syntactic level (application) (Freyre and Naudi, 2001). However, it is not easy to find one-to-one relationships between terms in different vocabularies due to the differences in linguistic expressions for the same concept. In addition, polysemous terms with multiple meanings hinder vocabularies mapping. On the other hand, the interoperability issues among different thesauri are associated with the questions of integrating the views of different cultures, since controlled vocabulary or subject terms in classification systems need to be properly translated during the process of vocabulary mapping. Literally translated language might be meaningless and there are also difficulties with transferring a whole conceptual structure from one to another culture appropriately (Hudon, 1997).

### **Integrating Different Structures**

Knowledge Organization Systems (KOS) such as subject headings and classification schemes have their own structures and guidelines and differ from one another in their structure, semantic, lexical, and notation or entry features (Iyer and Giguere, 1995). Furthermore, depending on communities and the defined usage of the term, there are a number of ways to investigate vocabularies and their functions (NISO, 2017).

### **Semantic Problems in Thesaurus Integration**

Doerr (2001) points out that hierarchical relations without subsumption (subclass and subproperty) would result in ambiguity in thesaurus mapping and the semantics of hierarchical relations should be made. In thesauri, the semantic differences of hierarchical relations have occurred, because BT

(Broader Term)/NT (Narrower Term) relations were defined differently in different thesauri. In some thesauri it means subsumption (subclass and subproperty), while in other thesauri it can mean BTI (Broader Term Instance) or BTP (Broader Term Partitive). Fisseha (2003) also points out ambiguity in thesauri regrading typical hierarchical relations such as Broader Term and Narrower Term and shows that their semantics are not explicitly defined. For example, “sweet” corn is a property of corn, but in the AGROVOC multilingual thesaurus, the term “sweet corn” is listed as a narrower term of the “Maize” (Figure 1). AGROVOC thesaurus can be accessed online (<http://aims.fao.org/standards/agrovoc/functionalities/search>). The semantic relationship between terms are not clearly explicated in the thesaurus.

products > plant products > cereals > maize	
PREFERRED TERM	maize
-----	
BROADER CONCEPT	cereals (en)
NARROWER CONCEPTS	dent maize (en) flint maize (en) popcorn (en) soft corn (en) soft maize (en) sweet corn (en) waxy maize (en)
ENTRY TERMS	corn (maize) (en)

Fig. 1. Hierarchical relations in AGROVOC Multilingual Thesaurus

The subsumption relations between all terms of two thesauri can be identified from a complete mapping using ontological reasoning (Fisseha, 2003). The term *ontology* has been used in several disciplines, from philosophy to computer science. As a branch of philosophy, ontology studies the structures of the objects, properties and relations of reality (Smith, 1997). In computer science, which came out of artificial intelligence, the ontology is a model of the representation of objects in the world with properties and relationships (Garshol, 2004). Gruber (1993) defines an ontology as “a formal, explicit specification of a conceptualisation” (p.1) and explains the definition:

- *Conceptualisation* refers to an abstract, simplified view of the world that we wish to represent for some purpose.
- *Explicit* refers to type of concepts used, and the constraints on their use are explicitly defined.
- *Formal* refers to the fact that an ontology must be able to be read by the computer.
- *Shared* refers to the notion that an ontology captures consensual knowledge, that is, it is not private to some individual, but accepted by a group.

Other researchers describe ontologies as taxonomic hierarchies (Baeza-Yates & Ribeiro-Neto, 1999; Vickery, 1997). Vickery (1997) notes the aspect of taxonomic hierarchies of classes, with class definitions and the subsumption relations. Baeza-Yates and Ribeiro-Neto describe ontologies as hierarchical taxonomies of terms representing topics. Unlike general taxonomies, ontologies classify terms and defines the relationships between the terms, and also expand on taxonomies which clarify the context of terms (NISO, 2017).

In Figure 2, between two terms Maize and Sweet corn, ontological relation such as the “*Kind of*” can be formalized to specify the semantics of relationship between terms. It can be stated that Sweet corn is a *Kind of* Maize.



Thesaurus	Ontology
MAIZE	Kind of (e.g. Maize/Sweet corn) - Sweet corn is a kind of Maize
BT cereals	
NT dent maize	
NT flint maize	
NT popcorn	
NT soft maize	
NT sweet corn	
NT waxy maize	

Fig. 2. Explicit relationships in ontologies

Thesaurus integration tools using ontologies and semantic frameworks have been developed to resolve problems associated with ambiguity in hierarchical structure of thesauri. The examples of the tools include the YAM++ Online and the Visual Terminology Alignment Tool (VisTA). The YAM++ Online is a web tool for ontology and thesaurus matching (Bellahsene et al., 2017). The Yam++ Online tool has been partially supported by the French National Research Agency (ANR) within the DOREMUS (Doing REsuable MUSica data) Project focusing on developing controlled vocabularies for music. The Visual Terminology Alignment Tool (VisTA) aims to help users to work on the intellectual handling of the assignment between two terminologies by visualizing vocabulary hierarchies (Axaridou et al., 2018).

