

**USING JAPANESE SOURCES FOR ACADEMIC RESEARCH: INFORMATION-
SEEKING BEHAVIOURS OF GRADUATE STUDENTS**

by

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Abstract

Traditionally, library and information studies have found that people strategize their information seeking depending on their plans and situations. When it comes to locating Japanese information sources in English-speaking countries, previous studies found that barriers by geography, language, and culture influenced their strategies. However, less studied is how Japanese information sources are sought by graduate students, who have unique information-seeking behaviors compared to undergraduate students and faculty members. To fill the research gap, I investigated the intersections of *Japanese-language sources*, *information-seeking strategies*, and *graduate students*. I conducted semi-structured virtual interviews with eight graduate students at the University of British Columbia (UBC), five in the Department of Asian Studies and three in the Faculty of Education. The interviews were transcribed and coded using a directed content analysis approach. Participants' self-report indicated that they strategize information seeking by interacting with information systems (e.g., a discovery tool), resources (e.g., library stacks) and people (e.g., peers and librarians) and shift different strategies. The selection of strategies and shifting were affected by their plans (e.g., search habits, information literacy, research stages) and situations (e.g., geography, culture, language, academics' roles). Also, most participants used resources and strategies available within UBC community, such as UBC library collections and services and asking for help from supervisors, librarians, and peers. Participants also reported that time and budgetary constraints limited opportunities for travelling to Japanese library institutions. Disciplinary differences were also found. Education students, who did not have Japanese-speaking supervisors, did not rely on people at UBC, whereas Asian Studies students frequently mentioned help from their supervisors. These findings suggest that

information professionals continue advocating for collection development, international interlibrary loans, digitization and open access. Partnership with faculty members would also help outreach the available library services for graduate students. Also, faculty and departments could provide travel grants for students to visit library institutions overseas, as participants' time and budgetary constraints forced them to give up accessing physical copies that are only available at Japanese institutions. Future research is expected to explore graduate students in other disciplines and other languages, and employ different research method (e.g., research diaries).

Lay Summary

This thesis explores how graduate students look for Japanese-language sources for their research projects - coursework assignments, research assistantships, and theses/dissertations. When working on their projects, graduate students need access to books, journals, and other information sources. While previous research has studied how faculty members seek non-English sources, little attention has been paid specifically to graduate students and Japanese-language sources. During one-to-one interviews with eight graduate students who use Japanese-language sources at the University of British Columbia, participants in this study described their reliance on services available on campus – such as library collections and guidance from their peers, librarians, and professors. The participants’ ideal was to visit Japan to obtain Japanese sources, but time and budgetary constraints prevented them from taking these actions. It is hoped that librarians continue advocating for availability of Japanese-language sources on campus to fulfill the needs of graduate students.

Preface

This thesis was approved by the University of British Columbia Behavioral Research Ethics Board (H20-00633). Literature review, research design, and research instruments (i.e., informed consent, pre-interview questionnaire, and interview scripts) in Chapters 1, 2, 3, and appendices were drawn from a term project for LIBR 553: Understanding information users in diverse environment, offered by Dr. Heather O'Brien in the Winter term 1 in 2019. In the group project, the author of this thesis, Risa Hatanaka, and her group member, Josh Chan, were both responsible for literature review, research design, interviews, and writing up. The project was presented as a poster at the Council of East Asian Libraries (CEAL) Annual Meeting 2020 [Hatanaka, R., Chan, J., and O'Brien, H. (2020, March 17-19). *Using non-English sources in academic research* [Poster presentation]. CEAL 2020 Online Annual Meeting. <https://www.eastasianlib.org/newsite/wp-content/uploads/2020/03/8.-Using-Non-English-Sources-in-Academic-Research-Risa-Josh-Heather-CEAL2020.pdf>]. In this thesis, the author re-wrote elements of the LIBR 553 term paper and the CEAL poster in her own words with guidance from her supervisory committee, Drs. Heather O'Brien and Erik Kwakkel. Data collection, analysis and discussion in Chapters 4 and 5 were all conducted by the author, with recommendation from the supervisory committee.

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List of Abbreviations

ALA: American Library Association

CARL: Canadian Association of Research Libraries

CEAL: Council on East Asian Libraries

CJK: Chinese, Japanese, Korean

DCA: Directed Content Analysis

DD: Document Delivery

ILL: Interlibrary Loans

IR: Information Retrieval

ISP: Information Search Process

ISS: Information Seeking Strategy

LC: Library of Congress

LIS: Library and Information Science

NCC: North American Coordinating Council on Japanese Library Resources

NDL: National Diet Library

NII: National Institute of Informatics

OCLC: Online Computer Library Center

QCA: Qualitative Content Analysis

UBC: University of British Columbia

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Chapter 1: Introduction

1.1 Research background

Research activities require sources of information to be investigated, and these sources could be published in any language, in any region, and any historical period. For example, those who analyze a text of pre-modern Japanese literature may want to obtain the original texts written in pre-modern Japanese language. People investigating US-Japan political relationships may want to read journal articles published in Japan and written in Japanese. These sources are often published in the region where the languages are spoken – Japan, in these cases. If those who need such sources are located outside of Japan and affiliated with non-Japanese academic institutions, how do they locate and access them? This thesis is especially concerned with how graduate students, who are new to research activities, strategize identifying, locating and accessing Japanese-language sources.

This study focuses on Japanese-language sources, which have been collected by North American academic libraries to support research projects dealing with Japan. Academic research on a specific geographic area was established as *Area Studies* in North America before the second World War (Duller, 2015). Area Studies – also known as *Global Studies*, *International Studies*, or *Regional Studies* – is an interdisciplinary discipline that studies topics related to specific geographic areas and regions. It has been developed to strengthen national security by understanding the culture and language of the areas, which have politically influenced the US and Canada (Bond & Scott, 1999). Area Studies specializing in topics dealing with Japan is called *Japan Studies* – or *Japanese Studies*. According to Tsutsui (2007), Western countries

began to investigate Japan's history when Japan ended its seclusion policy in the late 19th century. Academic institutions in America have created programs and schools specializing in Japan to meet the national needs of learning languages and cultures to adapt to political and economic situations – such as the World War II, the Cold War, and cultural and political economy in Japan (The Japan Foundation, 2013b).

As of 2013, 156 specialists in Canada were involved in teaching, research, and other professional activities dealing with Japan (The Japan Foundation, 2013a). Graduate students conducting Japan-related research have conferred their doctoral degrees not only in the departments dedicated to Japan Studies – or broadly East Asian Studies and Asian Studies – but also in traditional disciplinary departments, such as language, literature, and history (The Japan Foundation, 2013b). However, Japan Studies has struggled in recent years in terms of professional development, teaching, and research. In 2019, Japanese Studies scholars created a roundtable, *The Death of Japan Studies*, at the Association for Asian Studies conference in Denver, and discussed the crises which Japan Studies have faced (Curtis, 2020a). The highlighted issues included the small number of researchers, lack of resources and jobs, program closures, political situation leading a decline in attention to Japan, as well as the high percentage of international students in Japanese-language classes (Curtis, 2020a).

To continue the discussion on how to overcome the 'death' and revitalize the area of study, Paula R. Curtis, a Postdoctoral Research Associate and a Lecturer at Yale University, launched a

virtual roundtable – *The “Rebirth” of Japanese Studies* – on her website¹. Japan Studies scholars discussed that student-centred education is critical to producing and empowering the next generation of researchers (Curtis, 2020a). This discussion indicates that graduate students are one of the important groups of researchers who can contribute to the revitalization of Japan Studies.

At the virtual roundtable, two librarians added their comments, advocating the importance of providing access to information sources. In fact, librarians, especially Area Studies librarians, have been working tirelessly to increase the accessibility of materials for Area Studies through liaison, collection development, cataloging, reference and other important activities (Misco, 2011). The central role of Area Studies librarians has been to help with issues related to non-English languages and specialized geographic areas (Pitman, 2015). For librarians, it is important to prepare for potential language- and area-related issues that patrons may face, to recognize the latest needs of patrons, and to provide services and resources that fulfill their needs.

Previous literature has also acknowledged that developing collections in languages other than English has been difficult due to the time and expense of purchasing materials from Japanese vendors (Hazen, 2012). When it comes to patrons’ use, citation analyses acknowledged that about 20 to 45% of cited sources in Area Studies researchers’ publications were in the non-English languages (Koulikov, 2020; Li, 2019; Ostos, 2017). It implies that researchers need access to non-English language sources, while collection development can be a hardship for

¹ See more about the roundtable on Curtis’s website: <http://prcurtis.com/events/AAS2020/> (Accessed on August 4, 2020)

librarians. This gap between librarians' struggle and patrons' demand exists in Japanese-language collections. To address it, librarians in North America specializing in Japanese-language collections have participated in several councils, such as North American Coordinating Council on Japanese Library Resources (NCC) and the Council of East Asian Libraries (CEAL), to share information about available services and toolkits.

From the user's perspective, how does one find information sources needed for research projects? Traditionally, many models in library and information science (LIS) have shown that information-seeking behaviour is influenced by cognitive, affective, and environmental factors (e.g., Kuhlthau, 1991; Leckie et al., 1996; Robson & Robinson, 2013; Wilson, 1981).

Information seeking has also been considered a step-taking process that uses multiple strategies to effectively access information, rather than sticking to a single strategy (e.g., Dervin, 1992; Ellis, 1989; Kuhlthau, 1991; Xie, I., 2008). It has also been found that information seekers strategize their actions depending on their plans and situations to complete their tasks and goals effectively (e.g., Belkin et al., 1995; Belkin et al., 1993; Marchionini, 1995; Xie, H., 2002; Xie, I., 2008). When it comes to using non-English sources, humanities scholars were influenced by geographic, cultural, and linguistic barriers when strategizing information seeking and accessing items (Sabbar, 2016; Sabbar & Xie, 2016). Thus, to access information needed, information seekers manage their information-seeking strategies (ISSs) appropriately based on their personal characteristics, attitudes, and surroundings.

Previous studies have also shown the uniqueness found in the information-seeking behaviours of graduate students, who have a dual identity as a student and a pre-professional researcher. For

example, graduate students, like faculty members, were found to seek help from experts at other institutions and began their research projects serendipitously, with little anxiety about browsing and citation tracking (Barrett, 2005). They differed from faculty and were rather consistent with undergraduates in their high use of electronic resources and internet search engines, their over-reliance on faculty instruction and use of course materials, and their lack of personal collections and subject matter experience in their areas of expertise (Barrett, 2005). Instead, their high dependence on their research supervisors and perception of time constraints – due to project deadlines and comprehensive exams – were not observed in both their faculty and undergraduates (Barrett, 2005; Catalano, 2013).

Understanding the unique needs of graduate students who use Japanese-language sources for their research projects will help librarians to tailor library services and decide strategic priorities. However, the intersection of three aspects – Japanese-language sources, ISSs, and graduate students – have not been investigated by previous researchers. This study, therefore, aims to fill the research gaps and to provide insights to support library services related to Japanese-language sources at academic libraries.

1.2 Research problems

This thesis aims to address the research gaps in the intersections of three aspects discussed above: (1) Japanese-language information sources, (2) ISSs, and (2) graduate students. To investigate how to design effective library and information services for patrons using non-English sources, past LIS scholars have worked on topics such as multilingual information retrieval (Nzomo et al., 2016), collection development (Lenkart et al., 2015), cataloguing

(Pitman, 2015), and citation practices (Li, 2019). However, less research has focused on the information-seeking behaviours of researchers who intentionally seek scholarly non-English sources for research use. Furthermore, few studies have focused on Japanese information sources.

One of the few studies that focused on information users of non-English sources was Carol Sabbar's dissertation (Sabbar, 2016; Sabbar & Xie, 2016). She investigated how language, geography, and culture influenced the information-seeking behaviour of humanities researchers seeking non-English sources. Her dissertation, however, did not isolate demographic factors of researchers, such as the number of years of study and degree types, although other researchers have found differences in information-seeking behaviours of young vs. experienced scholars (Catalano, 2013). Also, her research findings represented ISSs for 31 languages, and only three out of 40 participants in her study had been using Japanese-language sources. Investigating information-seeking behaviours of graduate students who need Japanese sources will reveal characteristics of ISSs specific to (1) graduate students – who are pre-professional researchers – and (2) Japanese-language sources. It will eventually benefit information professionals in designing library services and systems that fulfill their information needs.

1.3 Research questions

Building on the reviewed literature, this study seeks to explore the research gaps discussed above – information-seeking behaviour of graduate students who use Japanese-language sources for research – by interviewing graduate students at the University of British Columbia (UBC) who actively look for and engage with Japanese-language resources in their research work. This study

builds on Sabbar's (2016) dissertation and investigates what strategies they use to locate and access Japanese-language information sources. Research questions include:

RQ1: What information-seeking strategies (ISSs) are used by graduate students in seeking Japanese sources?

RQ2: What shifts the ISSs of graduate students when they seek Japanese sources?

1.4 Significance of the study

The significance of this study lies in several aspects. First, identifying graduate students' ISSs can help tailor library services for graduate students. Haruko Nakamura, the current chair of NCC and a librarian for Japanese Studies at Yale University, discussed that understanding recent needs is an important step in making resources more accessible, which may help revitalize Japanese Studies (Curtis, 2020b). Understanding the current information-seeking patterns of graduate students may help to identify their research habits and potential places where librarians can intervene to make their research activities more efficient.

This study is also beneficial to faculty who supervise graduate students using non-English language collections. Previous studies have acknowledged that faculty (supervisors, advisors, and instructors) are considered reliable channels for graduate students when it comes to identifying sources of information (Barrett, 2005; George et al., 2006; Thomas et al., 2017). Understanding the information strategies of graduate students would help faculty to identify student challenges and provide appropriate solutions for students.

Employing semi-structured interviews with potential library users, this study provides evidence of user behaviour that could apply to future library practices. Evidence-based librarianship, the integration of scientific methods into library practice, has been considered to improve library practice using the best available evidence found in quantitative/qualitative research (Eldredge, 2000). Although this study does not apply the research results to library practice, it is expected that future librarians could incorporate these findings into future services to meet the needs of graduate students. It is also hoped that the research findings will be incorporated not only into Japanese-language sources, but also into other world language sources.

1.5 Overview of structure

This thesis consists of five chapters. Chapter 2 reviews previous literature on relevant topics, including non-English language collections at academic libraries, information-seeking behaviours, graduate students' academic information seeking. It will also dig into the characteristics of Japanese-language collections specifically. Chapter 3 explains the research methods used in the current thesis: qualitative online semi-structured interviews and a directed content analysis (DCA) approach. The detailed description of the recruitment, data collection and analysis will be provided. Chapter 4 presents the results of DCA using a conceptual framework, the *information triangle* (Sabbar, 2016; Sabbar & Xie, 2016). And lastly, Chapter 5 provides a discussion of the findings and the implications for information professionals and faculty members supervising graduate students. It also discusses the limitations of the current study and suggestions for future studies.

Chapter 2: Literature Review

This chapter introduces previous literature discussing concepts and topics relevant to the current research project. The first section introduces how non-English library collections, particularly Japanese collections, have developed in North America and how library staff and patrons have made use of the collections. Then it defines terms related to ISSs and presents relevant models used in previous research. Next, it describes empirical studies of information behaviours, particularly those of graduate students, who are the research focus of this study.

2.1 Non-English language sources in North America

One of the unique aspects of this thesis is the context of ISSs: Japanese-language sources. Previous LIS literature has investigated (1) faculty's ISSs using non-English sources (i.e., Sabbar & Xie, 2016) and (2) graduate students' information-seeking behaviours (see section 2.3), yet no intersecting studies have been conducted. This section explores previous literature about library collections written in non-English languages and held in English-speaking contexts. This section also discusses collections in Japanese, which is the target language of this thesis.

2.1.1 Librarians' view: Area Studies librarianship

2.1.1.1 History of Area Studies

The development of world language collections in academic libraries, particularly non-English modern language collections, is closely related to the history of Area Studies. Area Studies - or Global Studies, International Studies, or Regional Studies - is an interdisciplinary area of study dealing with specific geographic areas and regions. This discipline has its roots in "Oriental

Studies”, which developed in the Soviet Union during the 1920s, and “scientific research groups in military, government, and intelligence agencies” (Duller, 2015, p. 949) in the United States during the Second World War. In both countries, extensive understanding of other regions was essential to strengthen their national security.

According to Bond and Scott (1999), Canada has seen the rise of Area Studies since 1947 when UBC first granted the first Bachelor of Arts degree in International Relations. During the 1960s and 70s, academic programs focused on specific regions and languages, including European, Soviet, East European, Asian, Latin American, and African studies, began to spread across the country. Like the Soviet Union and the United States, the focus was on geographic areas that the postwar Canadian government recognized as either a threat or an ally for trade and political influence. Area Studies in Canada also has another unique origin; some missionaries returning from long service in developing countries came to teach about their serving areas in undergraduate and graduate-level courses (Bond & Scott, 1999).

2.1.1.2 The roles of Area Studies librarianship

The development in Area Studies scholarship contributed to enrichment in library collections. As of May 2014, at least 20 member libraries of the Canadian Association of Research Libraries (CARL) hold collections in world languages and Area Studies (CARL Committee on Research Dissemination, 2014). Like scholars are often affiliated with discipline-oriented academic departments, classification systems employed at libraries (e.g., Dewey Decimal Classification system, the Library of Congress Classification system) are discipline-based. This made librarians struggle to manage the Area Studies collections that could not be classified by geography

(Hazen, 2012). In other words, materials related to a region were dispersed in different stacks due to the Area Studies' interdisciplinary coverage. Also, collections requested by Area Studies scholars were often written in languages unfamiliar to librarians (Hazen, 2012). Given the situation, the Indiana University Library was the first to hire *subject specialists* in Area Studies, including “Modern Foreign Languages (European), African Studies, Near Eastern Studies, Far Eastern Studies, Latin American Studies, and Russian and East European Studies” (Byrd, 1966, p. 191). Subject specialists at Indiana, namely *subject librarians*, required robust interdisciplinary knowledge of the geographic areas of responsibility. Their duties included collection development, reference services for graduate students and faculty, and instructions on how to find library holdings in specialized languages (Byrd, 1966).

Recent literature has discussed the challenges of connecting patrons to Area Studies materials, especially world language materials. The central role of Area Studies librarians is to help understand language-related issues and specialized geographic areas, which parallels that of Indiana in 1966 (Pitman, 2015). They have found hardship especially in collection development, liaison work, and instruction that involves “diverse and innovative approaches to librarianship” (Misco, 2011, p. 388). In collection development, for example, librarians often deal with non-English language materials published outside the United States and Canada, which are not always available from domestic vendors in North America. They found it difficult to create approval plans and packages, and purchase books requested by patrons to adequately support their research activities (Ostos, 2017). Purchasing world-language materials can be expensive and time-consuming, due to “export regulations, bureaucratic complexity, slow bank transactions, and difficult communications” (Hazen, 2012, p. 122). Besides, non-English sources

tend to be circulated less frequently than English sources due to the small size of target patron groups, resulting in budget cuts to these collections. To address these problems, many research libraries have implemented new digital technologies – such as automated bibliographic data and search algorithms – which have made library operations more efficient (Hazen, 2012).

Partnerships for cooperative acquisitions have also allowed them to gain access to materials that are not included in each library's acquisition package, thereby meeting a wide range of researcher's needs (Hazen, 2012). Nevertheless, cultural differences in publishing practices can hinder cataloguing, such as “little bibliographic control, few ISBNs [International Standard Book Numbers], and poor national bibliographies” (Pitman, 2015, p. 36). As a result, some materials remain undiscovered due to inaccurate cataloguing. Thus, ensuring availability and accessibility is a major challenge for Area Studies librarians in supporting patrons' research activities.

2.1.1.3 Japanese-language collections

Like other languages, Japanese library collections developed in tandem with the development of Japanese Studies as a discipline. In 1956, Dr. Ronald Dore was appointed as the first professor in the Japanese program at UBC. This appointment triggered an increase in the number of courses offered at Canadian universities on Japanese language, culture and society, eventually evolving into the collection development of Japanese-language materials (Gonnami, 2003). As of 2013, 156 specialists in Canada were involved in teaching, research, and other professional activities dealing with Japan (The Japan Foundation, 2013a). They also reported that UBC and the University of Toronto were dominant in terms of Japanese-language library collections as of 2012, followed by the University of Alberta, the University of Montreal, and the University of Calgary.

Japanese-language collections in academic libraries usually include both physical and electronic materials. According to the statistics published by CEAL (Doll & Liu, 2020), UBC Asian Library has 188,161 physical volumes, 1,943 print/online journal titles, 486 other materials (e.g., DVD, microforms) as of 2019. The C. V. Starr East Asian Library at the University of Toronto also has a large collection, including 203,158 physical volumes, 163 journal titles, 13,831 other materials. These materials were often purchased and subscribed through Japanese trade companies and publishers on approval plans or individual orders depending on patrons' requests. In addition, libraries and archives have collected rare books and special collections and archival materials in Japanese to meet patrons' research needs. For instance, UBC has monographs, maps, photographs, scrolls, and woodblock prints published in 17th to 19th century Japan (i.e., Japanese Maps of the Tokugawa Era, Meiji at 150), and pre-WWII Japanese-language newspapers dedicated to first- and second-generation Japanese Canadians (i.e., *Tairiku Nippō*), which are openly available online at UBC Library Open Collections. UBC Archives also holds Japanese-language materials in Japanese Canadian fonds (e.g., Mitsuru Shimpō fonds).

North American libraries also subscribe to digital Japanese resources, such as indexes, e-book platforms and e-newspaper. The major databases subscribed by North American academic libraries include *20-seiki Media Jōhō Dētabēsu* (Japanese wartime newspaper index), *Asahi Kikuzo II Visual* (full-text articles from the publications of Asahi Newspaper), *JapanKnowledge Lib* (Collection of Japanese reference resources, full-text of Japanese literature), *Maruzen eBook Library* (academic and scholarly ebook platform), *KinoDen* (academic and scholarly ebook platform), *Yomiuri Yomidasu Rekishikan* (full-text Yomiuri newspaper articles), *Web OYA-bunko* (Serial publication indexes), and *Zasshi kiji sakuin shusei* (Magazine and periodicals indexes).

These databases are contracted via Japanese vendors and publishers, either at their institutions or as a consortium. However, Egami (2012) noted that Japanese publishers often do not prepare legal statements in English, which makes librarians struggled to negotiate the terms and conditions of copyright and license agreements. To address this issue, NCC has established the Digital Resources Committee² to help with the collection development and negotiation process.

In addition to the library holdings and subscriptions, patrons have access to metadata and full-text materials from open-source databases published by academic and government institutions. For instance, UBC Library (2019) introduces the following services: *CiNii Articles*, *CiNii Books*, and *CiNii Dissertations*, operated by the National Institute of Informatics (NII), provide bibliographic information on Japanese-language materials (articles, books, doctoral dissertations) housed in Japanese academic libraries. *NDL Search* by the National Diet Library (NDL) provides comprehensive bibliographic information on Japanese publications housed in Japanese libraries, archives, and museums. *WINE* (Waseda University Catalogue) is another database with an extensive collection and detailed bibliographic information. *J-STAGE* is an e-journal platform managed by the Japan Science and Technology Agency, which provides access to more than 90% of articles in full text. In library information literacy instruction, librarians use these subscribed and open databases to teach students search techniques for locating Japanese information.