## EXAMPLES OF MERGED THESAURI

To achieve interoperability among different controlled vocabularies, several attempts to merge thesauri have been made by adopting different approaches and methods to deal with inconsistencies in the process of thesaurus integration:

### **Integrated energy vocabulary (1979)**

The integrated energy vocabulary for the energy domain was developed by integrating 11 existing vocabularies covering the subject area of energy research and development (Niehoff, 1976; Niehoff & Kwansy, 1979).

### **BRS (Bibliographic Retrieval Services)/TERM vocabulary database (1984)**

The BRS/TERM vocabulary database provides natural language synonyms and controlled vocabulary descriptors from seven bibliographic databases in the social and behavioral sciences (Knapp, 1984). TERM database, formerly on the Bibliographic Retrieval Service (BRS), merges terms and codes from controlled languages used in behavioral and social sciences databases.

### **The National Technical Information Service (NTIS) database (1984)**

The National Technical Information Service (NTIS) database is an integrated database from government agencies which have their own thesaurus. The NTIS thesaurus represents a single thesaurus by merging various thesauri and natural language terms (Piternick, 1984).

### **Unified Medical Language System (1990)**

The National Library of Medicine's Unified Medical Language System (UMLS) was developed

to integrate biomedical terminology. It aims to build a repository of biomedical terms and their interrelationships to help users retrieve and organize information (McCray & Hole, 1990). The Unified Medical Language System (UMLS) merged concepts from some 50 sources into a metathesaurus, which retains links to its original sources.

#### **Unified Agricultural Thesaurus (UAT) (1996)**

The three producers of the databases such as the US National Agricultural Library (NAL), the UN Food and Agricultural Organization (FAO) and CAB International (CABI) cooperated to create a Unified agricultural thesaurus. It integrated AGROVOC and CAB thesaurus (Clarke & Dextre, 1996) by creating a reorganized, classified structure derived from AGROVOC and CAB thesaurus. It aims to provide users with a comprehensive, multilingual thesaurus system.

#### **HILT (High-Level Thesaurus) (1997)**

The HILT ('High-Level Thesaurus') project aimed to focus on the problems associated with cross-searching and browsing by subject in a cross-sectoral and cross-domain environment encompassing libraries, archives, and museums. It integrated distributed and heterogeneous thesaurus databases and merged multilingual and monolingual thesauri (Kramer, Nikolai, & Habeck, 1997).

#### **Precision Medical Vocabulary (2018)**

The Precision Medical Vocabulary (PMV) is a controlled vocabulary related with precision medicine (Yu, et al., 2018). It was integrated from several controlled vocabularies including Medical Subject Headings (MeSH), National Cancer Institute Thesaurus (NCIt) and Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT), and databases in specific domain such as HUGO Gene Nomenclature Committee (HGNC) and Online Mendelian Inheritance in Man (OMIM) for gene, Human Phenotype Ontology (HPO) for human phenotype, DrugBank and RxNorm for drug. The PMV also integrated some biomedical resources such as DrugBank, ClinVar and NCBI Gene with the foundational vocabulary by utilizing a series of mapping and integration strategies.

#### **Controlled Vocabularies for Music Metadata (2018)**

Three major French cultural institutions (the French National Library (BnF), Radio France and the Philharmonie de Paris) cooperated to develop controlled vocabularies to describe semantically their catalogs of music works and events. The controlled Vocabularies for Music has been partially supported by the French National Research Agency (ANR) within the DOREMUS (Doing REsuable MUSica data) Project. The Controlled Vocabularies for Music provides music-specific, multilingual controlled vocabularies including topics such as musical genres, keys, or medium of performance (Lisena et al, 2018). The controlled Vocabularies for Music was developed by merging a number of existing vocabularies (IAML, RAMEAU, Diabolo, Itema3, Itema3-MusDoc, and Redomi) and was formalized using Semantic Web languages.