² To learn more about the committee, visit their libguide: <https://guides.nccjapan.org/c.php?g=355422&p=2399900> (accessed August 7, 2020)

However, as discussed for world language collections in section 2.1.1.2, collection development for Japanese materials is not always easy, due to budget constraints, processing time – such as bank transactions, shipment, and cataloguing – cultural differences, and political and economic circumstances. To address these issues, libraries have implemented Interlibrary Loans (ILL) and Document Delivery (DD) services locally, nationally and internationally. For materials held in North America, as with other language materials, librarians submit an ILL/DD request to the holding institutions upon request. Obtaining materials held in Japan is a bit more complicated than in North America. North American Coordinating Council on Japanese Library Resources (NCC, 2020) lists three ILL options: (1) ILL with the NDL via NDL Online, (2) with Online Computer Library Center (OCLC) member institutions in Japan via OCLC WorldShare ILL, and (3) with Global ILL Framework (GIF) using the ISO-ILL (International Organization for Standardization) protocol that transfer request information from OCLC to NACSIS-ILL, an interface managing daily ILL transactions in Japan (Paulus, 2013). However, the latter two have problems, as many Japanese institutions are not registered for OCLC, and the NII closed the GIF service in March 2018 (Araki et al., 2019). In the UBC’s Library research guide, librarians recommend checking WorldCat³ if North American institutions or the NDL hold the items. If not, CiNii Books offers information on available international ILL at Japanese academic libraries. To make this complicated ILL system work for patrons, Japanese Studies librarians have collaboratively assisted in reaching the requested items.

³ WorldCat (<https://www.worldcat.org/>) is a comprehensive online catalog that aggregates the collections of OCLC member libraries worldwide.

As mentioned earlier, ensuring accessibility and availability is a major challenge for library staff responsible for world language collections, and the same applies to Japanese collections. One of the main factors complicating accessibility in the digital environment is the complex nature of Japanese language. The modern Japanese writing system falls under pictographic/ideographic language, where each character represents a meaning and sound. Its scripts are divided into the following five types: *kanji* (Chinese characters and Chinese numerals; ideograms), *hiragana* (phonograms), *katakana* (phonographs), *rōmaji* (Roman alphabets and numeral), and Arabic numerals (Harai, 2007). *Kanji* letters are used to write the word stems of nouns and verbs. A single *kanji* can generally have more than one sound. For instance, the letter 花 can be read both as *hana* and *ka*, depending on the word or character used before or after it. Hiragana is used to spell grammatical particles, verb endings, and representation of affixes associated with *kanji* (Woodard, 2015). Katakana is used for non-Japanese words and onomatopoeia. All of the *kanji* numerals, Roman numerals and Arabic numerals can be used to write numbers.

To improve accessibility to those who do not read Japanese scripts, non-roman scripts (i.e., hiragana, katakana, *kanji*) could be converted to roman scripts (i.e., *rōmaji*). Romanization is usually dependent on the sounds that each letter has. For example, 日本 (“Japan” in Japanese) is romanized as *Nihon* or *Nippon*, depending on the words coming before and after. American National Standard System for the Romanization of Japanese⁴ has been developed and updated as a standardized system by the American Library Association (ALA) and the Library of Congress

⁴ See more on the standard system, visit the pdf published by the Library of Congress: <https://www.loc.gov/catdir/cpsd/romanization/japanese.pdf> (accessed August 8, 2020)

(LC). This is a revision of the *Hepburn-style* Japanese romanization, created by James Curtis Hepburn, an American missionary who published a Japanese-English dictionary for English-speaking people (Okada, 2016). There is another non-standardized romanization style, named *Kunrei-style*, which is the first official romanization style announced by the Japanese government in 1937 (Okada, 2016). Today, Kunrei-style is used for typing Japanese scripts on an English keyboard (Kudo, 2010). Therefore, if patrons enter Kunrei-style romanization into libraries' search box as if typing vernacular scripts on a computer, they may not retrieve the correct search results. Also, Kudo (2010) found that the romanized scripts in the OCLC WorldCat records created by Japanese vendors/libraries and never updated by North American institutions tended not to follow the standardized romanization style. Librarians, therefore, have minimized the inconsistencies by correcting catalogue records and increasing patrons' awareness of and familiarity with the standardized vernacular scripts and romanization systems.

In North America, inputting rōmaji in the primary MARC fields and adding the original scripts in alternative parallel fields are the standard cataloging practice to maximize patrons' access to world language materials (Nakano, 2017). However, either style of Japanese writing can confuse patrons who are unfamiliar with the standardized systems in cataloging practice. For example, some modern *kanji* letters are non-MARC21 compatible and have to be replaced with other Chinese characters that are visually identical. LC offers the CJK (Chinese, Japanese, Korean) Compatibility Database, which shows incompatible characters and their alternatives. For example, the modern Japanese letter 𠬞 (UTF-16 6238) has to be replaced by the letter 𠬞 (UTF-16 6236). The standardized letters are called *Kyū kanji* in Japanese, literally meaning 'old kanji'. They were used in the Japanese writing system until the Cabinet replaced them with characters

having simplified shapes in 1949 (Gottlieb, 2008). Kyū kanji is usually used in the Chinese writing system today, but not in modern Japanese writing in general, so that people cannot type it using a Japanese keyboard. Patrons, therefore, may not be able to find a book having the letter 戸 in library's OPAC⁵, even if the catalogue record using the replaced letter 戶 is available (see Figure 2.1).

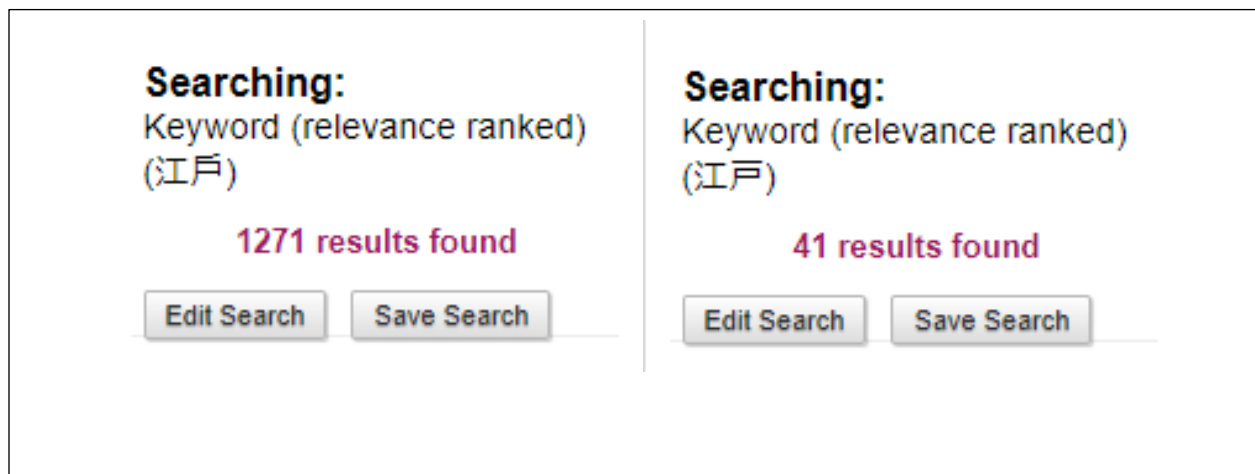


Figure 2.1 Comparison of UBC Library OPAC results (searched on June 15, 2020) when searching keyword “Edo” with the letter 戸 (“江戸”) and 戶 (“江戸”)

In addition to the writing standards, LC, ALA, and CEAL have collaboratively produced cataloguing guidelines, such as Descriptive Cataloguing of East Asian Materials. As manual and individual cataloguing following the guidelines is cumbersome, several cooperative cataloguing projects have been set up to share the burden and stabilize the metadata quality, such as the Program for Cooperative Cataloguing (PCC) CJK funnels and CEAL's Committee on Technical

⁵ OPAC (Open public access catalog) is a database aggregating bibliographic information of materials held by a library.

Processing. Sugiyama et al. (2016) introduced their efforts in updating OCLC records for the materials in JapanKnowledge Lib, whose MARC records provided by their vendor are often low in quality having incorrect fields. Librarians thus have collaboratively made efforts in applying North American standards to Japanese materials, while there is still room for improvement.

2.1.2 Patrons' use: Non-English language sources cited in research publications

While little has been studied about patrons' information-seeking behaviour of using non-English languages, recent citation analyses suggest moderate usage of non-English materials, especially monographs, in English-language Area Studies publications. Li (2019) analyzed 213 doctoral dissertations submitted to East Asian studies programs in the US and Canada and identified that 45% were East Asian citations and 66% of them were books. Ostos (2017) examined 13 monographs published by faculty members on Latin American studies at the Pennsylvania State University and discovered that 42% of cited books were written in non-English languages. Koulikov (2020) analyzed 127 articles published in *Mechademia: An Annual Forum for Anime, Manga, and the Fan Arts*, a serial on Japanese popular culture studies published by the University of Minnesota Press, and 22% of cited materials were written in Japanese. The survey conducted by the Japan Foundation (2013b) also found that Japan specialists used personal collection (85.1%), institution's collection (68.3%), collections of non-affiliated institutions (79.6%), government materials (37.9%), private collections (24.0%), data shared from collaborator (12.2%), data collected from participants (43.0%), private/community databases (13.2%), internet resources (51.3%), ILL/DD (42.4%), and purchased online (18.1%). However, Ostos (2017) found that 25% of non-English manuscripts cited were available in the library catalogue, whereas 77% of English manuscripts were located at the library. It indicates a wide

gap in collection development between English and non-English materials at academic libraries, which may require scholars to use alternative sources.

2.1.3 Section summary

The development of Area Studies collections, especially modern language collections, was in line with the academic development of Area Studies. Area Studies librarians have played an important role in liaison, collection development, cataloguing, referencing, and other important activities to ensure the availability and accessibility of non-English sources. Japanese language, in particular, has its unique linguistic characteristics that make librarians struggle to provide materials appropriately and effectively. It also has the potential to challenge patrons' access to the resources they want. While much of the literature discussed the roles of Area Studies librarians and challenges of collection accessibility, little studies have been done from a user-centred perspective. It is clear, therefore, that there is a need to fill the research gap.

2.2 Information-seeking strategies (ISSs) and shifts

Traditionally, researchers in LIS have discussed how people interact with information. However, many terminologies for *information* have been defined, such as *information search*, *information seeking*, *information behaviour*, and *information retrieval*. The interpretation of definitions also differs from one scholar to another. Given that, this section consolidates the existing definitions and theories that have been proposed by researchers and defines *information-seeking strategies (ISSs)* and *shifts* that this study interprets from the interviews in Chapter 4.

2.2.1 Definitions and concepts: Information, Information seeking

The dictionary's definition of information is "[k]nowledge communicated concerning some particular fact, subject, or event; that of which one is apprised or told; intelligence, news" (Oxford University Press, 2020). Dervin (1992) conceptualized information as "sense created at a specific moment in time-space by one or more humans." Case et al. (2016) acknowledge that information can be a primitive concept with no precise definition, yet notes that it is a process and message that reduces users' uncertainty and brings about "a change to the structure of a human mind" (p. 76). Combining these existing definitions, this study defines information as a form of human-generated knowledge about a particular fact, subject, or event that reduces the user's uncertainty about the facts. In the context of this study, information is expected to reduce participants' lack of knowledge and uncertainty about Japan-related research topics.

Information behaviour, literally understood as a behaviour related to information, has been explored as an umbrella term that encompasses information seeking (Savolainen, 2007). Wilson (2000) provided a comprehensive definition: "the totality of human behaviour in relation to sources and channels of information, including both active and passive information seeking, and information use" (p. 49). This definition implies that information behaviour consists of the following components: information users, information sources/channels, information seeking, and information use.

As Wilson's definition above indicates, information seeking is positioned as a component of information behaviour. Marchionini (1995) defined it as "the search [process] of information in which humans purposefully engage in order to change their state of knowledge" (p. 5). The

essential characteristics of information seeking, therefore, could be summarized as an activity of a goal-oriented seeker who aims to satisfy information needs and use the information found.

Information retrieval (IR) is another component of information behaviour. Manning et al. (2008) define it as “finding material (usually documents) of an unstructured nature (usually text) that satisfies an information need from within large collections (usually stored on computers)” (p. 1). While information seeking focuses on how people behave when looking for information, IR literature has dealt with how systems are designed and used to retrieve information needed (Case et al., 2016). Although this study focuses on information seeking, understanding IR is still important because people’s search experience is influenced by system designs, and vice versa (Marchionini, 1995).

Traditionally, LIS models of information behaviour discuss the influence of cognitive, affective, and environmental factors on patterns of information-seeking behaviour. One well-known model was proposed by Wilson (1981). His model defined three different kinds of barriers that could interfere with the actual search for information: *personal* (physiological, affective, and cognitive needs), *interpersonal* (demands of work-role and life), and *environmental barriers* (political and economic situation, technologies). Personal barriers were supported by Kuhlthau’s (1991) model of the information search process (ISP), which shows that users’ cognitive thoughts, affective feelings, and physical actions impact the stage selection of ISP. For example, in the *initiation* stage, people tend to feel uncertainty (feeling) due to their perceived gap in their knowledge and their vague ideas (thought), thus start seeking (action) how to navigate their information search

journey to fill the knowledge gap. Another model by Leckie et al. (1996) supports interpersonal barriers, by conceptualizing information behaviour specific to professionals. They found that professional roles, associated tasks, individuals' awareness of information sources and characteristics of information sources were important in information seeking. These models suggest that information behaviour is influenced by information seekers' characteristics and their surrounding environment.

Another model proposed by Robson and Robinson (2013) combined ideas of LIS scholarship, which primarily focuses on information users, and Communication studies, whose focus is on the relationships between information providers and receivers. They identified nine factors affecting information behaviour: context, demographics, expertise, psychological factors, information recipient's needs/wants/goals, information provider's needs/wants/goals, motivating and inhibiting factors, features of information seeking process (thoughts and feelings while searching), and characteristics of information and sources (utility and credibility). This model suggests that information behaviours are defined not only by seekers' personal characteristics and surroundings, but also by the surroundings of information providers, such as information systems and people who share information with the seekers.

Traditional models also demonstrated that information seeking could be divided into multiple stages. For example, Dervin's (1992) sense-making model argues that individuals construct ideas of a specific moment, which results in the construction of behavioural strategies. As one accumulates experience, the construction process sometimes repeats past ideas and behaviours.

She applied this model to human information use and discussed that human information behaviours involve step-taking processes impacted by situational conditions (Dervin, 1992). Ellis's (1989) model for information seeking patterns discussed behavioural characteristics of academic social scientists. He identified a six-stage pattern of users' information-seeking behaviour: *starting* (beginning information search), *chaining* (following reference lists), *browsing* (conducting a semi-direct or semi-structured search of an area of potential interest), *differentiating* (selecting materials by filtering the amount and nature of sources), *monitoring* (maintaining awareness of current practices of the targeting subject areas), *verifying* (ensuring accuracy), *extracting* (locating relevant material in a particular source), and *ending* (conducting a final search). Similarly, Kuhlthau's (1991) ISP model defined six stages of information-seeking patterns that are associated with users' thoughts, emotions and actions: *initiation*, *selection*, *exploration*, *formulation*, *collection*, and *presentation*. These models suggest that information users construct their information-seeking behaviours depending on how far away they are from their goals.

Overall, these traditional models in LIS suggest that information-seeking behaviours are influenced by information seekers' personal factors, environmental factors, and status of information providers. The journey of information seeking has been found to involve step-taking as well. In the context of this study, it is hypothesized that graduate students behave differently based on factors such as their needs, their identity as graduate students, political and economic situations between Canada and Japan, system designs of Japan-related systems and librarians' intentions of providing supports to them. Also, they are assumed to employ a step-taking process

depending on the situation surrounding Japanese sources, such as availability and system designs. The next section looks at ISSs and sees how previous literature has discussed the selection of information-seeking actions.

2.2.2 Information-seeking strategies (ISSs)

A *strategy* typically entails three steps of actions: (1) goal setting, (2) decision-making for actions to accomplish the goal, and (3) using all resources to put them into action (Savolainen, 2016). With this concept in mind, an information-seeking strategy (ISS) is defined as the approaches adopted in the process of selecting an action for information seeking to help meet information needs (Xie, H., 2002). Similarly, Marchionini (1995) defined it as a set of “tactics that are consciously selected, applied, and monitored to solve an information problem” (p. 73). Belkin et al. (1995) define it as “the variety of behaviours people engage in while searching for information in some knowledge resource [that arose from seekers’] state of knowledge and information-seeking goals” (p. 380). These authors highlight that the term *strategies* in the context of information seeking refer to the selection of information-seeking behaviours for the purpose of meeting their information needs and goals effectively.

As with the models of information behaviour discussed in section 2.2.1, previous researchers have identified multiple types and dimensions of ISSs. Belkin et al. (1993) conducted one of the earliest studies that used the exact term, ‘information seeking strategies.’ They suggested that ISSs are interactive processes between users and IR systems, and proposed four dimensions of ISSs: *method of interaction* (scanning or searching), *goal of interaction* (learning or selecting), *mode of retrieval* (recognition or specification), and *resource considered* (information or meta-

information). A seeker, for instance, first visits and scans a library's stacks (method) to learn (goal) and recognize (mode) the monographs available in the library (resource) (see Figure 2.2).

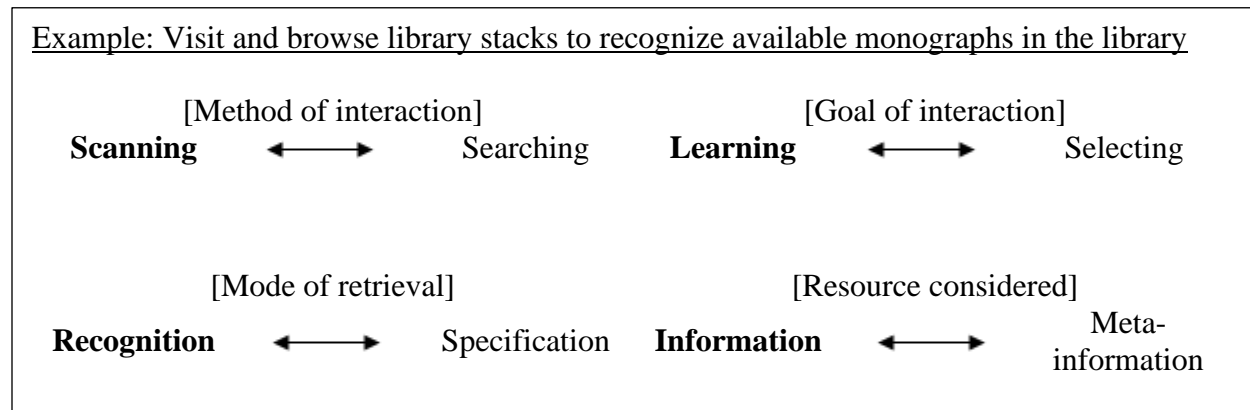


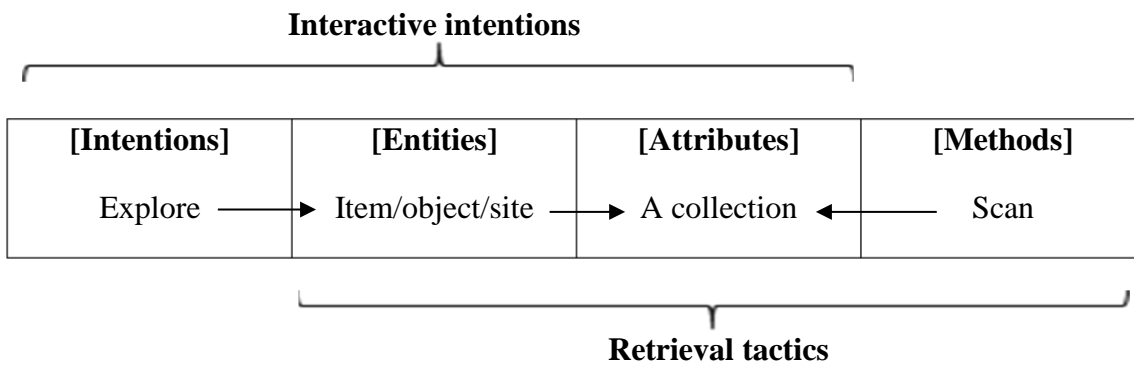
Figure 2.2 Example of an ISS applying the conceptual framework of Belkin et al. (1993)⁶

While the framework of Belkin et al. (1993) clearly states and covers how information seekers strategize their information-seeking journey, it does not discuss how shifting from one strategy to another happens in a single information-seeking episode. Also, because they focused on human interaction with systems, it was difficult to apply it to ISSs involving humans, such as librarians and professors in the context of this study. To address these points, I. Xie (2008) created a conceptual framework – planned-situational IR model – and described ISSs in two dimensions: *interactive intentions* and *retrieval tactics*.

⁶ Reproduced from Expert Systems with Applications, 9(3), Nicholas J. Belkin, Colleen Cool, Adelheit Stein, and Ulrich Thiel, Cases, scripts, and information-seeking strategies: On the design of interactive information retrieval systems, 379-395, copyright (1995), with permission from Elsevier

According to I. Xie (2008), interactive intentions are subgoals that users must accomplish in order to achieve their search goals and complete search tasks, consisting of 12 different intentions (identify, learn, explore, create, modify, monitor, organize, access, keep records, evaluate, obtain, and disseminate). Retrieval tactics are specific methods and techniques used to achieve the intentions, including: scan, specify, manipulate, consult, select, survey, track, trial-and-error, compare, extract, and acquire. For instance, if a graduate student consults a librarian to formulate a search query, ‘*creating* a query’ is their interactive intention and ‘*consulting* a librarian’ is a retrieval tactic in an episode of information seeking. The intentions and tactics could be specified by entities (data/information, knowledge, concept/term, format, item/object/site, process/status, location, system, human) and their associated attributes that describe their characteristics and traits. In the earlier example, a graduate student consults with a human (entity of retrieval tactics) who is a professional (attribute of retrieval tactics) to create a narrow (attribute of interactive intentions) term (entity of interactive intentions) (see Figure 2.3).

Example 1: Visit and browse library stacks to recognize available monographs in the library



Example 2: Consult a librarian to decide a search query

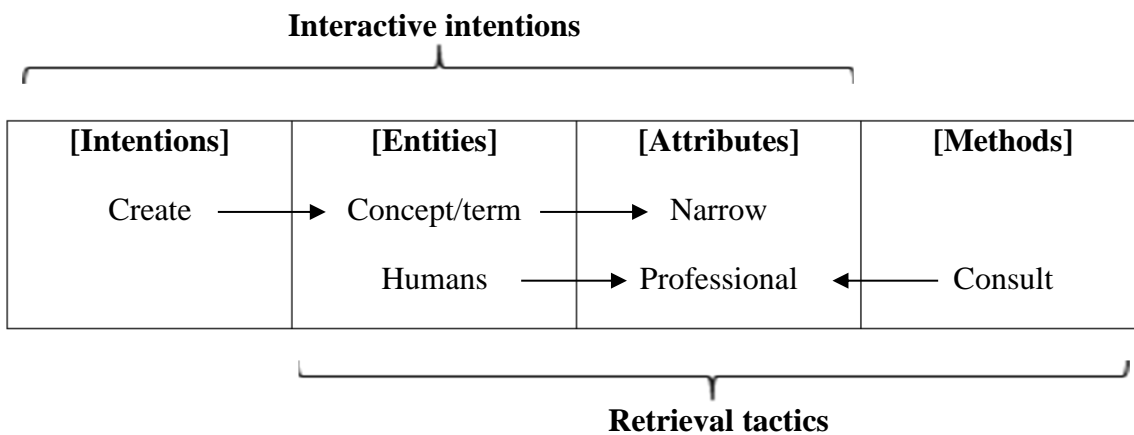


Figure 2.3 Example of ISSs applying I. Xie's (2008) framework ⁷

I. Xie (2008) also discussed the process of strategizing information seeking. Her model illustrated how a user's ISSs – interactive intentions and retrieval tactics – are determined and shifted by levels of their goals, plans, and situations. In her model, a user first organizes the

⁷.Adapted from *Interactive information retrieval in digital environments* by I. Xie, p. 239. Copyright 2008 by IGI Global. Reprinted with permission.

search tasks required to achieve their current search goals, which are influenced by their higher-level goals (i.e., long-term goals, leading search goals). Taking into account the types of tasks and the skills and knowledge they already have (i.e., *personal information infrastructure*), they make a *plan* for what to do, how to complete the tasks, and when to stop searching. After implementing the planned strategies and interacting with the actual information objects and interfaces, users can check if the information was successfully retrieved to complete the planned tasks. Depending on the resulting *situation*, users can proceed to the next plan or end their information-seeking journey. This conceptual model mirrors the definitions and domains of information seeking discussed in Chapter 2.1.1 and indicated the selection of ISSs is goal-oriented and driven by personal background and context.