## **CONCLUSION**

As a tool for vocabulary control, thesauri have been used to provide effective access to resources and to achieve indexing consistency. Since several controlled vocabularies have been developed in various domains, the tasks of thesaurus integration and mapping became challenged and faced difficulties due to different culture, different languages, and semantic problems in thesauri. In this paper, we reexamined a set of the issues and trends in vocabulary mapping between different thesauri and aimed to share emerging practices on semantic issues and mapping problems. Term

hierarchies in thesauri often do not express subsumption and are ambiguous because they do not express all subsumption relations. The subsumption relations between terms of two thesauri can be identified from a complete mapping using the successful formalization of ontology and semantic frameworks which result in explicit semantics between terms.

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## Promoting Translational Research Within the Global Library and Information Community: Access to Research Dissemination, Promotion of Timely Issues, and Professional Development Through IFLA Journal

Steve Witt

### Abstract:

Within the global Library and Information Science profession there is often a disconnect between research and practice. IFLA Journal seeks to help bridge this gap through an editorial process and publishing mandate that encourages mixed methods approaches to research that engages librarians and their communities in the research and information dissemination process in order to translate research in a manner that helps to shape impactful professional practice and share outcomes with the wider profession. This article describes ways in which to engage IFLA Journal and participate in some of its ongoing professional development activities.

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## **Promoting translational research within the global library and information community: access to research dissemination, promotion of timely issues, and professional development through IFLA Journal**

Steve Witt

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### **ABSTRACT**

Within the global Library and Information Science profession there is often a disconnect between research and practice. *IFLA Journal* seeks to help bridge this gap through an editorial process and publishing mandate that encourages mixed methods approaches to research that engages librarians and their communities in the research and information dissemination process in order to translate research in a manner that helps to shape impactful professional practice and share outcomes with the wider profession. This article describes ways in which to engage *IFLA Journal* and participate in some of its ongoing professional development activities.

**Keywords:** translational research, library science, publishing, professional development

For over forty years, the editors of *IFLA Journal* have strived to publish articles that reflect the work and mission of the International Federation of Library Associations and Institutions (IFLA). As recounted by Jerry W. Mansfield, past chair of the Journal's editorial committee, the history of *IFLA Journal* sees a publication that has evolved from a chronicle of IFLA activities to a peer-reviewed journal that examines the challenges faced by librarians and information professionals that range from the investigating role of information in society, improving communities, developing inclusive services, supporting economic development, increasing access to knowledge, and actively engaging in the local and international policies that impact libraries and the world's population (Mansfield, 2014). The broad mandate of *IFLA Journal* requires a long-standing dedication to channeling the global voice of the library and information professions while promoting research that impacts practice. The success of *IFLA Journal* relies on the participation of practitioners and academics. This essay provides information on the scope of the journal and ways in which to engage the IFLA community through its scholarly journal.

If one reflects upon past publications and often cited articles from the journal, the diversity of authors, perspectives, and issues are unmatched within the field's literature. Reviewing some of the most frequently read articles that are featured on the journal's website, one sees the depth and breadth of the journal's coverage. Articles focus on topics that remain timely such as freedom of expression, cultural heritage, development, indigenous knowledge, building leadership within the

profession, and perspectives from around the globe that inform our professional practice. Nakata's landmark article "Indigenous Knowledge and the Cultural Interface" continues to be one of the most read *IFLA Journal* papers while Koltay's contributions to our knowledge of data management practices breaks new ground in a pressing new professional initiative (Nakata, 2002; Koltay, 2016). These articles reflect the strength of the profession as a global field.

The important work to advocate the critical need for information access and the role of libraries and allied cultural organizations in facilitating knowledge production is predicated upon the availability of research and evidence from the field. The Lyon Declaration on Access to Information and Development, launched at the World Library and Information Congress 2014, marks a critical initiative to assert and advocate the role of the profession in cultures and societies around the world (International Federation of Library Associations and Institutions, 2014). Over 300 organizations from throughout the library and development community endorsed the document, calling upon United Nations Member States to integrate access to information into the post-2015 development framework. Declarations such as the one issued in Lyon in 2014 mark the ambitions and ideals of the library profession and successfully added the profession's voice to the important UN2030 conversations that will impact development initiatives for years to come (Bradley, 2016). Practitioners need access to both the tools and resources to translate their experience and the impact of their work to a wide and globally situated professional audience to make these initiatives successful. To contribute to the success of initiatives such as IFLA's work within the UN2030 Sustainable Development Goals, *IFLA Journal* aims to reflect the profession as a whole while ensuring a diversity of research methods, theoretical perspectives, and levels of inquiry that reflect the breadth and depth of IFLA's membership and remit.