2.2.3 Shifts in ISSs

Shifts in ISSs are defined as the changes in ISSs that have occurred within an information-seeking process (Xie, H., 2000). In a single information-seeking process, seekers do not stick to one type of strategy. Instead, they move from one strategy to another to adequately meet their information needs and goals (Belkin et al., 1993). However, many information retrieval systems had been designed to fit one strategy, and little research had been done on how people employ multiple, different strategies. To bridge the gap between the design of the IR system and the empirical studies of users' information-seeking behaviour, Iris (Hong) Xie examined multiple types of shifts deriving from users' plans and situations.

I. Xie (2008) proposed that shifts in ISSs occur with both interactive intentions and retrieval tactics. As for interactive intentions, she suggested four types of shifts: *planned* (habitual shifts

from one intention to another), *opportunistic* (serendipitous discovery of new intentions during the initial intention), *assisted* (assisting the original intention to complete the new intention) and *alternative shifts* (switching to a new intention to fully achieve the goals/tasks). She also categorized shifts in retrieval tactics as *method shift*, *entity shift*, *attribute shift*, and *method-entity shift*. These shifts are driven by (1) planned aspects, such as the level of goals/tasks and personal information infrastructure (domain knowledge, system knowledge, IR knowledge, and cognitive style), and (2) situated aspects, such as the outcome of user-system interaction, the types of situations (routine, disruptive, and problematic), IR systems, and social-organizational contexts. Her model conceptualized how and what types of shifts happen in two dimensions of users' ISSs and how contextual factors influence the types of shifts.

2.2.4 Sabbar and Xie (2016)'s information triangle

Building on Xie's (2008) model, Sabbar and Xie (2016) developed another conceptual model named the *information triangle*. ISSs were derived from study participants' interview responses included the following four types of strategies: *formal system strategies* (computer-based information retrieval systems, such as Google search and OPAC), *informal resource strategies* (interacting with actual information objects, such as tracing citations), *interactive human strategies* (consulting with colleagues and other people who are familiar with the information needed) and *hybrid strategies* (strategies that may fall into more than one category). In the information triangle, shifts were those of I. Xie's (2008) model: *planned shifts in routine situation*, *opportunistic shifts in disruptive situations*, and *assisted/alternative shifts in problematic situations*.

Sabbar and Xie's (2016) study is unique because they applied the conceptual model to 16 humanities scholars who use sources in languages other than English. All four strategies were mentioned by their study participants in their research diaries and semi-structured interview responses. Planned shifts were most commonly observed. For example, one participant started with a scholarly database (e.g., Project MUSE) and then visited a library to consult the database results and locate books to read. An example of an opportunistic shift in a disruptive situation was the accidental discovery of resources through conversations with people at a conference. *Geography, language, and culture* created problematic situations in the process of information seeking; for example, even if participants could find bibliographic data on a non-English source in a formal system (e.g., library OPAC), they still had to switch to other strategies, such as consulting with researchers in the target countries, in order to access the actual copies. These findings of Sabbar and Xie (2016) illustrate the applicability of the model to academic contexts where patrons interact with non-English information sources. They also suggest that ISSs in the context of non-English sources are uniquely influenced by geographic, linguistic, and cultural aspects of the sources' context.

2.2.5 Section summary

Based on previous research, the current thesis frames information seeking as users' intentional activity of seeking and receiving information that fills a gap between their current knowledge and goals. More specifically, ISSs are defined as a user's choices of actions to search for information that bridges the gap between their knowledge and goals. Past research has examined the planned and situational aspects of users' information-seeking shift ISSs. As explored by

Sabbar and Xie (2016), the use of non-English sources may represent a unique ISSs in academia, which the current thesis explores further.

2.3 Information behaviours in academia: Graduate students

This thesis project builds on Sabbar and Xie's (2016) research reviewed in Chapter 2.2.4 and Sabbar's (2016) doctoral dissertation. The difference between their study and this thesis is the scope of target participants; this thesis focuses on graduate students rather than trained academic scholars. This section reviews previous empirical studies particularly on graduate students' academic information seeking. This helps elucidate how graduate students search for information for their research projects compared to other groups in academia (i.e. undergraduate students, faculty members).

2.3.1 Unique identity of graduate students

Graduate students are in a unique position in academia where they have a different identity from undergraduate students and faculty members. Undergraduate research experiences have been discussed as beneficial to undergraduates' confidence in their research skills and awareness of what graduate studies are like (Russell et al., 2007). Students begin to formulate a clearer identity as a researcher upon entering to a graduate program, while experiencing the tension between "taking up an academic identity, [...], and being just an average graduate student 'who doesn't know much'" (Davis & Lester, 2016, p. 70). Thus, graduate students have two primary identities: (1) a pre-professional researcher creating research outcomes, and (2) a student receiving training in their field of study and research methods.

2.3.2 Graduate students' preference: Accessibility

One of the key factors for graduate students' information seeking is accessibility. George et al. (2006) described their preference as "convenience, speed and ease of access" (para. 59). It is consistent with past studies investigating undergraduates' information seeking, which showed the influence of ease of use and usefulness on their selection of academic e-resources (Joo & Choi, 2015). Steinerová and Šušol (2005) also found that students' information-seeking tended to be goal-oriented, and they preferred to use well-organized information sources, to explore new interests, and did not think it is worth putting effort, money and time into information searching. It was found to be opposite from research professionals, who tended to be analytical and dig into the detailed meanings of information. Therefore, graduate students' access to easily available information was found to be a common strategy with undergraduates, but different from that of faculty members.

One of the factors potentially related to graduate students' preference for accessibility is time pressure. Barrett (2005) found that dealing with time pressure was unique to graduate students compared with undergraduates and faculty members, and their timelines include "comprehensive examination schedules, prospectus deadlines, and expectations of timely project progression and completion" (p. 330). Vezzosi's (2009) interviews with 18 PhD students in biology indicated that students feel time pressure due to a lack of time to find bibliographic information or to monitor the latest research findings in their field of study. Sadler and Given (2007) found that the time pressure and fear of missing deadlines led to avoiding consulting with librarians and attending library instructions, which provoked the students' belief that "using library resources would

waste precious time” (p. 127). Therefore, using accessible sources may save time, allow students to complete their projects more quickly, and help them get through deadline stress.

2.3.3 Urquhart and Rowley’s (2007) conceptual framework of students’ information behaviour

Urquhart and Rowley (2007) conducted a longitudinal study and conceptualized students’ information behaviours regarding electronic information sources. According to their model, students were directly influenced by six *micro factors*, those which have a direct influence on students’ information behaviour, and five *macro factors*, those which eventually and indirectly affect students’ information behaviour. While it is important to note that the model conceptualized data collected from undergraduates, postgraduates, and academic staff, this model implied students’ own information-handling skills and their learning environment are influenced by micro and macro factors surrounding their learning environment. The following sections discuss the micro factors (see section 2.3.3.1) and macro factors (see section 2.3.3.2) consisting of this framework in detail.

2.3.3.1 Micro factors

Urquhart and Rowley (2007) defined six micro factors that directly influence students’ information behaviour – *information literacy, search strategies, academics’ role in changing information behaviour, discipline and curriculum, pedagogy, and support and training*. They argued that these factors were influenced by macro factors discussed in the next section. Other empirical studies have investigated how these factors influenced students’ information behaviour, as shown below.

Information literacy is an ability “to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.” (American Library Association [ALA], 1989, para. 3). Previous studies discussed that a high level of information literacy skills help students perform information search effectively. For example, in their quantitative study, Adeleke and Emeahara (2016) found that the higher postgraduates’ information literacy skills, the significantly higher their use of e-resources. Catalano (2010) also noted that graduate students were often overconfident with their information search and retrieval skills, which could lead to unexpected frustration during searches due to the gap between perceived and actual skills. She observed an increase in graduate students’ familiarity with and use of advanced search techniques as a result of her one-shot library instruction (Catalano, 2010). Conway (2011) found that postgraduates performed better in showing information literacy skills than undergraduates, while about half of postgraduates were also found to lack basic information literacy skills – such as creating a citation and locating a book chapter using library catalogues. Past studies also found that faculty members considered information literacy skills as an important competency for both undergraduate and graduate students, while half of the study participants did not integrate information literacy training into their courses (Bury, 2011). These findings imply that a high level of information literacy helps graduate students strategize their information seeking, while they do not necessarily receive instructional interventions from faculty and librarians.

Like the research process discussed in section 2.3.1, search strategies of graduate students have been found to be unique. Many researchers found that students use the Internet as another primary means of searching, which was found to be similar to the information-seeking behaviours of undergraduates (Barrett, 2005). The emergence of the Internet and online

databases has affected students' information use. Junni (2007) showed a significant increase in the number of scholarly journals cited in masters' theses between 1993 and 2003. Previous studies revealed that students use non-library search engines, commonly Google, to search for information (George et al., 2006; Liyana & Noorhidawati, 2014). However, graduate students in computer science experienced migration from non-library search engines to library databases due to their perceived frustration with the search results retrieved from non-library search engines (Liyana & Noorhidawati, 2014). In other studies, perceived usefulness and ease of use were listed as reasons for using Google Scholar, an online search engine that retrieves scholarly literature using Google's algorithm (Cothran, 2011; Wu & Chen, 2014). At the same time, some students were aware that materials available on Google Scholar are of less guaranteed quality than library databases, due to its occasional retrieval from non-refereed journals and non-academic websites (Wu & Chen, 2014). They also complained about not being able to access the scholarly material retrieved from Google Scholar but were not aware that a lack of subscriptions at their university was the cause (Wu & Chen, 2014). These studies suggest that using the online search tools helped graduate students searching for information, while they are not aware of the difference in coverage of each search engine.

Citation chaining is another popular strategy taken by graduate students. Moore and Singley's (2019) interviews with ten humanities doctoral students indicated their use of citations found in reference lists, endnotes, footnotes and Wikipedia entries. George et al. (2006) also showed that tracking citations found in books and articles allowed students to delve deeper into the literature and to save time compared to randomly browsing materials. Barrett (2005) found that their

preference for citation chaining is consistent with the information-seeking behaviours of faculty members.

To help enhance students' information literacy skills and advance their search strategies, librarians have provided information literacy training and support in various ways. Urquhart and Rowley (2007) stated that while their study participants did not clearly remember library instructions attended, the partnership of faculty and library staff in literacy training significantly increased students' use of e-journals. However, attitudes toward librarians varied. Ismail (2013) found that students tended to avoid librarians because of their overconfidence in their information search skills, whereas those who had previous in-person consultation with librarians showed familiarity and reliance on their support. Therefore, library instructions have been found to increase the information literacy skills of graduate students, regardless of their perceived usefulness.

Urquhart and Rowley (2007) insisted that teaching approach based on problem-based learning (PBL) encourages students to seek information independently. PBL is a teaching and learning approach in which students actively participate in collaborative group work to learn about a topic in the context of an actual problem (Bate et al., 2014). Previous studies showed that medical students in the PBL curriculum tended to proactively consult and evaluate different sources than those in the traditional curriculum (Dodd, 2007; Eskola, 2005). Although little studies were conducted about PBL in postgraduate classrooms, these studies imply that active learning and collaborative projects will help enhance students' information literacy skills, which eventually affects their patterns of information behaviour.

As for academic's roles of information behaviour, Urquhart and Rowley (2007) discussed that supervisors' competence in subject-based information sources and information technologies affect students' information behaviour. They argued that supervisors are "both role models and mentors in the ways of thinking and practice in the discipline, and set expectations about student information behaviour, through the design of learning and assessment" (p. 1191). Many other studies were consistent with this argument and showed students' reliance on academic staff, such as supervisors, professors, and instructors (Barrett, 2005; George et al., 2006; Thomas et al., 2017). Since faculty members offer advice on research directions and search strategies as well as actual sources, previous interviews with students often referred to them as a starting point for their information seeking (George et al., 2006; Thomas et al., 2017). Although undergraduates also ask help from instructors, graduate students were found to be unique regarding their reliance on supervisors especially when starting and developing their research projects (Barrett, 2005).

In addition to the role of supervisors mentioned by Urquhart and Rowley (2007), other studies discussed personal networks other than supervisors were also important in strategizing their information seeking for research projects. For example, student peers could also be helpful in terms of receiving suggestions on information sources and search strategies (George et al., 2006). Ismail's (2013) study of adult learners in the Master of Social Work (MSW) program found that the 30-39-year-old group had a preference for academic staff whereas the 40+ age group relied on their peers first before instructors. As can be seen in these studies, peers were found to affect students' information behaviour as a supporting role.

Finding and using information sources is an essential step in any field of study, yet the types of information sources used by graduate students vary by discipline. Previous citation analysis revealed that doctoral students in the humanities, such as history, tend to cite more monographs than those in the social sciences, such as psychology (Smyth, 2011). Social science PhDs stated that they were highly involved in experimental studies or fieldwork and relied more on electronic journals than a physical visit to library branches (Fleming-May & Yuro, 2009). In interdisciplinary fields, such as education, both monographs and journal articles were used interchangeably, depending on the students' scope of research (Smyth, 2011). One explanation for these differences is drawn from the disciplinary differences in objectives and expectations for degrees. In terms of doctoral dissertation work, for instance, some programs require empirical research while others emphasize literature review and evaluation (Fleming-May & Yuro, 2009). Graduate students adapt to the discipline-specific academic culture and transition from a generalist to a specialist by developing specialized knowledge and research skills (Fleming-May & Yuro, 2009).

Some scholars also noted differences in information seeking by students' years in their programs. Barrett (2005), for instance, argued that doctoral students were more likely than master's students to have more educational experiences (e.g., conferences, courses, workshops, recommended readings), which increases the opportunities to refer to authoritative sources. Khosrowjerdi and Iranshahi (2011) examined that the level of prior knowledge about information searches – such as familiarity, expertise and experience – was significantly and positively related to knowledge of the ease, and they had a significant and positive relationship with the knowledge of easy and fast searching. In line with Kuhlthau's (1991) ISP model, Madden (2014) also

discussed that early-year humanities felt anxious and uneasy about conducting a literature review, which she suggested was a good time to offer information literacy workshop.

2.3.3.2 Macro factors

Urquhart and Rowley (2007) conceptualized five macro factors – the contextual factors which may affect micro factors discussed above. *Information resource design* concerns if design aspects of information – such as visuals, structures, interactivity – match students’ needs of learning. *Availability and constraints to access* include accessibility of information – such as network availability at home. *Policies and funding* could be at institutional, regional, and national levels – such as budget cuts resulting in cancelling subscriptions and an increase in open access materials. *Organizational leadership and culture* are the way institutions proactively encourage students to acquire information skills. And lastly, *information and learning technology infrastructure* includes the availability of information technology, such as PC workstations on campus, off-campus access to resources, and internet availability. Since graduate students are affiliated with their graduate programs, this model indicates that the contexts of their programs, institutions, and location of the institutions can affect their learning environment, which eventually influences their information behaviour.

2.3.4 Section summary

Graduate students are intertwined between their identities as students who are learning and as pre-professional researchers. Previous studies found that graduate students’ information seeking as unique in terms of their preference for accessibility. Researchers also found that students were influenced by their surroundings, including their supervisors’ roles, disciplines, library training

and support, and institutional contexts of programs and universities. Under these circumstances, graduate students were found to use online resources, academic staff and peers to locate and access information for research use. Because all the reviewed literature was about English-speaking contexts using English sources, this thesis project examines graduate students' information-seeking behaviour focusing on non-English materials in an English-speaking context.

2.4 Chapter summary

This chapter reviewed literature on non-English library collections, ISSs, and information behaviours of graduate students. Previous studies have shown the uniqueness of graduate students' actions taken to find information sources that meet their research needs. However, little research has been conducted on the strategies that graduate students use to find information in non-English sources, which Area Studies librarians have struggled to ensure their accessibility. For Japanese-language collections, in particular, much collaborative work has been undertaken by librarians to resolve the problems caused by its unique linguistic characteristics. The current study aims to fill the research gap by interviewing graduate students and identifying how they seek and use Japanese-language materials for their research.

Chapter 3: Methodology

To answer the research questions in Chapter 1, the current thesis conducted semi-structured online interviews with eight UBC graduate students using Japanese-language sources for their research and analyzed the data using a DCA approach. This chapter summarizes the rationale for the research methodology and detailed procedures for participant recruitment, data collection and analysis.

3.1 Rationale for the research design

3.1.1 Research strategy: Qualitative approach

In social science research, *qualitative* and *quantitative approaches* are the two traditional research paradigms used by most researchers. Qualitative research aims to describe and understand social phenomena from research participants' perspectives. While quantitative research often collects numerical or statistical data to deduce findings from scientific models and theories, the focus of qualitative research is often on interpreting verbal data expressed by participants in the context of researchers' interest (Gorman & Clayton, 2004). As discussed in Chapter 2, the motivation underlying this study is to investigate how graduate students intentionally seek Japanese-language sources for their research use, which has not been empirically studied before. Therefore, due to the exploratory nature of the research, interpreting the verbal statements of those who use Japanese-language sources is appropriate to elicit an understanding of their ISSs.

3.1.2 Research method: Semi-structured interviews

Among various methods in qualitative approach, the current project adopted semi-structured interviewing method. In semi-structured interviews, researchers ask participants to describe their research topic in pre-determined and open-ended questions. Prior to the actual interview, researchers create an interview guide including a series of topics to ask, to collect rich and relevant data effectively. This method is more flexible than a structured interviewing method, which requires the interviewers to ask questions in pre-determined phrases (Bearman, 2019). Also, compared to unstructured interviews, in which the researcher and the interviewee have a free conversation, it allows researchers to explore a more specific problem (Bryman, 2012). Semi-structured interviews suit this study where a clear picture of research topic (i.e., ISSs of graduate students who seek non-English sources) has already been determined.

3.1.3 Cross-language research

Since I gave the interviewees a choice of two languages (i.e., English and Japanese), this study could be categorized as *cross-language research*, which collects data in multiple languages and requires translation for analyzing the data (Temple & Young, 2004). Cross-language research has been employed in the previous research involving people who are not proficient in the language of study, such as immigrants, refugees, multilinguals, and sign language users (Resch & Enzenhofer, 2018; Temple & Young, 2004). In this study, the informed consent and interview guide stated that the interviews would be conducted in English and participants could switch the language to Japanese if they wished to do. As a result, four participants, whose first language was Japanese, used Japanese during their interviews.

This bilingual interview was possible due to the author being bilingual in English and Japanese. Shkларov (2007) argued for two roles of a bilingual researcher: a neutral translator and as a creative researcher. It requires looking at two parallel meanings that are conceptually and linguistically distinct and understanding the two ethical paradigms represented by two linguistic cultures. These practices are to “protect participants from harm” and “maintain research integrity” (Shkларov, 2007, p. 535). Translation of the quotations limits data reliability, because participants’ spoken language may not be fairly represented in another language (van Nes et al., 2010). To give an appropriate voice to the public, researchers have a responsibility to respect the participants’ dignity and reflect the equivalence of meaning between the two languages.

In Chapter 4 discussing the research findings, all quotes from the participants’ interview responses are written in English, regardless of the language used during the interviews. This thesis project did not hire any translators or interpreters, while it is common in cross-language research to employ qualified professionals to minimize the misinterpretation of quotes (Squires, 2009). To mitigate the risks of misrepresentation, this study includes the Japanese quotes as appendices allowing the audience to refer to both the original and translated scripts (see Appendix A).

3.1.4 Qualitative e-research

In 2020, UBC restricted in-person meetings with research participants and use of on-campus facilities, due to the global COVID-19 pandemic⁸. I thus decided to conduct online interviews using Voice over Internet Protocol (VoIP; e.g., Skype, Zoom). Online interviews are categorized under *qualitative e-research*, which “us[es] information and communication technologies to study perceptions, experiences or behaviours through their verbal or visual expressions, actions or writings” (Salmons, 2016, p. 6). In particular, video-call interviews allow researchers and participants to determine their own location and environment during the interview and to have nearly the same experience remotely as they would in a face-to-face meeting (Deakin & Wakefield, 2014; Krouwel et al., 2019). Having synchronous communication using live audio over the Internet or telephone also allows them to have “a high level of mutual focus and attention in communication” (Salmons, 2016, p. 45). Nonetheless, this approach has technical requirements (e.g., having a stable wi-fi network, hardware with a screen and camera, registered account for VoIP services) and potential distractions (e.g. family members at home, video time-lag, fatigue in online environment: Deakin & Wakefield, 2014; Krouwel et al., 2019). Despite these risks, conducting the interviews in an online environment was the best way to collect data, given my limited project timeline during a time of high uncertainty.

⁸ See more about the COVID-19 and research restriction at UBC on website: <https://ethics.research.ubc.ca/behavioural-research-ethics/ubc-behavioural-guidance-during-covid-19-research-restrictions> (accessed August 8, 2020)

3.1.5 Directed Content Analysis (DCA) approach

This study employed directed content analysis (DCA), one of the qualitative content analysis approaches (QCA) (Hsieh & Shannon, 2005). QCA is a flexible research method that subjectively interprets “the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005, p. 1278). Hsieh and Shannon (2005) identified three main approaches of QCA: conventional, directed, and summative. Conventional content analysis generates coding categories from the data used for analysis. This approach works when few theories or studies are available on the social phenomenon of interest. In summative content analysis, researchers start by identifying specific words or textual contents to explore how the keywords were used. The keywords could be derived from the researcher’s interest or from previous research findings. It helps researchers to discover the underlying meaning of the keywords in the study domain. However, these two methods were not suitable for this study, which sought to draw upon Sabbar’s (2016) information triangle to study the ISSs of graduate students using Japanese-language materials. Building on previous research, this study adopted DCA, which analyzes textual data by incorporating ideas from existing theories and research when identifying a coding schema and analyzing data.

In the DCA approach, according to Hsieh and Shannon (2005), researchers first create an initial codebook prior to data analysis by using theories and prior research as supplementary resources. If the data do not represent any of the predetermined categories, researchers can add new categories or subcategories that explain it. This strategy helps researchers who want to understand all the phenomena that occurred during the interviews and to validate their theoretical

and conceptual models in the research area. Because the current research used an established conceptual model, the information triangle, the DCA approach helps to draw out the information world of graduate students using Japanese-language sources, which is a unique research area at the moment.

Hsieh and Shannon (2005) noted three main limitations to DCA. First, using an existing theory or previous research may reflect a strong bias in the research findings. Researchers need to be aware of the existence of unconscious bias and actively look for patterns that are not derived from previous research. Another limitation that may surface during the interviews is that the questions may imply the predetermined coding categories. It may cause participants to answer the questions in a certain way “to please researchers” (p. 1283). Lastly, researchers could be so focused on theory that they ignore the contextual aspects. I attempted to minimize the impact of these limitations by recognizing their potential risks, focusing on elaborating on the participants’ responses to the prepared questions, and checking if participants have anything to add before ending the interviews.

3.2 Data collection

3.2.1 Sampling method

Recruitment started after approval by the UBC’s Behavioural Research Ethics Board on March 25, 2020 (Ethics ID: H20-00633). Eligible participants were UBC graduate students who (1) are fluent in English, (2) specialize in Japan-related topics, and (3) are actively doing research using resources written in Japanese language. As of January 2020, 22 graduate students and 8 tenure-track faculty members in the Department of Asian Studies at UBC specialized in Japanese

Studies. In addition, the Centre for Japanese Research has 40 researchers from various departments (e.g., Anthropology, Architecture, Art History, Business, Economics, Education, Geography, History, Law, Political Science, Psychology, Wood Science). While no population data are available on the number of eligible graduate students linked to the researchers on this website, these numbers indicate that students supervised by these scholars could potentially use Japanese sources for their Japan-related research.

Convenience sampling and *snowball sampling* methods were employed to find research participants (Bryman, 2012). A convenience sample is a selection of people that are easily accessible to the researcher (e.g., personal contacts). A snowball sample is used to trace the contacts of people who are relevant to the research topic with the aim of finding other participants. The important limitation is its questionable generalizability of the findings. Meanwhile, these approaches have the advantage of saving time and money for recruitment. Given the small size of the target community and the limited timeframe of the research project, these two approaches were the most appropriate for this research.

I started recruitment by asking a subject librarian and faculty members who specialize in Japan studies to forward a solicitation email to graduate students (see Appendix B.1). I also contacted graduate students with whom I was already acquainted (see Appendix B.2). An advertisement message was posted on the UBC Graduate Student Community Message, an online communication forum for graduate students at UBC (see Appendix B.3). At the end of each interview, I asked the participants to spread the word to their fellow students, who could become participants. As a result, three students were recruited from my personal contacts, and the other

participants emailed me individually to express their interest.

3.2.2 Instrumentation

After scheduling meetings with participants, I sent an invitation URL auto-generated from a VoIP platform that each participant preferred to use for their interviews. Six participants used Zoom and two participants used Skype. As for Skype, I used an account created for research use. In order to minimize participants' discomfort and intimidation by their unfamiliarity with online video calls, I attached a brief instruction on how to use the platform to join the meetings. Participants also received an electronic copy of the informed consent form (see Appendix C) and pre-interview questionnaire (see Appendix D) via email. The questionnaire asked 15 questions related to demographics, study area, Japanese-language ability, and types of Japanese materials they usually use for research. The list of questions were built upon and modified from the questionnaire and research diaries used in Sabbar's (2016) dissertation. I asked participants to fill out and return the questionnaire via email prior to the interview, in order to brainstorm follow-up questions to ask.

The interview guide included clarification questions for participants' responses on the pre-interview questionnaire and open-ended questions about their information-seeking behaviours (see Appendix E). Semi-structured questions were prepared both in English and Japanese depending on participants' language preferences. Depending on the participants' comments and responses, I asked follow-up questions to the participants. The main objectives of the interviews were to explore: (1) the ISSs that participants employ to access Japanese sources and (2) the factors that alter and hinder their ISSs.

3.2.3 Interview procedures

The entire interview process was conducted virtually and synchronously via VoIP services, in order to avoid in-person interactions during the COVID-19 pandemic. I also offered participants an option to use a phone call if they wish to avoid VoIP, whereas none of the participants used it. The average length of interviews was 40-45 minutes, which was within the timeframe described in the informed consent. After the interviews were completed, participants received honorarium as a form of e-gift card.

The recorded videos and audio were securely stored on a local encrypted computer. VoIP services, including Skype and Zoom, provided secured communications by encryption and authentication methods (Microsoft, n.d.; Zoom Video Communications Inc., 2020). The interview responses were recorded using a video recording feature of VoIP services and a voice recorder as a backup (Philips VoiceTracer DVT2710). Computer files were encrypted and password-protected.

3.3 Data analysis

3.3.1 Transcribing the interview

The recorded interview responses were manually transcribed by the author using Microsoft Word and NVivo 12 Pro. Schilling (2006) discussed the importance of defining transcription process. It is to ensure the contents of recorded responses are accurately retained when the audio is turned into textual data. Schilling stated that the following three aspects should be considered: (1) dialects or slips of the tongue, (2) observed behaviours including sounds (e.g., ‘uh’ ‘er’) and audible behaviour (e.g., coughing), and (3) all questions or main questions from the interview

guidelines. In the current project, Japanese responses were transcribed in Japanese and not translated into English during the transcription stage, as mentioned in section 3.1.3. Regardless of the languages, I included participants' sounds, audible behaviour (e.g., laughing) and all questions and interactions during the interview. After I revised the transcription several times, pseudonyms were assigned to each participant in order to keep confidentiality.

3.3.2 Coding

In creating the coding schema, I referred to Mayring (2000)'s step model of deductive category application. The proposed model consists of eight steps: (1) statement of research questions, (2) identification of the aspects of analysis, main categories, and sub-categories based on a theory, (3) formulation of definitions, examples, coding rules for each category, (4) revision of the categories and coding agenda, (5) formative assessment of reliability, (6) application of the coding agenda to the textual data, (7) summative assessment of reliability, and (8) interpretation of the research findings. The clear and comprehensive coding method ensures the credibility, transparency, and rigour of qualitative data analysis and provides practical findings (Assarroudi et al., 2018).

In Chapter 1, I identified two research questions: (1) What information-seeking strategies (ISSs) are used by graduate students when seeking Japanese sources? and (2) What shifts the ISSs of graduate students when they seek Japanese sources? To answer these questions, the current research focused on three aspects of participants' information-seeking behaviours: (1) ISSs (formal, informal, interactive, hybrid), (2) shifts in ISSs (planned, opportunistic, assisted, alternative), and (3) barriers for information-seeking (geography, language, culture).

An initial codebook was derived from the categories and subcategories used in Sabbar and Xie (2016) and Sabbar's (2016) dissertation. After revising Sabbar's codebook, this study employed five codes for formal system strategies (see Table 3.1), seven for informal resource strategies (see Table 3.2), eight for interactive human strategies (see Table 3.3), and four for hybrid strategies (see Table 3.4). Table 3.5 shows the codebook for shifts in ISSs, which uses the same codes as Sabbar's (2016) research. Table 3.6 is a codebook used for identifying factors that influence ISSs and shifts, which consists of five codes. Pre-existing subcategories were removed, added or modified based on the responses. The coding schema was assigned to the transcribed responses for semi-structured interviews. Each code was manually imported to NVivo as a *node*, a function that allows researchers to assemble references to a thematic and topical collection (NVivo, n.d.), and applied to the transcriptions. While the nodes were created in English, the Japanese transcriptions were kept as is without translation to English.

3.4 Chapter summary

This thesis project conducted qualitative online semi-structured interviews and analyzed the transcribed responses using DCA. The participants were recruited from researchers' personal networks and snowball samples at UBC. The interview responses included both English and Japanese, and transcribed and analyzed verbatim. While these methods and approaches may pose risks to generalizability and data validity, they were the most appropriate for this project given the timeline and the COVID-19 situation in 2020. The next chapter discusses the findings from the interviews related to the research questions.

Table 3.1 Codebook for formal system strategies

Code	Description	Example
Search in a discovery tool (UBC Library Summon)	Searching in UBC Library's discovery tool	"For me, the UBC website, library search, is a good place to start." ⁹ (P8)
Search scholarly databases*	Searching in scholarly databases either subscribed to by UBC Library or openly available, such as Asahi Kikuzo Visual II and CiNii	"I go to database, Asahi Shimbun database." (P7)
Search the web using a search engine*	Using a web search engine, such as Google, to search for relevant information to their research topics	"I just google it." (P1)
Search Google Scholar	Using Google Scholar to search for scholarly literature	"I'd go to Google Scholar and put keywords to look it up." (P2) ¹⁰
Search library OPACs (non-UBC Library, WorldCat)	Searching for items using a library OPAC of non-UBC Library, including WorldCat	"So what I do instead is I usually go to WorldCat, um and see if other places can interlibrary loan it to me." (P4)

Note. * Codes which I modified the names and/or description from Sabbar (2016). ** Codes which I generated for this study. Codes without stars were incorporated from Sabbar (2016).

⁹ See Appendix A.4 for the original Japanese transcripts.

¹⁰ See Appendix A.1 for the original Japanese transcripts.

Table 3.2 Codebook for informal resource strategies

Code	Description	Example
Visit and/or browse library (UBC Library)	Consulting or browsing collections in affiliated institutions' libraries, UBC Library in this study	"Going to library when it's open, is nice because it's all there." (P6)
Citation tracing	Following the footnotes, citations and bibliography of a source to identify other useful sources	"When I look at the citation or the publishing information, I find like other materials to read." (P4)
Consult known web sites	Consulting web sites known to the participants	"I definitely checked the Takarazuka, that website." (P7)
Visit and or browse libraries in Japan*	Consulting or browsing collections in libraries in Japan, including national, public, academic, school, and special libraries	"I was going to the library every day during my visit in Japan for summer vacation." ¹¹ (P2)
Consult personal collections	Using materials already in the participants' own possession	"So I still have those materials that used to be used in undergrad research." (P1)
Visit and/or browse bookstores in Japan*	Consulting, browsing, and/or purchasing physical resources in bookstores in Japan	"I usually buy a book [when going back to Japan] and bring it back [to Canada]." ¹² (P5)
Read newspapers (on-line or in print)*	Reading and consulting online or print newspapers to identify relevant keywords and other useful sources	"So newspapers, like online news and websites are like main research for me, for main sources for me to get the latest resources." (P1)

Note. * Codes which I modified the names and/or description from Sabbar (2016). ** Codes which I generated for this study. Codes without stars were incorporated from Sabbar (2016).

¹¹ See Appendix A.1 for the original Japanese transcripts

¹² See Appendix A.3 for the original Japanese transcripts

Table 3.3 Codebook for interactive human strategies

Code	Description	Example
Ask a librarian	Asking for help from a Japanese Studies librarian	“We have a librarian who is in charge of Japanese at UBC, and I am eventually asking her.” ¹³ (P2)
Consult a master’s or PhD peer**	Consulting with a person in master’s or doctoral programs by means such as email, phone, in person, etc.	“I’ll ask [...] my fellow MA PhD students if they ever read any novels or any manga or anything about food or about like animals.” (P6)
Consult faculty members**	Consulting with faculty members, both of UBC and non-UBC institutions	“I got a lot of advice, or actually booklist from my prof, from the instructor of the course.” (P7)
Learn from blogs and social media timelines**	Browse or consult a web-based forum, including blogs, social media timelines	“I sometimes use like Twitter. [...] I’m not actively searching on that. It comes up to my timeline.” (P1)
Attend a conference, guest lecture*	Attending a conference and a guest lecture and interacting with attendees	“When I go to a conference, [I chat with fellow attendees] like, ‘Have you read the book?’” ¹⁴ (P5)
Contact an author or family member	Contacting the author of a source directly or their family member or friend	“If it’s an article you really want, I would desperately email the authors directly to ask if they could send a copy” ¹⁵ (P5)
Interview human subjects*	Conducting interviews of humans in a relevant field to the participants’ research topics	“I also have access to people who studied abroad in the Philippines in my workplace. [...] Their stories are very important to me.” ¹⁶ (P3)
Use social media to contact other people	Sending a message on posting on social media, such as Twitter and Facebook	“I have friends with Japanese graduate students as Twitter followers. [...] And I ask them to send what they scanned.” ¹⁷ (P5)

Note. * Codes which I modified the names and/or description from Sabbar (2016). ** Codes which I generated for this study. Codes without stars were incorporated from Sabbar (2016).

¹³ See Appendix A.1 for the original Japanese transcripts

¹⁴ See Appendix A.3 for the original Japanese transcripts

¹⁵ See Appendix A.3 for the original Japanese transcripts

¹⁶ See Appendix A.2 for the original Japanese transcripts

¹⁷ See Appendix A.3 for the original Japanese transcripts

Table 3.4 Codebook for hybrid strategies

Code	Description	Example
Use interlibrary loan (ILL) or Document Delivery (DD)*	Requesting materials from another library through interlibrary loan and document delivery	“I was interlibrary loaning stuff quite a bit.” (P6)
Purchase a copy online	Utilizing an on-line book vendor to purchase a source	“I bought it on kindle a few times when I had to, you know, buy it right now.” ¹⁸ (P8)
Request acquisitions at libraries**	Requesting purchase of an item at UBC Library	
Ask acquaintances living in Japan**	Asking people, including participants' family and friends who are not necessarily in academia, to get a copy from institutions located in Japan	“I actually asked my friends in Japan, I asked them to buy it for me in Japan and then they shipped all the books from Japan for me.” (P7)

Note. * Codes which I modified the names and/or description from Sabbar (2016). ** Codes which I generated for this study. Codes without stars were incorporated from Sabbar (2016).

¹⁸ See Appendix A.4 for the original Japanese transcripts.

Table 3.5 Codebook for shifts in ISSs

Code	Description	Example
Planned shifts in routine situation	Shifts between strategies as a part of the participants' research habits	"I usually ask my advisor first so my supervisors or other people in the field, and [...] sometimes they send me articles to read or, sometimes they would mention specific names or titles both magazines and journals that tell me." (P4: interactive human strategy to formal system strategy/informal resource strategy)
Opportunistic shifts in disruptive situation	Shifts to a strategy when participants had a positive and serendipitous discovery that fulfill the same goal as an initial strategy	"I will pick up information [on the latest publications popped up on my timeline following Japanese publishers] and like, 'Oh, there's an interesting topic up there, let's read it.' [and then access Japanese journals.]" ¹⁹ (P5)
Assisted shifts in problematic situation	Shifts to a strategy to achieve a new intention that can assist achievement of an initial intention, when an initial strategy cannot yield information wanted	"I will go to the database and try to find that and interlibrary loan it if UBC doesn't have it." (P6)
Alternative shifts in problematic situation	Shifts to an alternative strategy to achieve a new intention by giving up an initial intention, when an initial strategy confirmed the participants cannot obtain information wanted	"Even if I feel like this article or this content could be really really relevant to what I'm working on, if I can't do, if I can't get access to it in a relatively simple and straightforward way, I'm less likely to try to haunt it down. [...] If I can't get access to them via interlibrary loan, or if it's not available at UBC or online then I just won't bother." (P6)

Note. All codes were incorporated from Sabbar (2016).

¹⁹ See Appendix A.3 for the original Japanese transcripts.

Table 3.6 Codebook for factors influencing ISSs and shifts

Code	Description	Example
Culture	Cultural aspects dealing with information-seeking contexts, such as availability, publication practices	“If I can’t find it, or like, in North America, or if I can’t find at UBC or the online copy, often times I’ll not just use it.” (P6)
Geography	Geographical aspects dealing with information-seeking contexts, such as needs for traveling to Japan	“I can’t really travel to Japan that, for, like as many times as I want.” (P7)
Language	Linguistic aspects dealing with information-seeking contexts, such as language proficiency and graphical representations	“Sometimes even when I type in Japanese, nothing pops up.” ²⁰ (P8)
Budget**	Budgetary constraints that impact access to materials	“[Buying a book is difficult because] it takes time and money.” ²¹ (P3)
Time**	Time constraints due to project deadline	“It’s just, for me, it was based on the timeline of when I wanted to finish my MA.” (P6)

Note. * Codes which I modified the names and/or description from Sabbar (2016). ** Codes which I generated for this study. Codes without stars were incorporated from Sabbar (2016).

²⁰ See Appendix A.4 for the original Japanese transcripts.

²¹ See Appendix A.2 for the original Japanese transcripts.

Chapter 4: Results

This thesis set out to explore the following research questions:

RQ1: What information-seeking strategies (ISSs) are used by graduate students in seeking Japanese sources?

RQ2: What shifts the ISSs of graduate students when they seek Japanese sources?

Before answering these questions, this chapter first explains demographic information of participants and Japanese information sources mentioned by participants. Pertaining to RQ1, section 4.3 categorizes ISSs mentioned by participants into four types – formal system, informal resource, interactive human, and hybrid – as defined in the codebook (see section 3.3.2). Sections 4.4 and 4.5 are related to RQ2 and show the shifts in ISSs and influential factors on ISSs mentioned during the interviews.

4.1 Demographics of participants

Table 4.1 summarizes the demographic information of participants in the study, based on the pre-interview questionnaires and interviews. At participants' request, interviews with P2, P3, P5, and P8, who identified themselves as experts in their Japanese-language skills, were conducted in Japanese. Three participants were doctoral students and the others were master's students. Three participants were in the Faculty of Education, and five were in the Department of Asian Studies. Since two participants were not in research-intensive degrees, their information-seeking experiences were for coursework. Two other participants spoke about both their coursework and

their ongoing thesis/dissertation projects, as they had just begun their thesis/dissertation research. The other participants talked about their thesis/dissertation projects. While some participants shared their experiences from their previous degrees completed at Japanese institutions, the analysis did not include these parts of the interview since the focus was on the ISSs of students studying at a North American institution.

Table 4.1 Demographics of participants

ID	Degree	Department	Timeframe of research topics	Japanese proficiency	Interview language
P1	MEd	Education	2010s-2020 (Social science)	Expert	English
P2	PhD	Asian Studies	1910-40s	Expert	Japanese
P3	MA (recently transferred from MEd)	Education	2010s-2020 (Social science)	Expert	Mixed English and Japanese
P4	MA	Asian Studies	1867-1930s	Advanced - Expert	English
P5	PhD	Asian Studies	1910-1920s / late 1900s-today (pop culture)	Expert	Mixed English and Japanese
P6	MA	Asian Studies	2011 and after	Intermediate - Advanced	English
P7	MA	Asian Studies	16 th to 18 th century / 1970s	Intermediate - Advanced	English
P8	PhD	Education	1960s-2000s	Expert	Japanese

Note: Timeframe of research topics was based on what participants described about their research topics.

4.2 Japanese sources used by participants

Table 4.2 shows the types of Japanese primary and secondary sources mentioned by participants in the interviews. UBC Library (2020) defines primary sources as “the direct evidence or first-hand accounts of events without secondary analysis or interpretation,” (para. 2) and secondary sources as the works “analyz[ing] or interpret[ing] a historical event or artistic work” (para. 4). These definitions were shared with participants as part of the informed consent form. Due to the diversity of participants’ disciplines and research topics, the types of sources and they mentioned ranged from academic and non-academic books, journals, magazines, magazines, newspaper articles and statistics. These sources were also used differently by participants. For example, while scholarly books were used mostly by participants as secondary sources to support research arguments, P8 was the only participant using them as primary sources. This is because P8’s research focus was on how a Japanese psychoanalyst discussed parent-child relationships in their writings. Similarly, P4 was the only participant using newspapers as primary sources because their research assistantship investigated Japanese Canadian newspaper articles published before WWII.

Table 4.2 Japanese primary and secondary sources mentioned by participants

Types of Japanese sources	Number of participants who used the source as primary sources	Number of participants who used the source as secondary sources
Scholarly books	1	5
Non-scholarly books (Literature, textbook)	6	0
Scholarly journal articles	1	5
Magazine articles	3	0
Newspaper articles	1	4
Multimedia (Anime, manga, video recordings)	3	0
Reports	1	0
Statistics	0	3

4.3 Information-seeking strategies (ISSs)

All participants discussed aspects of the four main strategies outlined by Sabbar (2016): formal system, informal resource, interactive human, and hybrid. These are detailed in the following sections.

4.3.1 Formal system strategies

Table 4.3 shows the frequency of the subcategories of formal system strategies mentioned by participants. All participants mentioned at least one subcategory during the interview, which indicated that formal systems were frequently used for identifying, locating, and accessing Japanese-language sources. The following sections describe each strategy in details.

Table 4.3 Formal system strategies employed by participants

Name	Number of participants using
Search in a discovery tool (UBC Library Summon)	7
Search scholarly databases	7
Search the web using a search engine	6
Search Google Scholar	5
Search library OPACs (non-UBC Library, WorldCat)	5

4.3.1.1 Search in a discovery tool (UBC Library Summon)

A discovery tool is an access point centralizing indexes retrieved from library catalogues, scholarly databases, web-based resources and online journals (Thomsett-Scott & Reese, 2012).

As of 2020, UBC Library uses Summon® by ProQuest. Searching in UBC Library Summon was mentioned by the greatest number of participants. Participants found it useful for checking the availability of physical and electronic materials available at the UBC Library. P2 described it as the easiest platform to access online and to check availability at UBC Library. Although P4 and P5 also used Summons first to confirm availability, most of the materials they desired were not housed at UBC.

Some participants were distrustful of UBC Library Summon because of their experience of failing to retrieve the Japanese-language materials they wanted to use, as P1 discussed:

“I sometimes use UBC library search, but sometimes, because my topic is really specific and not really when in Canada or in Western countries, so like sometimes UBC search doesn’t do much. [...] [I use UBC Library Summon] mainly for like my theories and methodologies [referred to in English language sources], not about like actual data [from Japanese sources].”

P3, the only participant who did not use Summon to find Japanese sources, argued that UBC Library Summon usually did not retrieve both English and Japanese items needed, even if they

spelled a keyword or an item title correctly in the search box. It resulted in their perception that Google was “easy to locate sources [regardless of languages]”²². Although it was impossible to identify the causes of this failure from P3’s self-report, possible reasons include errors in metadata or in their search query. Therefore, this response indicates room for improvement in information literacy instruction, index corrections in traditional discovery tools, and reference services that support locating sources online.

4.3.1.2 Search scholarly databases

Seven participants mentioned the names of scholarly databases available through library subscriptions and open sources. They included CiNii (P1, P2, P5, P7, P8), Asahi Kikuzo II Visual (P5, P7), Factiva (P7), Aozora Bunko (P4), Maruzen eBook Library (P6), KinoDen (P5), Maisaku (P4, P5), and UBC Open Collections (P5). As an indexing tool for Japanese scholarly articles housed in Japanese institutions (see Chapter 2), CiNii was the preferred platform for exploring Japanese scholarship. Databases of newspapers, such as Asahi Kikuzo II Visual, Factiva, and Maisaku, were perceived to be useful for those looking for archived newspapers that were published decades ago. P7 commented on Asahi Kikuzo II Visual: “I also use um Asahi Shimbun, because I think I can still find the 1970s and quite early versions of Asahi Shimbun online.”

However, some participants found it difficult to make use of the databases. For instance, P8 said they could not find the Japanese papers they were looking for even when inputting the correct

²² See Appendix A.2 for the original Japanese interview transcripts.

title in the CiNii search box. Both P1 and P7 stated that while they could find bibliographic information for Japanese papers, their full-text (pdfs, copies, etc.) were often not accessible. P1 assumed that “[not being] enrolled in a Japanese university” was the reason for their inability to obtain the actual items.

P6 said that they preferred to use the resources they had used in the past rather than learn how to use new databases due to time constraints as follows:

“[Japanese Studies librarian] sent the links to the Maruzen databases and [...] I played around with that a little bit. But um, I was like, I should focus on the actual works instead of playing with this website. I’m sure that like because there is more access to things now, um, like eventually I will learn how to use them better, but at the moment, I’m just not making the best use of the resources that I know are available.”

As seen in these responses, many participants mentioned scholarly databases – mainly those provided by Japanese vendors and publishers. However, some participants found it difficult and cumbersome to formulate the right search queries and explore how to use the databases. This indicates that while the comprehensiveness of the database meets the information needs of the participants, they struggle to locate and access the items.

4.3.1.3 Search the web using a search engine

During the interviews, six participants stated, “I Google it.” They used Google when they were looking for keywords without any specific idea of what resources to use. For example, P2 responded, “If I only have a rough idea of what I would like to look into, I would put some

keywords into Google and see if anyone has written about it.”²³ P1, who studied the *Children’s Cafeteria* that provides space and food for Japanese children in poverty, also said that:

“If I wanna know like basic information, [...] I would just type 子ども食堂 [Children’s cafeteria] 日本 [Japan] 現在 [today] 状況 [situation]. If I want to get a specific opinion, I would add 良い [good] 悪い [bad] to get like all opinions on that.”

Participants using Japanese statistics (P1, P3, P7) started their search on Google rather than going to the ministry’s websites directly. P7 explained:

“I sometimes don’t know if they have what I want to read, so I just simply type my keywords in Google, and sometimes Kōsei Rōdōshō [Ministry of Health, Labor and Welfare], they just pop up, and I just click on it.”

When searching for known items, three participants mentioned that they entered the item title into the Google search box. Obtaining the actual materials (e.g., pdfs, videos), they accessed the URL of a Japanese university’s institutional repository shown in the Google search results. P6 explained as follows:

“I’ll just google topics and find like articles available via like Waseda or something or like Doshisha. And I’ll just, because they’re available through universities, even though I found them on Google, I’ll read them and download them, even though it’s not using in a proper way to find an article. [...] If I’m looking for an article and it comes up on Google, I don’t have to jump through a bunch of hoops to get to it.”