One strategy *IFLA Journal* employs to reach the professional units that support IFLA's work is to partner with sections to develop topical and thematic special issues. The inaugural special issue of the journal focused on National Libraries as centered of innovation. Subsequent special issues focused on Cultural Heritage Preservation, Data Services, and Privacy (Cooke, 2018; Drijfhout & de Boer, 2015; Horstmann & Witt, 2017). In particular, the main goals of these special issues are to gather interdisciplinary and inter-professional research that contributes to professional practice and policy decisions that are important to the topics being addressed in global forums such as the UN. *IFLA Journal* focuses its special issues in a manner that encourages exchange between library researchers and practitioners and those from allied fields to inspire wider research that relates to practice and furthers dialogue with other professions ranging from archivists to urban planners.

Currently, *IFLA Journal* has open calls for two special issues that focus on challenges identified by professional sections. These include knowledge management, and information literacy.

### **Special Issue on Knowledge Management**

Managing institutional knowledge is increasingly recognized as a crucial element in improving competitiveness, innovation, and creativity. Libraries seeking to be resilient organizations in a quickly and unpredictably changing world know that KM is essential to their internal management strategy, and librarians in particular have the necessary skills and competencies to put it into action.

Libraries contribute to their parent institutions by helping them to develop their own approach to KM, providing them with methods and tools to address their own development, and transform themselves in a transforming world. As the number of knowledge workers increases in all sectors, practicing effective KM requires attention to human resources, a mature use of technologies and the ability to deploy effective processes.

*IFLA Journal* invites papers for a special issue focused on Knowledge Management across all continents. We intend to gather the latest theories, research, and practices from libraries and information professions to further the discourse on the current state of Knowledge Management in libraries and other information-rich institutions. We are particularly interested in articles employing quantitative or qualitative research methods in their approach to knowledge management.

**Guest Editors:**

**Leda Bultrini**

Operating Systems and Knowledge Management, Director  
ARPA Lazio (Regional Agency for Environment Prot.)  
Italy

**Wilda Newman**

Information Resources Manager  
Knowledge Resources Associates, LLC  
United States

**Mary Augusta Thomas**

Deputy Director  
Smithsonian Libraries  
United States

**Jennifer A. Bartlett**

Interim Associate Dean, Teaching, Learning, & Research Division University of  
Kentucky Libraries  
United States

**Submission Deadline:**

Articles for the special issue should be submitted to *IFLA Journal* for peer review on or before Friday, 19 April 2019.



### **Special Issue on Information Literacy:**

IFLA Journal and IFLA's Library Theory and Research (LTR) and Information Literacy (IL) Sections are soliciting articles for a special issue focusing on theory and practice in information literacy. With the potential to transform lives and societies, the importance of information literacy is appreciated world-wide. Our understandings of information literacy come from across the globe and ranges in focus from practice-based to highly theoretical; from everyday life to education and workplace settings; and for infants through to the elderly.

The Information Literacy special issue aims to examine a range of critical approaches and research models that contribute to building new theory; the challenges of applying theory in practice and how learning theories can inform practice. In particular, the main goal of the special issue is to explore how the body of information literacy practice can inform the building of theory, which in turn can inform future practice. It will also explore the potential for developing knowledge to guide information literacy practice across disciplines, contexts and environments.

#### **Guest Editors:**

##### **Dr. Gaby Haddow**

Libraries, Archives, Records & Information Science  
School of Media, Creative Arts & Social Inquiry  
Curtin University  
Australia

##### **Dr. Min Chou**

Congressman Frank J. Guarini Library  
New Jersey City University  
United States

#### **Submission Deadline:**

*Articles for the special issue should be submitted to IFLA Journal for peer review before **June 30 2019**.*

### **Training Libraries in Translational Research**

In addition to special issues, the journal seeks to work within the association's professional bodies to promote research and publishing that engages the diversity of the profession and speaks to the multiple challenges librarians face. To channel the global nature of IFLA's membership, the journal encourages wider collaboration and networking throughout IFLA that will inspire research and scholarship on topics important to the profession. One of the strengths of IFLA is that it brings together librarians from varied perspectives and backgrounds to discuss professional matters and advocate important issues. By encouraging and facilitating collaborative research among colleagues within IFLA, the profession will benefit by increasing access to publishing

opportunities among members while raising the level of the research and scholarship published in the journal.

The journal seeks to increase IFLA members' access to research tools and expertise to enable further efforts towards translational research. Librarians are increasingly being called upon to be researchers within their organizational and community settings. This research allows librarians to take an evidence based approach to identifying problems with local partners, measuring impact, and sharing the results of work to stakeholders and the broader profession.