As P6’s statement indicates, finding materials on Google was intended to save time in locating items. On the other hand, they felt that accessing directly from Google was inherently wrong to do, as P5 mentioned, “I Google like ‘keywords pdf’ and read the article pdfs, but I don’t think I

²³ See Appendix A.1 for the original Japanese transcripts

should do that.” P6 also described downloading a pdf directly from Google as “not using in a proper way to find an article.” These responses implied that using scholarly databases and library sources was considered as a proper way, although they chose to use Google due to its ease of use.

4.3.1.4 Search Google Scholar

Five participants mentioned that Google Scholar helped to locate Japanese scholarly articles. For P2, P5, and P7, Google Scholar was not a main platform but used as a supplement to UBC Library Summon. The other participants, P1, P3, showed positive sentiments about Google Scholar. P1, for example, stated, “I often use Google Scholar to get an overview.” P3 noted that Google Scholar’s feature of showing the number of sources cited (“Cited by”) was used to evaluate the reliability of the material. They also perceived Google Scholar to have more results than UBC Library Summon. This perception is consistent with Ciccone and Vickery (2015), who found that Google Scholar had a higher average number of relevant results than the two web-based discovery services, Summon and EBSCO Discovery Service, when performing a topical search. P1 and P3, who were not positive about Summon at the UBC Library (see section 4.3.1.1) are suggested to prefer Google Scholar as a means of obtaining extensive and relevant search results.

4.3.1.5 Search library OPACs (non-UBC Library, WorldCat)

Five participants named OPACs for libraries other than UBC, including NDL (P2, P4, P6, P7), WorldCat (P2, P4, P8), and Waseda University (P7). They were used to identify the location of known items and their availability in libraries other than UBC. P2 said they used the NDL to

check the table of contents for known items. However, P4 and P7 admitted that the NDL often did not allow them to access digitized materials in the NDL Search, even though the bibliographic information was displayed in the NDL. P4 mentioned that “[NDL] do[es] have the material available but usually we can’t view it unless you’re in the physical location, so it’s not very useful for me.” P7 also said:

“Basically Waseda [University], I think they have a very wonderful online digital resources, and I can really get access to all of them, but for [NDL], for that one, some of them, although I can find them and I can find the URL or the website, [...] I still can’t really get access to them.”

P2, P4, and P8 used WorldCat when the materials wanted didn’t show up in the UBC Library Summon search results. They identified two main purposes of using WorldCat. First, all three participants mentioned the function of listing the OCLC institutions that hold the materials. It allowed them to see if they could potentially get the materials through ILL, which helped them to fill out the ILL request form or check with the librarian. Another way to use WorldCat was to identify the correct spelling of the titles of the materials. For example, P8 described an experience where they were unable to search with the correct spelling on UBC Library Summon due to a lack of knowledge of the standardized Japanese spelling in the North American library system. If the materials they wanted did not pop up in Summon’s search results, they often copied and pasted the titles on WorldCat into Summon’s search box to double-check the UBC Library’s holdings. This response illustrates how patrons could potentially deal with the complex nature of Japanese characters discussed in Chapter 3, without librarians’ help.

4.3.2 Informal resource strategies

Table 4.4 summarizes informal resource strategies mentioned by participants during the interviews. Informal resource strategies were also found to be used frequently by participants, especially visiting UBC Library and citation tracing. The following sections will discuss the interview responses in details.

Table 4.4 Informal resource strategies mentioned by participants

Name	Number of participants using
Visit and/or browse library (UBC Library)	6
Citation tracing	6
Consult known web sites	4
Visit and or browse library or archives in Japan	4
Consult private collections	1
Purchase a copy at a bookstore in Japan	1
Read newspapers (on-line or in print)	1

4.3.2.1 Visit and/or browse library (UBC Library)

Most of the participants visited UBC Library branches, especially the UBC Asian Library, to access UBC's Japanese-language collection. There were two major patterns of interacting with the collections: (1) browsing and borrowing items whose availability was confirmed through the UBC Library Summon or (2) randomly browsing the stacks and discovering new materials that might be relevant to their research. All of the participants who mentioned this strategy noted that they would usually visit the physical location for a specific item they wanted, as P8 discussed:

“When I go to the library, I’ve already decided what I want to borrow for this book. Sometimes I borrow a book around the one that I initially intend to check out, but I don’t go to the library for that purpose [of expecting the discovery].”²⁴

P2 went to the library to discover new material, even when they did not have a specific material wanted. Statements such as “[books written by] the same author are stacked side by side”²⁵ (P8) and “books on relevant topics are available around the stack”²⁶ (P5) suggest that participants found call-number based shelving helpful for those expecting serendipities discovery of relevant items.

The following response by P6 clearly summarized the two patterns:

“If I’m going to find Japanese-language sources, I will go to Asian Library. And, I, I’ll search for like one, a book in the general topic area that I’m looking for. So I know where like the Japanese author’s section is, right? So if I’m looking for a specific author and read all the Kaisetsubon [commentaries] or something, and I can go to that author’s section and just look at the shelves and to see if it seems it might be relevant or it doesn’t seem to be relevant. And I’ll stand in and flip through the books. And if it’s more topically-related, yeah, use the library database to first find a book that seems like it might fit into the general section or general topic that I’m interested in, and then I’ll go and find that book and I will look around the area and see if there are any other books that match what I’m looking for.”

These responses indicated that visiting and browsing library collections were used both for active information seeking and serendipitous discovery. Because these two strategies were often mentioned together, browsing library stacks is assumed to be a common behaviour of patrons when visiting physical branches.

²⁴ See Appendix A.4 for the original Japanese transcripts

²⁵ See Appendix A.4 for the original Japanese transcripts

²⁶ See Appendix A.3 for the original Japanese transcripts

4.3.2.2 Citation tracing

Citation tracing was another popular strategy mentioned and used by six participants, which is consistent with previous studies that identified the use of citation tracing by graduate students (Moore & Singley, 2019; George et al., 2006). Interview responses implied that participants perceived the cited material to be of quality and reliable. For example, when an important quotation came up in a book or an article, P8 would check the author of the quote's name in the reference section to read other works of that author. P6 mentioned that citation tracing complemented their Japanese-language skills and effectively identified the literature to read next:

“I’m really bad at skimming Japanese. [...] Because I don’t have the same kinds of, um, I don’t know, I don’t have the same kind of textual signals developed as I do when reading in English or on the UBC databases or something like that. [...] But I feel like everything feels important, and I just have to take time to look through things. So while I do use those[databases] a lot and I often use those to find English language sources as well as Japanese-language sources, I feel much more assured of the validity and the quality of Japanese-language sources, if they are referenced in a book already.”

In addition to academic sources, reference lists of former students’ dissertations for master’s and doctoral degrees were consulted as well. P3, who used government statistics, referred to previous dissertations that cited statistics of the Japanese government. It helped them identify the names of statistics that they could use for their thesis.

4.3.2.3 Consult known web sites

Four participants indicated that they consulted known websites. Known websites included Japanese national and local government websites where they could access statistics and reports (P1, P7), websites run by the organizations which participants were studying (P1, P7), and video streaming sites where they could watch and analyze animations (P5, P6). These websites either

popped up when searching on Google or were visited directly if they knew the website's URL to be accessed.

4.3.2.4 Visit and or browse libraries and archives in Japan

Four participants considered visiting libraries and archives in Japan to be a feasible strategy for obtaining Japanese materials. Family visits were an excellent opportunity for most of the participants who mentioned this strategy (P2, P5, and P8) to stop by a library to obtain materials because their family members were in Japan. For example, P2 reflected on their visit to Japan during their summer vacation: "I went to the library every day. I didn't know what I needed, but I copied everything anyways. It was a lot of work. It cost me about 100,000 yen [approximately 1,200 Canadian dollars] to make the copies."²⁷ P5 also mentioned that "In Japan, you can find everything in libraries, so I try to look through as many different materials as possible."²⁸ Having to go through the cumbersome steps of accessing Japanese materials in Canada, and sometimes giving them up, led them to browse as many items in Japan as they could before returning to Canada.

Another option mentioned by participants was to make a visit to a research institution in Japan, with two participants (P4 and P5) having plans to visit Japan. P4 had received research funding to travel to Japan, but it was deferred until the end of COVID-19. P5 also stated that they

²⁷ See Appendix A.1 for the original Japanese transcripts

²⁸ See Appendix A.3 for the original Japanese transcripts

planned to visit a Japanese university that had primary sources related to their research topic, although no funding sources were available at the moment.

Although P8 showed a positive attitude towards going to libraries in Japan during a family visit, they expressed their struggles as follows:

“Well, in my case, I have a chance to go back to Japan as a visit to my hometown, and I would go [to libraries] during my stay. But I can’t make the visit right away, which makes me difficult to get literature in my hands when I want it, or like, I want to go and check it right now but I can’t.”²⁹

As P8 pointed out, it is expensive and time-consuming to make frequent trips to Japan. For this reason, P1 and P3 gave up materials that were only available in Japan. Therefore, even if the materials needed for their research were only available in Japan, visiting a Japanese library became an option only if budget and time allowed.

4.3.2.5 Consult personal collections

One participant said that referring to their personal collections had helped them in their information-seeking journey. P1 mentioned Japanese journal articles that they had downloaded while studying as an undergraduate at a Japanese university. However, they said that consulting the articles would not necessarily help them in their current research projects at UBC, as they were not “the latest version of resources” (P1). They also said:

“Research I have done in undergrad is two or three years old and the situation around children’s cafeteria is changing rapidly, so not being able to get the latest research is kinda hard, and that limits my research range as well.”

²⁹ See Appendix A.4 for the original Japanese transcripts

For papers in the social sciences, this interview response suggested that personal collections were not necessarily useful, as the value of articles may decline over the years.

4.3.2.6 Purchase a copy at a bookstore in Japan

P5 mentioned purchasing a book at a bookstore when visiting Japan. They would “visit libraries to do extensive research and decide on a book that I would definitely use, and then would buy it.” Similar to the visits to Japanese libraries discussed in section 4.3.2.4, students who have family visits to Japan took an advantage of that opportunity to obtain books.

4.3.2.7 Read newspapers (on-line or in print)

While Sabbar’s (2016) study included reading newspapers as primary and secondary sources as an informal resource strategy, this study ignored those applicable persons (P4, P5, P6, P7). One reason for this is that reading newspapers as primary and secondary sources could be considered as one of the goals that the information seekers want to achieve in the information-seeking process. In this study, the inclusion criterion for this strategy is to consult newspapers in order to obtain information on a research topic to help in finding primary and secondary sources.

P1 was the only participant who incorporated strategies that met the above criterion. They used online newspaper articles as an important source of up-to-date information about their research topic – children’s cafeterias in Japan. However, the credibility of these articles was considered low. They reported that:

“[A lot of newspapers] don’t include all those references they used to create a newspaper. So I try to read as many newspapers and many as possible. Yeah, I don’t use them as like the evidence to back up my research.”

This response indicated that interaction with newspaper articles was shown to help form search queries to find academic sources that can be properly cited in research writing.

4.3.3 Interactive human strategies

Interactive human strategies involve interaction with people to obtain an information source. In this study, all participants mentioned at least one subcategory of interactive human strategies. As shown in Table 4.5, people within the university community, such as librarians, peers in graduate schools, and professors, were frequently mentioned by the participants. The following sections disclose the detailed responses from the participants.

Table 4.5 Interactive human strategies mentioned by participants

Name	Number of participants using
Ask a librarian	6
Consult a master's or PhD peer	6
Consult faculty members	4
Learn from blogs and social media timelines	4
Attend a conference, guest lecture	3
Contact an author or family member	1
Interview human subjects	1
Use social media to contact other people	1

4.3.3.1 Ask a librarian

Participants stated that they relied on librarians' support both when searching for known materials and when starting a topic search. All participants in this study who mentioned this strategy named the Japanese Studies librarian at UBC. P2 considered consulting the librarian as a final strategy after exploring a discovery tool or browsing the library's stacks. When searching

for known items, P2, P4, P5, and P8 received suggestions from the librarian as to whether they should refine the query, request an ILL/DD, or whether the library could purchase it as a new collection. For topic searches, P4 and P7 learned how to formulate a search query in OPAC. P6 and P7 participated in an instructional workshop hosted by a Japanese Studies librarian and were taught about the Japanese-language databases subscribed to by the UBC Library and advanced search techniques for finding Japanese-language materials, which they found “helpful.” Given the richness of information provided by the librarian, P8 believed that consulting with a librarian was the quickest option for obtaining materials. Thus, for those who had experienced face-to-face consultations with the librarian, asking a librarian was perceived to be a reliable strategy that ensured access to the resources they were looking for.

Some had never consulted a librarian directly about Japanese-language materials. The responses of P1 indicated their confidence in finding Japanese items on their own saying, “I thought that the resources I can get online can cover that specific research as well.” Also, while P6 attended the workshop, they had never had a one-on-one consultation with the librarian and felt that “[Librarians] seem so busy.” Therefore, some students didn’t find the need to rely on librarians and had the impression that librarians were unapproachable.

4.3.3.2 Consult a master’s or PhD peer

Consulting a master’s or PhD peer is a unique strategy that was not mentioned in Sabbar (2016). Some participants had obtained specific sources of information, such as books or journal articles, from fellow students. For example, P1 asked a friend studying in Japan if the Japanese items that P1 was looking for were included in their university subscriptions. Also, when working on a

research project for his coursework, P2 asked fellow students who had previously taken the class if they had any helpful information sources on the topic they were working on. Most of the peers sent P2 the titles of articles related to the topic or sent them permanent links to the bibliographic records at the UBC Library. In addition, P6 asked their peers for recommendations of Japanese novels and comics about food and animals that might be their primary sources, describing how they trusted their peers:

“I’m really bad at organizing information and reading through information on my own a lot of time. Like um, I can google things but everything still seems important to me. So well, in some ways, people who have already done that organizational work [...] or they might know something, and the fact that someone I trust knows this story or someone I trust knows this writer, right? I’ll be able to trust that relatively important, or at least has strong ties to the thing that I’m looking for.”

Other participants did not consult with their peers about specific sources, but occasionally got ideas for their information seeking from discussions with their peers. For example, P5 sometimes asked their friends who the well-known scholars in the field were. They used the scholar names to start a topic search when finding Japanese sources.

4.3.3.3 Consult faculty members

Consultation with professors was employed by participants in Asian Studies (P2, P4, P5, and P7). They usually consulted their advisor or a professor in a related field about the research topic, well-known authors in the field, and specific sources of information for reference. Professors sometimes loaned them the actual publications from their personal collections. If they received a list of titles from their professors, participants searched for titles using the formal system strategies described in section 4.3.1. For example, P2 said:

“I rely on my supervisor a lot. When deciding my paper topic, I consult them and say I will write this topic, right? If they say okay, I will then ask them to give me books for reference, and then they picked some books up from his office, or send me an email with a list of books to read.”³⁰

However, for the other participants, their supervisors did not always help them in finding literature written in Japanese. While asking for directions on English language literature about theories, they believed that their professors did not have knowledge of the students’ research area – Japan. For example, P1 said, “What I try to remind me is that I’m the only one Japanese in my current person among my supervisor and colleague, and I’m the only one who knows the situation in Japan.” P6 also mentioned that “What I’m asking professors for ideas and advice, I’m asking more broad critical theory, so those tend to be English language sources.” Also, P8 believed that he would know more about Japanese sources than his advisor, which results in him seeking information without the help of his advisor. Similarly, P3 discussed that:

“My supervisor, for example, they don’t know much about the context of the Japanese learner’s context [and] Japanese language itself. So like other theoretical framework or study abroad in general, like if it’s in English, I think she would give me some advice, and I will ask for advice. But then when it comes to the Japanese sources, I’m not sure even like if I’m, you know, encouraged to use the Japanese sources for the actual paper or the dissertation itself.”

These responses indicate that consulting their advisor or faculty member was perceived to be an effective strategy if their advisor was well versed in Japanese. However, in departments outside of Japanese Studies, supervisors were not always proficient in Japanese. In such instances, students searched for Japanese-language materials under their own responsibility without professors’ assistance.

³⁰ See Appendix A.1 for the original Japanese transcripts

4.3.3.4 Attend a conference or guest lecture

Three people considered attending conferences and lectures as a strategy for obtaining Japanese-language sources. P2 viewed conferences as a good opportunity to discover new titles and overviews of modern publications about which they had not previously known. Other participants gained information about Japanese-language materials through direct interaction with people. For example, when P7 had lunch with a guest lecture speaker, the speaker shared their knowledge of P7's research topic and was kind enough to tell P7, "I can actually mail you or send you every new magazine and related sources, like physical copies to you from Japan." Also, P5 stated that the conference was a place to discuss with other researchers whether they had read a certain book or not. Despite their experience of attending the conference, however, P6 and P8 did not see it as an opportunity to exchange information about Japanese-language sources.

4.3.3.5 Learn from blogs and social media timelines

Learning from blogs and social media timelines includes reading blog posts and browsing social media timelines. This strategy is categorized as interactive because participants received the others' perspectives and ideas from the textual information. The platforms mentioned by participants included Twitter (P1, P5), Facebook (P1, P5), blogs (P2, P3), and book review websites (P5). The strategy was perceived as useful, especially when they had no solid idea on how to start research and information seeking. P1, for example, followed the Twitter accounts of Japanese politicians and Facebook accounts of friends who worked in a relevant sector to P1's research topic to find out "certain ideas that might be a hot topic in Japan right now, [...] voice of popular people, [...] [politicians'] opinions [...] and [...] comments below that to see people

supporting those ideas or not, and how people are conceptualizing all those programs.” P5 followed the official Facebook accounts of Japanese publishers, where they posted information about their latest publications. P6 followed Twitter accounts of prominent scholars in the field and took note of recommended books tweeted by the scholars, yet did not manage to find the books. The participants all agreed that these posts were not authoritative and should not be cited in research papers. Instead, reading these posts was considered a starting point that would give participants an idea of how to formulate a search query and how their topics were being discussed by the public.

4.3.3.6 Contact an author or family member

P5 was the only participant who described their experience in contacting the author of a publication. They said, “If it’s an article I really want, I would desperately email the authors directly to ask if they could send a copy. Often times they have ignored me, but I’ve actually received a copy several times.”³¹

4.3.3.7 Interview human subjects

P3 was the only participant who mentioned interviewing human subjects, because their research topic, Japanese students who experienced in studying abroad in the Philippines, was highly related to their job. Because of the nature of their work, they had the opportunity to interact with Japanese students in Canada who had studied in the Philippines in the past. The interaction with

³¹ See Appendix A.3 for the original Japanese transcripts

those students helped them to understand the current situation around the research topic and plan their research.

4.3.3.8 Use social media to contact other people

Unlike learning from blogs and social media (see section 4.3.3.5), this strategy involves active engagement with others on social media platforms, such as direct messages and replies. P5 was the only participant who interacted with their Twitter followers, mostly Japanese graduate students, and shared information about Japanese sources with each other. They said, “Japanese students scan a lot, because many Japanese books haven’t been digitized yet. So they have sent me the scanned materials.”

4.3.4 Hybrid strategies

Table 4.6 summarized the participants mentioning four subcategories of hybrid strategies. Sabbar (2016) defined a hybrid strategy as one that can be classified into multiple strategies due to its ambiguity and unpredictability in methods and entities. She categorized two strategies as hybrid: using ILL and purchasing a copy online. For example, when using ILL, patrons must fill out a printed or electronic form and contact a librarian. When purchasing copies online, users can use search engines to find items, but “the transaction is not really search based, nor does it utilize browsing or human contact to any great extent” (Sabbar, 2016, p. 183). The participants in this study mentioned and discussed both strategies during the interviews.

In addition to Sabbar’s (2016) strategies, two other strategies were discussed and categorized as hybrid: requesting acquisitions at a library and asking acquaintances living in Japan. As with the

use of ILL/DD, item requests may require patrons to consult with a librarian, search the bibliographic information for a desired item wanted, fill out a request form, and check out the newly added material. For acquaintances in Japan, one could ask family or friends living in Japan to visit a library or bookstore in Japan to obtain materials and have them sent physically or electronically. Because these strategies potentially include features of all the strategies – formal, informal and interactive – they were added as hybrids.

Table 4.6 Hybrid strategies mentioned by participants

Name	Number of participants using
Use interlibrary loan (ILL) or Document Delivery (DD)	5
Purchase a copy online	3
Request acquisitions at libraries	3
Ask acquaintances living in Japan	2

4.3.4.1 Use interlibrary loan (ILL) or Document Delivery (DD)

Five participants identified ILL and DD as useful methods. They incorporated this strategy after confirming that the materials needed could not be accessed from the UBC Library’s collections or open sources. For example, P2 requested magazines published in the early 1900s, obtained pdf files from DD and borrowed a few copies from ILL. P8 borrowed books that were housed in the UBC storage facility and could not be borrowed, as well as Japanese-language journal articles that were not purchasable at the UBC library. Most of the participants who used ILL/DD also referred to librarians as an interactive human strategy (see section 4.3.3.1). In contrast, P3, who had never interacted with the Japanese Studies librarian, had used ILL for English language materials, but not for Japanese-language materials. These responses suggest that ILL/DD emerged as an option for accessing Japanese-language materials in conversations with librarians.

The institutions from which participants borrowed and received materials were located in North America and Japan. P6 responded that all of the materials they requested were from North America. P4 listed a few institutions where they had borrowed materials in the past, including the University of California Los Angeles, Columbia University, the University of Hawaii, and Waseda University. In P4's experience, it took a week to receive materials from North American institutions and over a month from Japanese institutions. In addition to the shipping time, previous ILLs from Japanese libraries imposed additional barriers to P4 due to library conditions and miscommunication:

“I have no problem ordering within Canada or from the US, but every single time I try to get a book from Japan, um, for example, I think I already tried to borrow books from the Waseda library, and they would have a book. But when I request it to be interlibrary loaned, they usually decline saying, ‘Oh, we don’t have a book,’ or, ‘For some reason, we can’t give you the book.’ So I have a very difficult time ordering books from Japan.”

Some participants who used the ILL/DD service found the processing time to be too long. For example, due to tight project timelines, some participants could not wait to receive materials and gave up using them. P6 mentioned that:

“There are definitely been times where I’ll find a table of contents, or something where I’m like, I want this, and then I’ll be like, I don’t have time to wait [for] interlibrary loan or not been able to interlibrary loan things like right now.”

Another issue related to time was that the length of the loan period was considered too short, as P5 described:

“Even if I borrow a book [from NDL] using ILL, ILL has a very short loan period. [...] So of course, I cannot read the whole book [within a loan period] and

have to scan a copy by myself, because I have to return it immediately, like in a week or two weeks, which I found inconvenient.”³²

Language can also pose a problem when submitting a request form. P4 stated that they were always careful to spell out the title and author’s name in the correct romanization to request the right one. P2 shared the following experience of receiving a wrong item due to language-related issues:

“They asked me over and over which one [the ordered item] was. Because it’s Japanese, we had a lot of misunderstandings. [...] There might be some [of the ILL staff] who are fluent in Japanese, but some probably may not. And, the items I received were sometimes incorrect Maybe the way I filled out and submitted requests wasn’t correct either.”³³

ILL and DD provided participants with access to Japanese-language materials that were not physically or electronically available at UBC, hence they were preferred by the participants. These materials came from institutions in North America with large Japanese-language collections and from Japanese institutions that accepted requests from abroad. However, the length of processing time and loan periods could be barriers for them when their deadlines were approaching. Interview responses also revealed that using non-English languages to fill out a form could lead to miscommunication and false delivery.

4.3.4.2 Purchase a copy online

Three participants mentioned using e-commerce to purchase physical books. The books purchased were either used as primary sources or as secondary sources that they would

³² See Appendix A.3 for the original Japanese transcripts

³³ See Appendix A.1 for the original Japanese transcripts

continuously refer to in their future careers in academia. Three other participants also mentioned purchasing copies as an option but had not taken that strategy due to limited availability. For example, P7 looked for a DVD of 1970s musical theatre recording on Amazon but could not find one. P6 stated that they used ILL rather than buying, and then commented on the unavailability of academic e-books, saying:

“Even if they are just available for kindle or something, I would feel like I could just buy it on kindle and it’s fine on eating the cost, right? But because so many academic books are not available through kindle, and that is true for English language ones as well, right?”

P3 further guessed that if Japanese books could be more easily purchased online, online purchasing would become an alternative to visiting Japan. To address the problem of Japanese books being difficult to buy online from within Canada, P8 used a Japanese online bookstore to send items to his parents’ home in Japan so that he could pick them up when he visited his family. For P8, purchasing an e-book is an alternative used only if they could not wait for the delivery of the purchased printed book.

4.3.4.3 Request acquisition at libraries

Of the eight participants, all three doctoral students mentioned item requests to the UBC Library as a way to obtain materials. In P5’s experience, it usually took a couple of months to borrow newly purchased materials. P8 used item requests more frequently than ILL. They used ILLs only when items were held at the UBC Library but were not immediately available due to library renovations. P2 said that “I had a feeling that they would buy a book for us if I ordered it. If I

insisted that I would do this topic for my PhD dissertation, they would possibly collect what I wanted to use.”³⁴

4.3.4.4 Ask acquaintances living in Japan

Two participants experienced asking individuals they knew living in Japan to obtain and send copies to them. This strategy was selected when participants confirmed that a copy was available in Japan whereas all of the strategies described in the previous section, such as using the services of the UBC Library or purchasing a copy, did not yield what they wanted to use. This strategy required the participants to first check if the item was available in Japan and then contact family and friends to see if they could obtain it, either physically or electronically. For example, P2 asked their sibling to visit a library that did not accept ILL/DD and ask them to scan and send them magazines to be used as primary sources. P7 asked a friend in Japan to buy a magazine from a bookstore and ship it to Canada. Thus, even if their acquaintances were not academics, participants relied on acquaintances to access the Japanese-language sources available in Japan.

4.4 Shifts in information-seeking strategies (ISSs)

4.4.1 Planned shifts in routine situations

Planned shifts in routine situations demonstrate participants’ research habits. Figure 4.1 summarizes all planned shifts from the interview responses by depicting arrows in the information triangle framework (Sabbar, 2016; Sabbar & Xie, 2016). As shown in the visual, all arrows from interactive human strategies led to undertaking formal system strategies. This

³⁴ See Appendix A.1 for the original Japanese transcripts

indicates that participants used formal information systems after receiving information from other people. The arrows from citation tracing also pointed to formal system strategies, which implies that participants tried to locate and access cited materials using information systems. In the interviews, all participants indicated their planned shifts between strategies, suggesting that their habitual ISSs were established during their postgraduate studies.

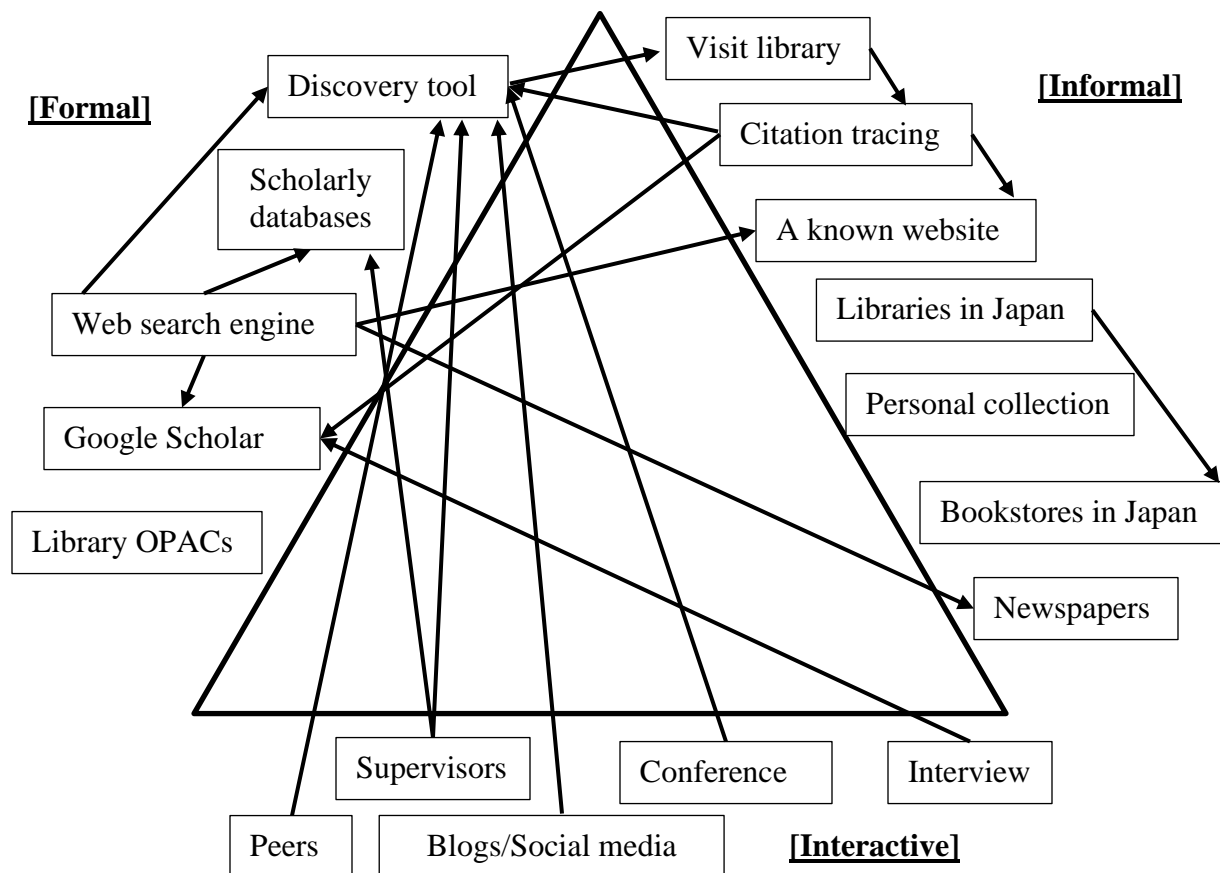


Figure 4.1 Planned shifts in routine situation found in interview responses

The interview responses suggested that the pattern of transition from the first strategy attempted by a participant to the next was differentiated by two different goals – performing topic searches and searching for known items. Topic searching occurred when participants had a vague idea of

their research and were looking for a specific keyword or item. In this situation, participants' initial shifts were either (1) from formal to informal or (2) from interactive to formal. For example, P2 began by searching the web using a search engine (formal) to identify keywords related to their research topic. Then they moved to either searching Google Scholar (formal), searching a scholarly database (i.e., CiNii; formal), or searching a library discovery tool (i.e., UBC Summon; formal) to identify and locate an item. Another example of P4 started by consulting professors (interactive) to ask for recommendations for items. Then they moved to searching a library discovery tool (formal) to see if they were available at UBC.

When searching for known items, participants started with formal system strategies to see if they were available online or at library branches. For example, participants using government statistics and reports (P1, P3, P7) started by searching the web using a search engine (formal) and then moved on to consulting a known website (informal) – ministries' and government organizations' websites in this case – to search for data or pdfs. If UBC had the sources they needed, participants visited or browsed library stacks (informal) based on the bibliographic information found in UBC Library Summon. P4 also said that they habitually looked at the bibliography of the items they browsed, to determine which materials to refer to next. This indicates a shift from searching library discovery tools (formal), to visiting and/or browsing library stacks (informal), and from there to citation tracing (informal), and back to searching library discovery tools (formal).

4.4.2 Opportunistic shifts in disruptive situations

As discussed in Chapter 2, an opportunistic shift involves serendipitous discoveries of new intentions during the initial intention. Figure 4.2 summarizes the opportunistic shifts mentioned by participants and applies them to the information triangle (Sabbar, 2016; Sabbar & Xie, 2016). As shown in the figure, this type of shift was demonstrated by participants who learned from blogs and social media timelines (interactive). For example, both P1 and P5 used social media to learn about updates to their research topics and related publications. Once they found information of interest, they moved on to one of the formal strategies - searching library discovery tools, searching scholarly databases, searching the web using a search engine, or searching Google Scholar. This allowed them to identify items to be cited and check their availability through the UBC Library. In this scenario, as defined by I. Xie (2008), participants are considered to be switching their interactive intentions from learning to exploring and/or accessing. This scenario can be considered opportunistic, as the discovery of relevant information occasionally occurs.

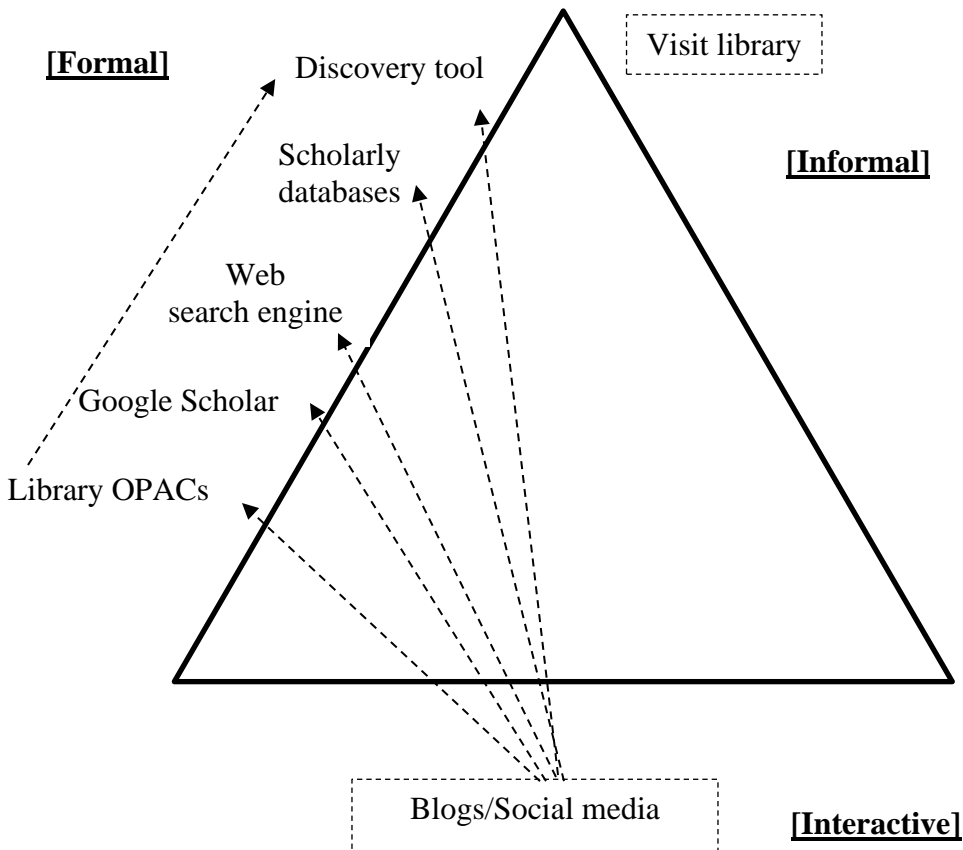


Figure 4.2 Opportunistic shifts in disruptive situation found in interview responses

In this research, all participants who mentioned visiting and/or browsing the UBC Library (informal) experienced the discovery of new items as they browsed the shelves for known items. This could be considered a shift in entities of intention (i.e., from a known item to another book stacked on the same shelf) rather than ISSs. However, since all visitors to the library's stacks may experience this type of serendipitous discovery, this opportunistic shift in entities is likely to be essential to graduate students' information seeking.

4.4.3 Assisted shifts in problematic situations

As discussed in Chapter 2, assisted shifts were defined as assisting the original intention to complete a new intention. Figure 4.3 summarizes all assisted shifts mentioned during the interviews and applies them to the information triangle (Sabbar, 2016; Sabbar & Xie, 2016). All participants mentioned shifts in problematic situations at least once, suggesting that graduate students had to overcome barriers when searching for and finding Japanese-language materials.

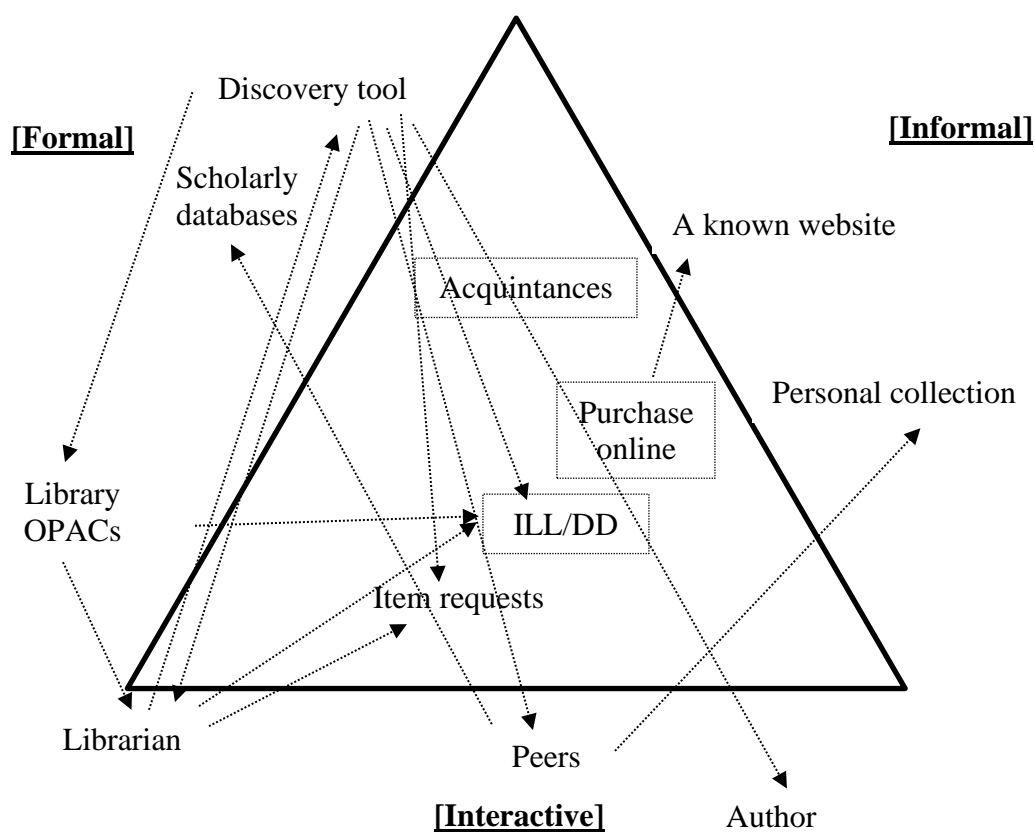


Figure 4.3 Assisted shifts in problematic situations found in interview responses

An example of an assisted shift mentioned by several participants is the transition from formal to hybrid strategies. When they confirmed that the intended items were not available at UBC

through formal system strategies, P2, P4, P5, and P6 used ILL and DD (hybrid) to fulfill the original intent to access certain items. As discussed in section 4.3.4.3, doctoral students also shifted from formal system strategies to requesting acquisition at libraries (hybrid) to ensure accessibility. When the formal system listed institutions in Japan that did not accept ILL/DD, P2 and P7 switched their strategies to asking acquaintances living in Japan (hybrid) to receive the items as intended.

Another assisted shift occurred within formal system strategies. When the intended item did not appear in the results list after searching a discovery tool (formal), P2, P4, and P8 noted that they shifted to *searching library OPACs* (formal), including Waseda University and WorldCat, to ensure availability at other institutions. Switching to a different system allowed them to check availability at UBC and other institutions to meet their original intent to access a specific item.

Some participants discussed their assisted shifts from formal to interactive strategies. P1, for example, consulted master's or PhD peers (interactive) in Japan when she confirmed that no items were available when searching a discovery tool (formal). Another example by P5 is to ask a librarian (interactive) for help to perform a search with the correct spelling when the intended item was not found in the search results in a discovery tool (formal). P4 also asked a librarian (interactive) for help when the desired item was not found using all formal strategies. In these examples, interactions with peers and librarians assisted participants in finding the materials they wanted, which they were unable to achieve when using the formal system.

4.4.4 Alternative shifts in problematic situations

I. Xie (2008) defined an alternative shift as switching to a new intention to fully achieve a goal/task. In this study, several participants stated that some barriers would cause them to give up access to the items they wanted. For example, P6 stated that they gave up on getting the item because of the time it took to read Japanese and the looming deadline for the project:

“If I have to put in a bunch of extra steps to get access to the information, I’m more likely to give up. Even if I feel like this article or this content could be really really relevant to what I’m working on, [...], if I can’t get access to it in a relatively simple and straightforward way, I’m less likely to try to hunt it down. [...] I definitely [try to get through the paywall] for English language resources. But for the Japanese-language resources, because there is that additional language barrier, [...] I’m definitely less likely to try to put an effort to find Japanese-language resources [...] than I am in English language resources.”

P3 and P5 stated that they would give up if they could not access information sources with the available strategies due to lack of time. After completing a strategy without the intended item, participants either resumed a new strategy to find alternatives or completed their information-seeking journey without searching for additional sources. In the latter scenario, however, P3 was concerned that their writing would become a biased discussion due to the limited sources referenced.

4.5 Factors influencing information-seeking strategies (ISSs) and shifts

The second research question was, “What shifts the ISSs of graduate students when they seek Japanese sources?” In addition to the three barriers discussed in Sabbar (2016) – geography, language, and culture – this study identified two factors that influenced assisted/alternative: time and budgetary constraints. The following sections delve deeper into each of these barriers and highlight some of the problematic situations.

4.5.1 Factors related to non-English sources

4.5.1.1 Geography

Geographical barriers affected participants' ISSs when materials were not available at UBC libraries but were available at other institutions in North America and Japan. If holding institutions accepted ILL/DD requests from UBC, participants would shift to *using ILL/DD* (hybrid) to obtain them. However, P4 talked about their experience of having their ILL request denied, despite WorldCat confirming that the Japanese institution owned the item. In this case, the alternative strategy would be to travel to Japan to visit library branches. As discussed in sections 4.5.2.1 and 4.5.2.2 below, time and budget constraints impeded their visits, because traveling to Japan is time-consuming and expensive. Even those with family in Japan (P2, P5, P8) had to wait until the next family visit because they "can't always go home when [they] want to,"³⁵ as P8 commented. Therefore, participants had to either give up the source or find an alternative in Canada to complete their projects.

Another geographic barrier mentioned by P2 and P8 was location and distribution of libraries holding an intended item. When searching WorldCat, P8 noticed that the volumes of the journal they wanted were scattered across different libraries. This distribution made them emotionally resistant to sending their requests to all institutions, which hold different volumes, using ILL/DD.

³⁵ See Appendix A.4 for the original Japanese transcripts

4.5.1.2 Language

The interview responses revealed that language was causing assisted/alternative shifts in problematic situations described in sections 4.4.3 and 4.4.4. A major barrier to the use of formal system strategies was a graphical representation of Japanese language. As reviewed in Chapter 2, Japanese writing uses five types of characters – hiragana, katakana, kanji, numeric, and rōmaji. Thus, the item and author names could be spelled either in Japanese characters (i.e., a combination of five different characters) or in Japanese romanization (i.e., all in alphabets). Also, standardized Japanese in library systems is different from the modern Japanese language, such as the use of Kyū kanji scripts in standardized vernacular scripts. During the interview, P4 found it difficult to find the correct bibliographic information because of the mixture of old and current scripts in some records. P2 and P8 search WorldCat (informal) to correct their spelling because the items wanted did not appear in UBC Library Summon (formal). To resolve the spelling issue, P5 asked a librarian (interactive) for help after using UBC Summon (formal). P3 stated that searching on Google (formal) was more likely to retrieve intended Japanese sources than UBC Summon (formal), even without correct spelling. Also, P3 thought that they should not use Japanese vernacular scripts in UBC Summon's search box and felt that spelling Japanese titles in roman scripts was cumbersome. These responses implied that participants were confused by differences between libraries' standardized Japanese and modern Japanese widely used today.

Another language-related issue was Japanese-language proficiency of the participants, supervisors, and library staff. As the quote of P6 in section 4.4.4 indicated, P6 mentioned their perceived poor language proficiency. As it took time to read Japanese-language sources, citation tracing was considered to be the most effective way to identify the next literature to read. On the

other hand, P2, a native Japanese speaker, preferred to read Japanese material over English because of their perceived lack of English proficiency. They also had the experience of reading books translated from English to Japanese in order to save time in understanding the content of the original English edition. These interview responses showed that participants' language skills influenced their choice of ISS and shift.

Participants also mentioned language proficiency of supervisors, which contributed to the selection of consulting with professors (interactive). For example, participants from the Faculty of Education (P1, P3, P8) did not consult with their supervisors about Japanese-language sources due to their supervisors' lack of reading ability in Japanese. P8 expressed their confidence in their knowledge of Japanese sources, as "I know more about Japanese publication [than my supervisor], so I don't ask [my supervisor] for advice when looking for Japanese sources."³⁶ Since Japanese is an unfamiliar language to their supervisor, participant P3 was concerned about being allowed to cite Japanese literature in their thesis. Meanwhile, many Asian studies participants mentioned consulting a supervisor (interactive) as a strategy for identifying items relevant to their research topic and getting copies of them. This indicates that faculty members supervising Asian studies students were familiar with the Japanese language and materials written in Japanese. Therefore, it is likely that students developed their own strategies for finding Japanese materials in accordance with their advisor's Japanese-language skills.

³⁶ See Appendix A.4 for the original Japanese transcripts

4.5.1.3 Culture

Of the three factors listed by Sabbar (2016), cultural factors were mentioned by all participants. In particular, all participants discussed conditions at libraries, such as their holdings and digitization practices. First, conditions at UBC Library was important to them. If UBC did not have items, participants shifted from searching UBC Library Summon (formal) to another strategy, such as searching WorldCat (formal), asking a librarian (interactive), and requesting ILL/DD (hybrid), as described in section 4.4.3. P4 and P8 also noted that the renovation of the UBC Asian Library from 2018 to 2019 had reduced accessibility to the library's collections, as the holdings have been temporarily moved to storage.

If the intended materials could not be borrowed at UBC or ordered from another institution, participants wished to have the materials digitized and available online. However, six participants experienced that the physical copies wanted were available at Japanese institutions but were not digitized. P7 used CiNii to search for Japanese journal articles, but few of the results listings had full texts. P3 said that "I initially thought I couldn't access an item just because I'm in Canada, but gradually realized that is not the reason, and instead, it seems to be because most Japanese publications were printed rather than digital."³⁷ In addition to digitization, P4 argued that some of the NDL's bibliographic records were poorly indexed, making it difficult to identify items to request ILL/DD. Access to materials, therefore, depended on how the library institutions provided the materials and how open they were to users of other institutions.

³⁷ See Appendix A.2 for the original Japanese transcripts

Another cultural issue mentioned was authorship and publishing culture in Japan. P3 referred to Kiyō, a research bulletin published by a Japanese academic institution. Kiyō usually includes lecture transcripts of conference presentations, institution meeting minutes, institutional newsletters, and compilations of reports and proceedings submitted to institutions or conferences (Nihon Toshokan Jōhōgakkai Yōgo Jiten Henshū Iinkai, 2013). Although many Kiyō articles were listed in search results in Google Scholar, P3 stated that they had heard that Kiyō was not academically credible and questioned whether it could be considered an authoritative source. The perceived doubt towards quality, therefore, hindered P3 from citing Kiyō articles retrieved from formal system strategies.

The availability of materials, especially primary sources, was also influenced by historical preservation practices, as described by P2:

“In Japan, shōjo[‘girls’ in Japanese] magazines hadn’t been considered to be important, so there was no movement to preserve them as documents. [...] Recently, the culture of boys and girls has become popular among researchers, and the number of people who are nostalgic for the culture is increasing, and libraries have started to collect [the magazines]. However, they don’t have all the volumes yet, or even if they have them, they don’t lend them out due to their fragility.”³⁸

P1 pointed out the problems with the Japanese Internet culture. They experienced confusion when searching for web pages they had visited in the past because of the lack of permanent links to newspaper articles and government statistics online.