Librarians often conduct studies in community settings and apply for grants that require documentation of real-world impact. Many funders require components such as dissemination plans, stakeholder engagement, or community participation. To meet these demands, librarians need to be able to understand and adopt research methods that will allow them to work with their communities to craft research questions and interpret project results to inform practice and policy. Working with the Social Science Libraries Section, IFLA Journal plans to develop a series of workshops that introduce participants to methods for conducting research in real-world settings and translating empirical findings to both practice and publishable results.

These workshops will introduce students to methods and tools to equip them to design, conduct, and critique qualitative and mixed methods research. Participants will explore the strengths and weaknesses of a variety of data collection methods and evaluate strategies for using and combining them. The workshop will focus on research designs that encourage community participation and that incorporate in-depth interviews, focus groups, surveys, participant observation, and archival research. The majority of the workshop will focus on issues of research design and data collection to allow participants to design projects and community programs in a manner that will allow quality assessment and analysis to disseminate results to stakeholders and the broader professional community. The IFLA Journal editorial committee hopes to host its inaugural workshop at the WLIC 2019 meeting in Athens, Greece. We also look forward to partnering with other organizations to host and conduct similar events.

As *IFLA Journal* continues to evolve, the editor and editorial committee seek your input and collaboration. There are multiple ways in which to engage the journal and publishing process beyond submitting research. From opportunities to edit a special issue to professional development and even serving on the journal editorial committee, the journal strives to reach the global library and information science community through both its publishing mandate and vision to make research and publishing opportunities more accessible to the IFLA membership and field globally.

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### **About the author**

Dr. Steve Witt is an Associate Professor at the University of Illinois at Urbana-Champaign where he is the Head of the International and Area Studies Library, Director of the Center for Global Studies, and Japanese Studies subject specialist. Professor Witt is also the Editor of IFLA Journal. His research focuses on the trajectory and impacts of international developments in library and information science, placing global trends in librarianship and knowledge production in the context of wider social and technological developments.

### **The 9th Shanghai International Library Forum (SILF 2018)**

The 9th Shanghai International Library Forum (SILF 2018) was held on October 17-19, 2018 at the Shanghai Library. The forum was organized by the Shanghai Library (Institute of Scientific and Technical Information of Shanghai) and co-organized by the Shanghai Society for Library Science and the Shanghai Society for Scientific & Technical Information. A total of 292 delegates from 24 countries and regions attended the forum.

The forum program consisted of three keynote speeches, one plenary session which included seven presentations, and five concurrent sessions: digital scholarship and humanistic studies; public service and reading promotion; information technology and smart libraries; space design and service innovation; and academic publication and professional communication.

The three keynote speeches were delivered by Chen Chao, Director of Shanghai Library titled “Intelligence and Inclusiveness: The Power to Re-Envision the Public Library;” Gloria Perez-Salmeron, IFLA President titled “Libraries as Motors for Change;” and Peter K. Bol, Professor of Chinese History at Harvard University titled “The Digital Humanities and a Cyberinfrastructure for China Studies.”

Michael Bailou Huang, Director of Global Library Initiatives at Stony Brook University chaired the Concurrent Session V titled “Academic Publication and Professional Communication—Collaboration, Openness and Moving Forward Together: The International Future of Academic Publication in Library and Information Studies.” At this well attended session, Guoying Liu, University of Windsor, together with Fangmin Wang of Ryerson University, talked about the Chinese American Librarians Association’s peer-reviewed academic English journal: *International Journal of Librarianship*. In addition, Guoying presented about hot topics in recent LIS publications. CALA Executive Director Lian Ruan shared her experience about working together with Chinese and American academic librarians for a monograph publication. Ping Fu of Central Washington University co-presented with Kristi Thompson of University of Windsor on “How to Publish in an English Academic *Journal*.” Kristi, joined by Shenqin Yin of Fudan University in Shanghai, China, made a presentation titled “Collaboration Between a Canadian and Chinese Author and Their Different National Perspectives on Library and Information Science—A Case Study.”

At the round table titled “International Communication and Sharing of Library and Information Academic Achievements” co-chaired by Xiaoming Jin of Shanghai Library and Shushi Wu of the National Library of China, editors-in-chief and representatives of 23 journals from China, Canada, and the United States gathered together and shared their perspectives on the future of academic publications in library and information studies. A joint initiative of the library and information science journals about open access was endorsed by the 23 participating journals including *International Journal of Librarianship* and other core LIS journals in China such as *Journal of the National Library of China*, *Library Journal*, *Library Construction*, *Journal of Academic Libraries*, *Library and Information Work*, *Library Forum*, and *Chinese Library Journal*.

The Joint Initiative calls for promoting the rapid and wider dissemination of research results in library and information science and making the research results in this field freely available to the public.

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**Guoying Liu, University of Windsor, Ontario, Canada**