³⁸ See Appendix A.1 for the original Japanese transcripts

4.5.2 Factors related to graduate students

4.5.2.1 Time

As discussed in Chapter 2, graduate students are under time pressure, which results in shifting their ISSs to complete the assignment on time. Participants in this study mentioned two types of timelines that influence their ISSs: program completion and project-based timelines. P6 stated that they determined the research topic for their master's thesis based on the availability of primary sources in order to complete the master's program in the recommended time frame:

“I was trying to decide what I’m gonna write for my theses, I was debating between some Taishō period [from 1912 to 1926] literature and really like Heisei literature [from 1989 to 2019]. So for Taishō stuff, I was looking for articles and books that were written about, and this text that I was interested in, and some of them are available online, some of them I could not find. [...] Based on the knowing availability of resources that I was made, I was like, contemporary stuff is probably easier to do, in a short period of time.”

Project-based timelines included course-based assignments, publication submission deadlines, and comprehensive exam dates. When one of their deadlines was approaching, P2 asked their sibling in Japan to visit a library to scan and send them a copy of a magazine that was only available in Japan. In this scenario, they believed that asking their sibling for help was the fastest option to use the items and complete the project on time. Some participants also gave up on ILL and item requests when they could not wait for the item to arrive. P8 had experience in deciding not to request an item due to its processing time, which resulted in their shift to purchasing its e-book edition.

4.5.2.2 Budget

Another factor that influenced participants' strategies was budgetary limitations. With regard to items only available through Japanese institutions, participants claimed that they could not afford to travel to Japan. P4 had planned to use awarded travel funds to travel to Japan but postponed it due to the COVID-19 pandemic. Due to a lack of financial support, P5 was forced to use their savings to do fieldwork at a Japanese university to acquire and analyze a dōjinshi collection. Even though the books were available in online bookstores, P3 had to give up access to books and magazines due to the high cost of shipping from Japan to Canada. Therefore, legally bypassing the paywall seems to be a key for graduate students to access items in Japan.

4.6 Chapter summary

This chapter summarized the ISSs, the shifts in ISSs, and the factors that triggered the shifts described by the interviewees. All ISSs, shifts, and triggers in the Sabbar's (2016) information triangle were mentioned by participants. In addition to the existing framework, factors unique to this study were also found, such as reliance on acquaintances in Japan and item requests by doctoral students. In particular, the use of services available within the university community (e.g., UBC Library, faculty, peers) was often heard as a strategy. Unavailability of information sources within the UBC community can cause giving up access to them due to time and budgetary constraints, especially if travelling to Japan was required to obtain them. The next chapter discusses the theoretical and practical implications based on the research findings.

Chapter 5: Discussion

This chapter summarizes the findings from the results shown in Chapter 4. It provides theoretical implications by comparing the results in Chapter 4 with existing theories and previous research discussed in Chapter 2. Practical implications of future services for information professionals and academic staff are also provided. Lastly, this chapter concludes with suggestions for future research.

5.1 Intersection of graduate students and non-English sources

5.1.1 Research question 1: Selection of ISSs

As the results in section 4.3 showed, participants in this study employed four types of ISSs – formal system, informal resource, interactive human, and hybrid strategies. This finding confirms that information seekers consciously strategize their ISSs (Belkin et al., 1993; Belkin et al., 1995; Marchionini, 1995; Xie, I., 2008). It also suggests that three dimensions of the information triangle, which Sabbar (2016) applied to humanists, were found to be applicable to the contexts of graduate students who use Japanese-language sources.

One of the main findings of this study was that many participants used strategies available on campus. As shown in Chapter 4 above, the strategies mentioned by more than five participants were those that were available either via the internet, library resources, or people at UBC. In contrast, strategies that required going outside of the UBC campus or community, such as networking with scholars outside of UBC and visiting holding institutions in Japan, were not commonly mentioned by the participants. One possible reason is that students do not need to take

a lot of time and money when using UBC's sources. UBC resources are freely accessible to UBC students, and students can access them quickly if they are housed in the library or provided by people working/studying on campus. As discussed in section 4.5.2, participants aimed to access resources as much as time and budget allowed, but often gave up. It indicates the influence of time and budget in graduate students' information seeking, not only on shifts but also in their selection of ISSs.

Participants' preference for UBC resources supports previous literature discussing the availability of resources within a specific timeframe as an important factor in graduate students' information seeking. Using the concept of *satisficing*, a decision making when individuals' considered their goals were fulfilled, Prabha et al. (2007) suggested that stopping information search is influenced by information seekers' goals and desires for obtaining information, types of information need, contextual and personal factors, and project timeline. Specifically, they found that undergraduate and graduate students stopped their information-seeking journey for their research projects when they met the project requirements, reached a deadline, were satisfied with the amount and accuracy of information, found information cited from multiple sources, and understood the concepts. Similar to Prabha et al. (2007), participants in this study showed their priority to complete their projects on time. They indicated that they put a lot of effort into obtaining reliable information to rationalize their arguments by deadlines. Given the importance of timelines, participants tended to rely on UBC where they could access academic information as quickly as possible. However, some participants suggested that giving up materials held at institutions other than UBC and relying solely on on-campus resources could limit the scope of their research. As a convenient strategy for graduate students, this finding encourages librarians

to continue to advocate for collection development and accessibility of non-holdings through ILL/DD.

Disciplinary differences were also found among participants in this study, particularly with regard to consulting faculty members (interactive). Because the supervisors of Education students were not fluent in Japanese enough to give guidance on sources written in Japanese, they did not consider faculty members to be useful resources for obtaining Japanese-language sources. On the other hand, most of the Asian studies students stated that their supervisors guided them on Japanese sources, and sometimes gave them a list of useful items. Previous studies discussing students' reliance on professors were found to be partly supported, but only if the professors were fluent enough in the sources' languages to provide guidance in information seeking (Barrett, 2005; George et al., 2006; Thomas et al., 2017). This disciplinary difference in participants' consultation with professors can also be supported by two micro factors in Urquhart and Rowley's (2007) model of students' information behaviour – academic's role in information behaviour, and discipline and curriculum.

Furthermore, the Education students in this study, who had never consulted a librarian before, stated that they were so confident in finding the Japanese-language resources needed that they had never considered asking librarians for help. This finding is consistent with Catalano's (2010) discussion of graduate students' overconfidence in their information literacy skills. As discussed in the previous paragraph, the supervisors of these students were not fluent in the Japanese-language, which resulted in students' taking a solo journey of information seeking. In future, Japan Studies librarians could reach out to students in departments other than their liaison, which

would prevent students from being isolated and taking extra time and effort on their own when they faced difficulties in locating and accessing Japanese language sources.

Another finding in ISSs was participants' reliance on non-academic individuals, represented by two strategies: learning from blogs and social media timelines (interactive) and asking acquaintances living in Japan (hybrid). Blogs and social media were often used by the participants when they wanted to identify keywords or specific items. This finding supported previous research that discussed the use of blogs and microblogs by postgraduates (Kim et al., 2013). It was also consistent with previous research that serendipitous discovery of new information on microblogs helped physicians keep up-to-date on their research topics (Panahi et al., 2016).

Participants' reliance on acquaintances living in Japan was an unexpected finding in this study, as less has been studied on how information seekers seek help from those outside academia to access scholarly information. In this study, some participants reported their help-seeking from their family or friends in Japan after identifying and locating what they needed and confirming its availability at a Japanese institution/bookstore. Although little research has been done on support from non-academic acquaintances, this behavior could be derived from the participants' trust in their Japanese acquaintances and their confidence in sharing bibliographic information accurately. However, this strategy itself may create an information access gap between those who have acquaintances or family members in Japan and those who do not. The ideal solution reducing this gap is that North American libraries collect the Japanese-language materials requested by students and make international ILL/DD from Japanese institutions available, yet it

is difficult to achieve it due to political, cultural, and economic situations between Japan and North America, as discussed in section 2.1.1.

To summarize the responses to the first research question, graduate students seeking Japanese-language sources utilized formal systems, informal resources, and interacted with people to obtain research sources. In particular, they preferred the methods available to them as UBC students. This finding aligns with previous studies that found accessibility and ease of use as important factors for graduate students' information seeking. Using UBC resources was found to be one of the most accessible options for seeking Japanese-language sources, because Japanese sources are often published in Japan and housed in Japanese institutions. Also, Japanese-language fluency of their advisors differentiated participants' choice of interactive methods with people, which implied the influence of academic's roles on students' information behaviour. The uniqueness of the graduate students was also seen in the fact that they used non-UBC human resources to search for information efficiently. Therefore, graduate students were found to strategize their information seeking to overcome barriers unique to Japanese sources – geography, culture, and language – without spending time and money.

5.1.2 Research question 2: Shifts in ISSs

Participants changed their ISSs through four types of shifts – planned, opportunistic, assisted and alternative – in three situations – routine, disruptive, and problematic. This finding supports I. Xie's (2008) planned-situational IR model, which conceptualized that planned and situational aspects shift the information seekers' ISSs until their goals and tasks are achieved. As for problematic situations, participants discussed geographic, linguistic, and cultural barriers that

caused assisted and alternative shifts, which also suggested the applicability of Sabbar's (2016) information triangle to graduate students' context.

Participants were found to shift strategies differently by their goals and stages of information seeking. For example, planned shifts could be divided into two patterns: performing a topic search and searching for a known item, as discussed in section 4.4.1. This finding could be analyzed in two ways. First, it indicated that ISSs of graduate students were goal-oriented, as I. Xie (2008) discussed. All graduate students have a leading search goal to complete their research projects and current search goal to look for relevant information to their research topics.

However, interactive intentions – subtasks to achieve the current search goal – could be different depending on their research stages. Applying I. Xie's interactive intentions discussed in section 2.2.2, the goal of those who performed a topic search was to identify (intention) a collection (entity) by specifying (method) a narrow (attribute) term (entity) and scanning (method) meta-information (attribute). On the other hand, those who already had a known item aimed to obtain (intention) and access (intention) the whole (attribute) item (entity) by scanning (method) meta-information (attribute) of a collection and specifying (method) the whole (attribute) item (entity). This result implies that graduate students have different interactive intentions and retrieval tactics to achieve their leading goal – completing their research projects.

Participants' intentional shifts in strategies also support traditional models that relate information seeking as a series of steps to be taken. For example, Kuhlthau's (1991) ISP model considers that the first stage starts from having vague idea with uncertainty and requires the searcher to seek background information. As they select and explore the topic, information seekers gradually

have a clearer understanding of a topic and seek more focused information in the end. Although Kuhlthau's (1991) model was conceptualized from data of high school students and college graduates, this study showed the applicability of this model to the context of graduate students using Japanese-language sources. In other words, information seeking of graduate students is step-taking, regardless of the languages of the information sources.

When looking at influential factors, geographic, linguistic, and cultural barriers were frequently mentioned by participants, as shown in section 4.5.1. One of the important factors related to both geographic and cultural barriers was unavailability of materials at the UBC Library. The interview responses arguing lack of library holdings is in line with Ostos (2017), who indicated there were gaps in collection development between English and non-English sources at academic libraries. It was difficult to obtain items available only in Japanese institutions because participants did not have time and money for research trips to Japan. As discussed in section 5.1.1, accessibility was found to be a key for graduate students when seeking information for research projects, which potentially led participants' preference for UBC resources.

Unavailability of Japanese-language sources at UBC forced students either to request items from other institutions through ILL/DD or to give up access to them. Ideally, these barriers could be mitigated through institution and consortium level collection development, travel grants for students, and international ILL from Japanese institutions, yet the operations of these services are up to institutions' missions, visions, priorities, budget limits and capacity.

Another influential factor was language, especially romanization (*rōmaji*) of Japanese vernacular scripts. As reviewed in section 2.1.1, the standardized romanization in library system is different

from the way Japanese-language is typed into a computer, which presumably confused the participants. Japanese vernacular scripts are also complicated due to usage of old scripts (Kyū kanji) in library systems. Participants described their experience of not retrieving an item when typing the title with correct spelling, and some addressed this issue by visiting WorldCat and consulting a librarian. This finding can be explained by two micro factors in Urquhart and Rowley's (2007) model of students' information behaviour: (1) information literacy and (2) training and support (see section 2.3.3.1). The standardized Japanese scripts can be instructed by librarians as a part of advanced search skills. The facts that some participants consulted a librarian indicated that librarians' training and support assisted students' information behaviour. Therefore, it is recommended that librarians continue to hold instructions and provide tutorials – such as online research guides – on how to locate Japanese-language sources using Japanese rōmaji and vernacular scripts.

A unique shift found in this study was access denials due to the time and budgetary constraints, as discussed in sections 4.4.4, 4.5.2.1, and 4.5.2.2. In Meho and Tibbo's (2003) study that interviewed social scientists who studied stateless nations, access was an important step in information seeking. They suggested that information sources dealing with stateless nations were not always accessible, even if the items were identified and located. Like their study, the participants in this study expressed their distress at giving up access to the materials needed, due to not being able to afford travel expenses and waiting for ILL/DD to arrive. Thus, working to improve the accessibility of materials will be where librarians could continue to intervene. In particular, librarians are encouraged to continue to advocate for collection development at their own institutions and joint collection development among North American institutions. In

addition, the availability of international ILL/DD between Japan and North America would dramatically improve accessibility to the materials needed by graduate students.

5.1.3 Section summary

To sum up, graduate students using Japanese-language sources for their research projects supported previous literature discussing (1) academic information behaviours, (2) information behaviours when seeking non-English materials, and (3) information behaviours of graduate students. Figure 5.1 visualized the research findings by applying previous studies and models of ISSs. Interview responses indicated that planned and situational factors influenced their selection and shifts in ISSs, as shown in I. Xie's (2008) planned-situational IR model. Plans included students' personal factors, such as their search goals, disciplines, information literacy skills, and time and budget constraints. Students' research stage was also considered as a planned factor, which is in line with Ellis's (1989) and Kuhlthau's (1991) model. Situational factors included serendipitous discovery, which I. Xie (2008) defined as a disruptive situation. Geography, language, and culture – barriers defined by Sabbar (2016) and Sabbar and Xie (2016) – were also contextual factors influencing ISSs. Also, academics' roles in information behavior, discussed in Urquhart and Rowley's (2007) model, was found to be an important context. In addition, planned and situational factors intersected, such as time and budgetary constraints that were relevant to geographic and cultural barriers.

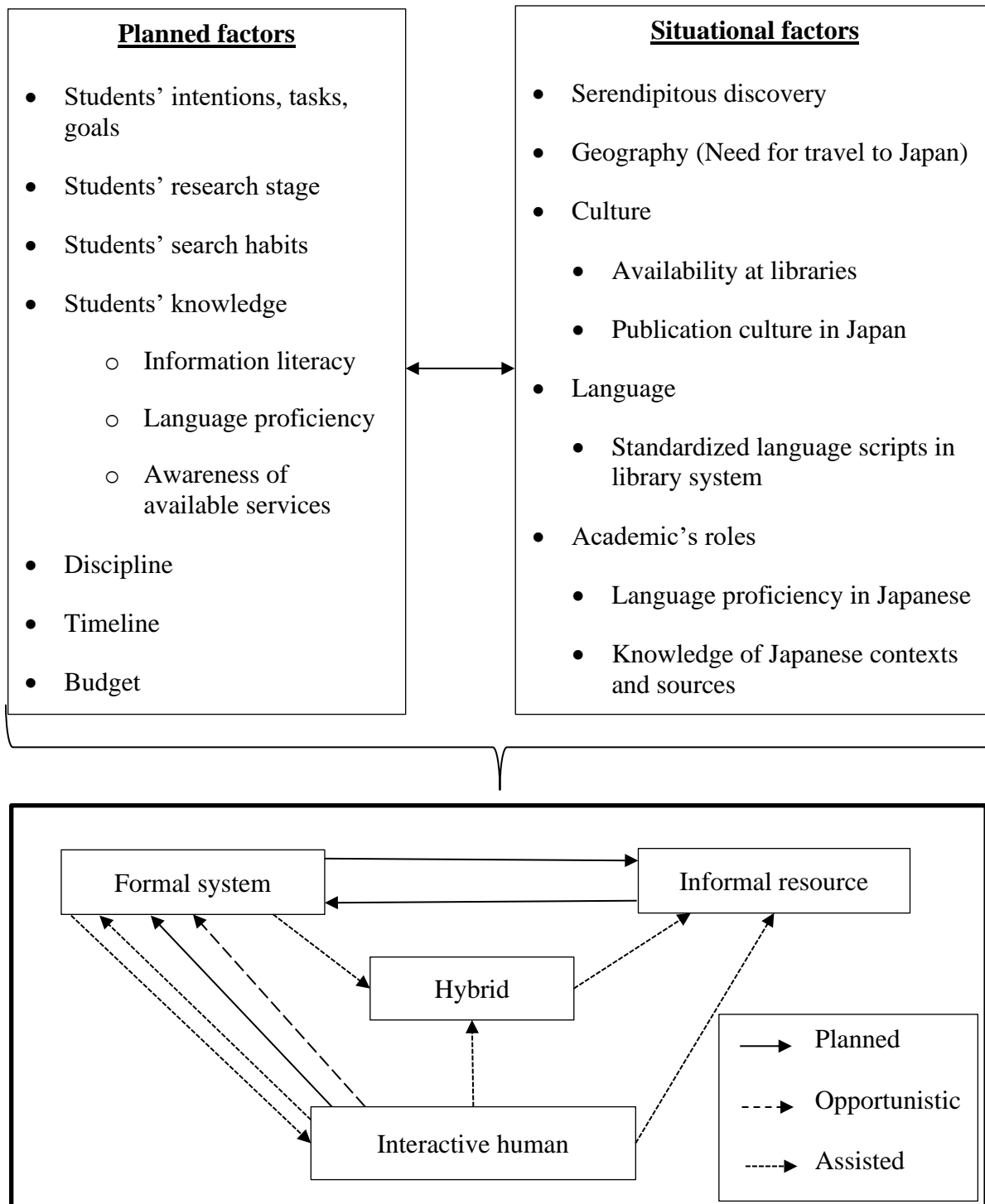


Figure 5.1 Summary of the research findings applying previous models of ISSs

5.2 Practical implications

5.2.1 Implications for librarians in North America

This study suggests that graduate students are dependent on resources available at their institutions. On the other hand, time and money constraints caused them to give up materials that were only not immediately available through their institutions – such as items only available in Japan and those that had not yet been digitized. These results suggest that librarians need to continue their efforts to promote access. Specifically, librarians are encouraged to continue to enrich the library's holdings, collaborate with other institutions (catalogue records, collection development, ILL/DD), and provide further reference support for their patrons. Since some participants in this study struggled with formulating search queries, facilitating guidance on how to do standardized spelling in library systems is also essential.

There is also a need to reach out to students who use multilingual materials in departments outside of Area Studies librarians' liaison. As this study reveals, students may explore information sources on their own, especially if their supervisors do not have language proficiencies in target languages. Caring for and approaching these students would prevent them from being isolated and overlooking useful resources. Communicating to professors in non-assigned departments that they could support students dealing with non-English sources would also raise awareness of library services specializing in non-English languages.

5.2.2 Implications for information providers in Japan

The intersection of geographic, cultural, and linguistic barriers and student time and budgetary constraints illustrate the difficulties of graduate students in accessing materials that are only

available in Japan. An ideal world for patrons would be to make international ILL/DD more accessible, to have more digitized items available, and to make Japanese materials more openly accessible. However, Munson and Thompson (2018) stated that solutions are not as straightforward. They acknowledged that while international ILL is the only option for patrons to borrow rare books and local publications, implementation is difficult due to cultural, social, economic and political issues between countries. In fact, in Japan, one of the international ILL services provided by the NII was terminated in 2018, as discussed in section 2.1.1.3 (Araki et al., 2019). One solution will be, like what the International Research Center for Japanese Studies did, that Japanese institutions become a member of OCLC (Araki et al., 2019). This will make it easier for both requesting and requested institutions to process international ILL/DD between Japan and North America. For the institutions already working on international ILL/DD, Munson and Thompson (2018) suggested that the lending institutions make sure that “their policies and licensing agreements for e-resources do not prohibit or hamper international ILL” (p. 29), collaborate with rare books and special collections units, and develop a system overseeing the international ILL status.

As with international ILL, digitization and open access should be advocated for, yet they also entail complex issues such as budgets, copyrights, and licensing agreements. Meanwhile, recent Japanese researchers have been active in setting up institutional repositories and nation-level portals of digital collections – such as Japan Search launched in 2019, and Cultural Japan launched in 2020. Also, the Japanese government has committed to open access since 2011 (Ojiro & Ichiko, 2018). Thanks to their work, 42.2% of publications were openly accessible as of 2018 (European Commission, n.d.). For e-books, Agata and Ueda (2019) found that about 90%

of pre-1970 books were digitally available on the NDL Online, yet only 5% of books published in 1970-2000 were. They also found that only 24.6% of academic books were available digitally, while about 83.2% of comics and 74.2% of novels published in 2017 were digitized. They argued that these were due to copyright protection and publishers' practices. Segawa (2020) reported from her fieldwork in Poland that low discoverability and difficulty in translating metadata from Japanese to English were two main problems for Polish researchers in accessing digitized materials from Japanese institutions. Therefore, it is hoped that Japan will continue to consolidate and promote the available digital resources while continuing its efforts to digitize and open access.

5.2.3 Implications for professors supervising graduate students

As mentioned in section 5.2.1, faculty members are encouraged to continue working with librarians to support graduate students in their research activities. In particular, in-class library instruction in information literacy, including search techniques and available materials, will help students learn how to identify and locate information in Japanese in the library catalogues and databases and what services and sources of information are available at their own university library. Non-Japan Studies faculty are also encouraged to ask librarians if their students can get assistance from librarians regarding the use of Japanese language materials. As this study shows, faculty outside of the Department of Area Studies tend not to be knowledgeable about their students' geographic areas of study. Therefore, consultation with a Japan Studies librarian, or broadly East Asian Studies librarian and Asian Studies librarian, would be one solution to support their supervisees in their information seeking of Japanese language sources.

Another factor in which faculty can intervene is to advocate for travel grants to support graduate students' research visits to Japan. Providing financial support could help alleviate students' budgetary constraints that have been found to be an important factor limiting access to the collections of Japanese institutions.

5.3 Limitations and future improvement

There is room for improvement in this study. First, the use of a supplementary methodology other than qualitative semi-structured interviews may reveal other aspects of ISSs that were not presented in this study. It should be recognized that self-reporting by participants may not always accurately cover participants' behaviours, as they may feel pressured and hesitant to disclose their lack of knowledge and exaggerate what they actually do (Barry, 1995). One method that may complement this study is the use of research diaries used by Sabbar (2016) for participants to write and record their daily activities. It could be effective in covering ISSs that had been left out of participants' memory during the interviews (Alaszewski, 2006).

Future research could also consider involving students with more diverse backgrounds and profiles. For example, the participants of this study were from two departments: Asian Studies and Education. If students from other fields had participated, this study would have obtained more generalizable results on the situation surrounding Japanese-language sources. Including students investigating ancient, classic, medieval, and pre-modern Japan may also show different results and implications, since they may use sources published in classic and medieval Japanese languages. Examining undergraduates and faculty members who use Japanese sources would also allow us to compare the selections and shifts of ISSs by academic status, and would

highlight ISSs specific to graduate students. As the CARL Committee on Research Dissemination (2014) indicated that small to medium-size universities need collaboration with large institutions to improve accessibilities to world language collections, students from other universities may strategize their information seeking differently. And lastly, including participants using different languages will enable the findings to be more generalizable to Area Studies librarians specializing in other world languages.

Last but not least, it is important to emphasize that this study was conducted during the 2020 COVID-19 outbreak, which altered the participants' study environments in many ways. This pandemic forced many academic libraries, including UBC Library, to temporarily close some library services, such as physical collections, face-to-face consultation with librarians, and ILL/DD. Participants also had limited in-person interactions with faculty members and peers, and rather relied on meetings, emails and chats online. At the same time, some publishers temporarily offered trials of online databases to support online teaching and learning. For example, UBC Library had access to 20-seiki Media Jōhō Dētabēsu and Web OYA-bunko for limited time³⁹. As such, because the pandemic both limited and expanded available services for students, it is hard to generalize the findings to the current and future situation surrounding academic libraries. It would also be worth investigating how COVID-19 impacted their ISSs, since this study identified their reliance on the services that had been closed during the pandemic, such as library stacks, ILLs and consultations with peers, supervisors and librarians.

³⁹ See more about temporary access on its libguide, *Asian Library Remote Resources and Services* (<https://guides.library.ubc.ca/remoteASIAN/japanese> accessed on July 26, 2020).

5.4 Conclusion

This study investigated how graduate students intentionally seek Japanese-language sources for research use, focusing on the selection and shifting of ISSs. The results revealed that graduate students strategically set up information-seeking patterns in order to efficiently find, locate, and access information sources in Japanese. However, the findings also suggested that graduate students struggle to access information sources within limited time and budgets. Japanese-language materials are often published outside of Canada and are not always available at the UBC Library, resulting in geographical barriers – the need to travel to Japan – cultural barriers - unavailability in the UBC Library collections – and linguistic barriers - correct spelling and language proficiency – that further make access to materials difficult. In some circumstances, they also had to give up access to the material. These findings have implications for future librarians, information providers, professors, and others who are expected to advocate for better access to materials for research use nationally and internationally.

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Appendices

Appendix A Japanese interview transcripts

A.1 Quotations from P2

¹⁰ Google Scholar でキーワードを入れて調べたりとかして

¹¹ 夏休みに日本帰るついでに毎日図書館に通って

¹³ 最終的にはもう UBC の日本語担当の librarian の人がいてくれるので彼女に聞いてます。

²³ 普通になんか自分がざっくりとこの方向性に調べたいな、ぐらいしかはわかってないときは google にキーワードを入れて、誰か何かそれについて本書いてないかなとか。

²⁷ 毎日図書館に通って、とりあえずこのコピーでも、自分は何が必要かわからんけどとりあえずコピーを全部して。すごい大変でしたよ、十万ぐらいかかりました、コピー代で。

³⁰ あの、Supervisor の先生にはめっちゃ頼ります。あのペーパーのテーマとか相談する時に、こういうテーマで書きますって相談するじゃないですか。それでいいよって言われたら、あの参考になる本くださいって言うと、すごいこう、いっぱい本、普通に物理

的にその辺で自分の研究室からパパって取って渡してくれたりとか、あとはまああの、結構リストにしてこれだけ、これ読みなさいみたいになってるのを、メールでくれたりとかするので、あります。

³³ 具体的にどれなのっていうのも何回も確認されて、日本語だから、いまいち結構こうすれ違いが多くて。[...] でもどうなんやろう、[ILLのスタッフで日本語を] 分かっている方もいらっしゃるかもしれないんですけど、分かってない人も多分いて。で、来たやつも、これじゃないのにな、っていうのとか。多分私のやり方書き方も悪かったのかもしれないんですけど。

³⁴ あの頼んだら買ってくれそうって感じが。自分が、例えば、今後あの PhD の dissertation やるって強くやったら揃えてくれる可能性があるかなと思う。

³⁸ 日本でもその少女雑誌って、あのあんまり大したものじゃないっていうか、大事なものとされてなかったから、その、資料として残そうっていう動きがなくて。[...] で、その最近になって、そのなんか少年少女文化みたいなのが注目されて研究、研究者に注目されてきたりだとか、懐かしがる人が増えて、図書館とかが集めてくれ始めてるんですけど、全然まだ、全巻揃ってないとか、あったとしてもボロボロで貸出してくれへんとか。

A.2 Quotations from P3

¹⁶ あと職場関係でそのフィリピン留学をした人にアクセスもあるんだよね。[...] そこからの話も結構大きい。

²¹ [本が買うのが大変な理由は] 時間が掛かるのとお金がかかるのと。

²² UBC で探すよりも Google の方が多いんじゃないかなって勝手に思ってる部分もある気がする。

³⁷ なんか最初はね、なんか自分がそのカナダに居るっていうので、アクセスができないだけのものがすごい多いのかなって思ってたんだけど、でもやっぱりよくよく見ても、その、そもそも紙しかないものも結構は多いなあ、っていうのはすごく感じたりする。

A.3 Quotations from P5

¹² あの私は普通に本を買って、あの普通に持って帰ってる。

¹⁴ カンファレンスに行くと、あの本読んだ？みたいな。

¹⁵ あとなんか本当に desperate に欲しい article だったら直接著者の人にメールして、送ってくださいみたいな。

¹⁷ 日本の学生、あの大学院生と友達になっているんですよ。あのフォローフォロワーで。[...] でそれで、スキャンしてもらった物を送ってもらったりとかしていますよ。

¹⁹ [雑誌の出版社の Facebook をフォローしているので]そういう[最新の出版物の]情報をなんかそのとって、あ今なんか面白いトピックやってるから読もう、みたいな[、それで日本の学術誌を探しに行く]。

²⁶ 図書館に行くと、それ系の本が並んでいるじゃないですか。

²⁸ 日本に行くともう図書館に何でもあるから、できるだけいろんなものに目を通して、って感じですね。

³¹ あとなんか本当に desperate に欲しい article だったら直接著者の人にメールして、送ってくださいみたいな。そういう時に何回か、大体みんな無視されるけど、何回か送ってもらったことがあります。

³² なんか ILL とかで本を借りても ILL って実はすごい短いんですよ、借りれる期間が。[...] だからなんかももちろん必ずそのスキャン、自分でスキャンして残しとかないと、すぐ、二週間か一週間くらいですぐ返さなきゃいけないんで。だからその読めたりしないし、っていうのはあって、不自由だなと思いました。

A.4 Quotations from P8

⁹ 僕はまず UBC のサイト、library search が、始めのところで。というのはそこでだと、あのダウンロードできるかもしれないので。

¹⁸ 何回かあの、どうしても今すぐっていうときは kindle で買いました。

²⁰ あの日本語で打ち込んでも出てこない場合があって

²⁴ あの、もう Library に行く時は、この本を借りたいっていうのを決めて。でそこで、まあその本の周りにあるタイトルが気になって借りたということはあるんですけど、その探す目的で Library に行くことはないですね。

²⁵ 同じ著者の方[の本]が並んでたりするので。

²⁹ いや僕の場合は、帰省として日本に帰る機会があるので、その時についでに行っちゃうかって言う程度の問題で。だからまあ、けどだから、けど帰省というのもすぐに来ないので、その文献を欲しい時に手に入らないとか、今調べに行きたいけど行けないとかっていう、そういう状態ではあります。

³⁵ 帰省というのもすぐに来ない

³⁶ 日本語の文献については[supervisor の先生よりも]僕の方が詳しいので、特に日本語の文献を探すときにアドバイスを求めたりということは無いです。

Appendix B Recruitment letters

B.1 Solicitation email forwarded by a subject librarian and faculty members

Hello,

I hope you are staying healthy and safe in this challenging time. My name is Risa Hatanaka, a second-year Master's student in Library and Information Studies (MLIS) from the UBC iSchool. Under Dr. Heather O'Brien's supervision, I am working on my Master's thesis work on how graduate students seek academic resources written in Japanese. Given that, I am looking for UBC graduate students who could be potential participants of my study.

With the end of the winter term approaching, I realize this will likely be a very busy time for you. It is much appreciated, however, if you could forward the following email to UBC graduate students, who potentially use classical, pre-modern, modern and contemporary Japanese sources. Thank you very much for your cooperation, and please let me know (risa.hatanaka@alumni.ubc.ca) if you need more clarification.

Hello,

I hope this email finds you well in this challenging time. My name is Risa, a second-year Master's student in Library and Information Studies (MLIS) from the UBC iSchool. Under the supervision of Dr. Heather O'Brien (h.obrien@ubc.ca), I am conducting research for my

Master's thesis and investigating how graduate students seek academic resources written in Japanese.

While I don't have many requirements, I'm looking for research participants who are:

- Fluent in English;
- Specializing in Japan-related topics (any historical periods and disciplines are welcomed);
- Actively doing research using resources* written in Japanese language. (Again, any historical periods and disciplines are welcomed.)

*Resources include any types of sources, including books, journal articles, manuscripts, memoirs, government documents, newspapers, etc.

If this sounds like you, I am hoping to interview you about:

- The specific types of Japanese language sources that you use in your research work
- The specific search strategies that you utilize when looking for Japanese language sources that you need for a new research project
- The key challenges that you face when trying to find Japanese language sources

The interview will be conducted using online video communication software (e.g. Skype, Zoom).

You can also choose to use a phone call if you prefer. The interview will take between 30-45 minutes in total, and eligible participants will receive CAD\$15 gift card. If you match all the criteria and are interested in participation, please contact me (risa.hatanaka@alumni.ubc.ca).

Your email with a description of your research area and a list of interview dates/times (between

March-June) will be helpful. Please also let me know if you have any additional questions or concerns.

Lastly, I have prepared an informed consent form, along with a pre-interview questionnaire that I would like to send you if you are available for an interview. Both of these documents will help to explain the nature of my study in more detail.

Also, it is much appreciated if you could spread your words to your fellow UBC graduate students who could be a participant in my study. Please feel free to share the information above.

Best wishes, and thank you for your time,

Risa

B.2 Recruitment message sent to the authors' personal networks

Hello,

I hope you are doing well in this challenging time.

As a second-year Master's student in Library and Information Studies (MLIS) from the UBC iSchool, I am conducting research for my Master's thesis and investigating how graduate students seek academic resources written in Japanese under the supervision of Dr. Heather O'Brien (h.obrien@ubc.ca).

While I don't have many requirements, I'm looking for research participants who are:

- Fluent in English;
- Specializing in Japan-related topics (any historical periods and disciplines are welcomed);
- Actively doing research using resources* written in Japanese language. (Again, any historical periods and disciplines are welcomed.)

*Resources include any types of sources, including books, journal articles, manuscripts, memoirs, government documents, newspapers, etc.

If this sounds like you, I am hoping to interview you about:

- The specific types of Japanese language sources that you use in your research work
- The specific search strategies that you utilize when looking for Japanese language sources that you need for a new research project
- The key challenges that you face when trying to find Japanese language sources

The interview will be conducted using online video communication software (e.g. Skype, Zoom).

You can also choose to use a phone call if you prefer. The interview will take between 30-45 minutes in total, and eligible participants will receive CAD\$15 gift card. If you match all the criteria and are interested in participation, please contact me (risa.hatanaka@alumni.ubc.ca).

Your email with a description of your research area and a list of interview dates/times (between March-June) will be helpful. Please also let me know if you have any additional questions or concerns. Your participation is completely voluntary and if you choose not to participate it will not impact our relationship.

Lastly, I have prepared an informed consent form, along with a pre-interview questionnaire that I would like to send you if you are available for an interview. Both of these documents will help to explain the nature of my study in more detail.

Also, it is much appreciated if you could spread your words to your fellow UBC graduate students who could be a participant in my study. Please feel free to share the information above.

Best wishes, and thank you for your time,

Risa

B.3 Advertisement post on UBC Graduate Student Community Forum

Title: [Study participants needed] Anyone using Japanese resources for your research?

Hello,

My name is Risa, a second-year Master's student in Library and Information Studies (MLIS) from the UBC iSchool. Under the supervision of Dr. Heather O'Brien (h.obrien@ubc.ca), I am conducting research for my Master's thesis and investigating how graduate students seek academic resources written in Japanese.

While I don't have many requirements, I'm looking for research participants who are:

- Fluent in English;

- Specializing in Japan-related topics (any historical periods and disciplines are welcomed);
- Actively doing research using resources* written in Japanese language. (Again, any historical periods and disciplines are welcomed.)

*Resources include any types of sources, including books, journal articles, manuscripts, memoirs, government documents, newspapers, etc.

If this sounds like you, I am hoping to interview you about:

- The specific types of Japanese language sources that you use in your research work
- The specific search strategies that you utilize when looking for Japanese language sources that you need for a new research project
- The key challenges that you face when trying to find Japanese language sources

The interview will be conducted via online video communication software (e.g. Skype, Zoom).

You can also choose to use a phone call if you prefer. The interview will take between 30-45 minutes in total., and eligible participants will receive CAD\$15 gift card. If you match all the criteria and are interested in participation, please contact me (risa.hatanaka@alumni.ubc.ca).

Your email with a description of your research area and a list of interview dates/times (between March-June) will be helpful. Please also let me know if you have any additional questions or concerns.

Lastly, I have prepared an informed consent form, along with a pre-interview questionnaire that I would like to send you if you are available for an interview. Both of these documents will help to explain the nature of my study in more detail.

Also, it is much appreciated if you could spread your words to your fellow graduate students who could be a participant in my study. Please feel free to share the information above.

Best wishes, and thank you for your time,

Risa

Appendix C Informed consent



THE UNIVERSITY OF BRITISH COLUMBIA

School of Information
Irving K. Barber Learning Centre
470-1961 East Mall
Vancouver, BC Canada V6T 1Z1

Phone 604 822 2404
Fax 604 822 6006
ischool.ubc.ca

Informed Consent

Using Non-English Sources for Academic Research: Information-seeking Behaviours of Graduate Students

Student Investigator: Risa Hatanaka risa.hatanaka@alumni.ubc.ca

Principal Investigator (Supervisor): Dr. Heather O'Brien h.obrien@ubc.ca

- Introduction** Thank you for participating in this study. This work is affiliated with a LIBR 599: Thesis offered at the iSchool, University of British Columbia. Please note that we are seeking graduate students whose research areas include Japan to participate in our study on the use of Japanese-language sources in academic research.
- Purpose** The overall purpose of this research is to identify the information-seeking strategies of graduate students and scholars that actively look for and engage with Japanese-language sources to support their research work. This research fills a significant gap in studies that explore how information-seeking is affected when users intentionally search for non-English sources.
- What you will be asked to do** After you have read this document, we will respond to any questions or concerns that you may have. This study will be divided into two stages: Pre-interview and interview. During the pre-interview stage, we will ask you to 1) Submit a signed electronic copy of our informed consent form; and 2) Submit a completed electronic copy of our pre-interview questionnaire. During the interview stage, we will ask you questions about the specific information-seeking strategies that you use when searching for Japanese sources. The interview will be conducted using online video communication software (e.g. Skype, Zoom). You can also choose to have a phone call if you prefer. In total, the interview is expected to take between 30-45 minutes. The interview video and audio will be recorded, transcribed, and subsequently deleted when the research is completed. The recorded video and audio will be stored in the student investigator's password-protected and encrypted laptop. When the research is completed, the files will be safely and permanently deleted.
- Risks/Benefits** Interviews will be recorded, transcribed, and subsequently deleted. We understand that some participants may not feel comfortable with having their video and voice recorded. For this reason, you can choose one of the methods for data collection at the end of this consent form. We are also open to more traditional methods of collecting data (e.g. note-taking). We also understand that due to the potential for some participants to feel

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self-conscious about the Japanese language skills they may perceive our study as an assessment/judgement of their language proficiency. We would like to emphasize that this is not the case.

Investigation of how graduate students search for and discover Japanese-language sources will contribute to a greater understanding of how multilingual information users identify and acquire non-English resources for academic research purposes. It is hoped that the results of our study will help future library professionals to tailor programs/workshops/services to better meet the needs of multilingual information seekers.

Compensation	We will offer an incentive in the form of a \$15 gift card.
Confidentiality & Anonymity	The results of your interview comments/survey responses will be reported without any reference to you specifically. All information that you provide will be treated confidentially and your identity will not be revealed anywhere.
Data Retention	Principal Investigator and student investigator will have access to the data collected from your interview response. Your name will appear only on this consent form and it will be stored separately from any data collected for this study. No names will be attached to computer files, and your name will not be used in any written work or in presentations.
Future Use of Data	Secondary data analyses may be conducted on the study data at a future date. Participant consent will not be necessary. The data may also be analyzed by the researchers potentially at a later time for the purposes of comparing it to other studies.
Feedback to Participants	The research findings will be published as a master's thesis and made openly available on the cIRcle, the UBC open access research repository. The findings may also be published as a journal article at a later time. The information on the publications will be shared with you if you are interested.

I, _____, have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to:

(Please put your initials next to the one that apply)

- Take part in this study and to having the video and audio recorded. ____
- Take part in this study and to having the audio recorded (not to having the video recorded). ____
- Take part in this study, but not to having the video/audio recorded. I would like the investigator to use more traditional methods of data collection (e.g. note-taking). ____

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However, I realize that my participation is voluntary and that I am free to withdraw from the study at any time.

Signature: _____ Date: _____

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598

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Appendix D Pre-interview questionnaire

Demographics

1. What is your affiliation with UBC?
☐ Master's student ☐ PhD student ☐ Faculty ☐ Other: _____
2. What is your faculty? (eg. Arts) _____
3. What is your department? (eg. Asian Studies) _____
4. Which country do you study? (eg. Japan) _____

Language Proficiency

1. What is your native language? _____
2. Which non-English language do you do your research in? If you use multiple non-English languages, please list them and rank them by usage.

3. Overall, how proficient are your reading skills in those languages?
☐ Beginner ☐ Elementary ☐ Intermediate ☐ Advanced ☐ Expert
4. Overall, how proficient are your listening skills in those languages?
☐ Beginner ☐ Elementary ☐ Intermediate ☐ Advanced ☐ Expert
5. Overall, how proficient are your speaking skills in those languages?
☐ Beginner ☐ Elementary ☐ Intermediate ☐ Advanced ☐ Expert
6. Overall, how proficient are you writing skills in those languages?
☐ Beginner ☐ Elementary ☐ Intermediate ☐ Advanced ☐ Expert
7. How often do you use non-English sources in your work?
☐ Daily ☐ Weekly ☐ Monthly ☐ Other: _____

Research Preferences

8. When starting a new research project that requires non-English resources I prefer to:

[Select one]

- ☐ Use an information retrieval system (eg. Google, library catalogue, database)
- ☐ Visit the library/archive and look for materials
- ☐ Consult colleagues (eg. Other researchers, Subject librarian)
- ☐ Other: _____

9. Over the course of a typical research project that uses non-English resources, I will

[Check all that apply].

- ☐ Use an information retrieval system (eg. Google, OPAC, database)
- ☐ Browse the library/archive for materials
- ☐ Consult colleagues (eg. Other researchers, Subject librarian)
- ☐ Other: _____

10. I use _____ frequently in my research work with non-English resources [Check all that apply].

- ☐ Newspapers
- ☐ Government or organizational documents/records
- ☐ Letters, diaries, manuscripts or memoirs
- ☐ Photographs, films, audio, or other multimedia
- ☐ Journal articles and/or books

- ☐ Conference proceedings
- ☐ Popular web sites
- ☐ Other: _____

11. When searching for non-English sources the most important factor is: [Select one]

- ☐ Quantity (eg. I value the breadth of research on my topic)
- ☐ Awareness (eg. I prefer sources that I have heard of before)
- ☐ Quality (eg. I only look for sources that are credible and authoritative)
- ☐ Access (eg. I am partial to sources that are easy to access/retrieve/download)
- ☐ Other: _____

Appendix E Interview guide

Introductory Script

Thank you for participating in this study. My name is Risa Hatanaka. I am a master's student in the School of Information, and I will be facilitating today's interview. You have been invited to this interview because you are all graduate students whose research areas include Japan. Could you please allow me to start recording the interview? [Turn on the recorder]

This interview will take approximately 30-45 minutes to complete. The central question for my research is: *How do graduate students look for and engage with non-English language sources to support their research work?* In this context, I define “non-English language sources” as both primary and secondary sources published in non-English languages. For your information, UBC Library defines primary sources as “the direct evidence or first hand accounts of events without secondary analysis or interpretation,” and secondary sources as the works “analyz[ing] or interpret[ing] a historical event or artistic work.” The definition of primary/secondary sources can change by disciplines, and please feel free to ask questions for me when you get confused.

I am particularly interested in hearing about:

- Your experiences searching for Japanese sources in your research work
- Specific strategies that you use when looking for Japanese language sources
- Challenges that you face when searching for Japanese language sources

In this research, Japanese language sources can include all kinds of sources from any historical periods (classical, medieval, pre-modern, modern, contemporary), any dialects (Kanto, Kansai),

any contextual backgrounds of the sources (business document, government document, academic papers, everyday life documents), and any formats (printed, digital) as long as you use them as resources for your research. During the interview, however, I would like you to describe the types of sources that you seek.

Your views on the search and discovery of Japanese-language sources will contribute to a greater understanding of how multilingual information users identify and acquire non-English resources for academic research purposes. As a library student, I believe that the results of our study will help future library professionals to tailor programs/workshops/services that align more closely with the information needs of multilingual information seekers.

Procedure

There are a few general rules that I would like to review with you before I begin today's interview.

- Please speak in an audible voice to allow for the highest quality recording possible.
- Please ask questions any time during the interview if questions are unclear.
- This interview will be conducted in English. However, if you would like to use Japanese during the interview, I would be happy to speak with you in Japanese, and please let me know.
- I assure you that you can withdraw this study at any moment during the study.

If there are no further questions, let us begin today's interview.

Interview Questions

- Please provide an overview of your research work, including your topic.

[In Japanese: まず始めに、あなたの研究分野と研究テーマの概要についてご説明ください。]

[Clarification questions about pre-interview questionnaire] [if applicable]

- What **types of Japanese primary and/or secondary sources** do you use most often in your work? E.g. books, manuscripts, journal articles, magazines, newspapers, government documents, statistics, etc.

[In Japanese: 研究活動において、どのような日本語の一次資料・二次資料を最もよく使いますか。例：本、原本、ジャーナル記事、雑誌記事、新聞、公文書、統計など]

- HOW do you begin to identify the resources you need? What are your usual strategies?

[In Japanese: 必要な資料をどのように決めますか。どんな戦略を立てますか。]

- Once you have identified a resource, how do you go about acquiring it? Are there times when you can't obtain a resource that you know does exist?

[In Japanese: 必要な資料が分かったのち、どのように資料を入手しますか？存在していると分かっているのに手に入れられないケースはありますか。]

- What is your **initial information sources** when looking for Japanese sources?

[Reviewing pre-interview questionnaire and see consistency in the responses]

[In Japanese: 日本語資料を探すうえで一番最初に使う情報源はどれですか。]

- What are the other information sources you use for finding Japanese language sources?

[In Japanese: 日本語資料を見つけるうえで他に使う情報源はどれですか。]

- What makes you change strategies for finding Japanese language sources?

[In Japanese: 日本語資料を見つける作戦・戦略を変える理由は何が挙げられますか。]

- Tell me about a recent time that you had difficulties obtaining Japanese language sources?

[In Japanese: 最近、日本語資料を見つけるうえで何か障壁を感じたことはありましたか。]

- How did you overcome those obstacles?

[In Japanese: どのようにその障壁を乗り越えますか。]

- [Language] Have you thought that language differences limit your search?

[In Japanese: 検索をするときに、日本語と英語の違いを気にしたことはありますか。]

- [Geography] With regard to primary sources written in Japanese languages, how do you first find out about the resources and/or their locations? have you ever had to leave Canada to find the original source?

[In Japanese: 日本語の一次資料に関して、どのように資料とその所蔵場所を特定しますか。資料を手に入れるためにカナダを離れなければいけないことはありますか。]

- If not, how did you find the original source?

[In Japanese: もしそうでなければ、どのように資料を手に入れましたか。]

- [Culture] Have you thought cultural differences limit your search? E.g. copyright, censorship, digitization culture, publication culture, etc.

[In Japanese: 文化の違いにより、日本語資料の検索が制限される感覚はありましたか。例：著作権、検閲、デジタル化、出版文化など]

- Describe how you evaluate Japanese language sources for inclusion in your research. In other words, how do you make a judgement about their usefulness? [Corresponding with a question from pre-interview questionnaire]

[In Japanese: 研究用に日本語資料を使う際、どのように資料を評価するか説明してください。どのように資料が使えるかどうかを判断しますか。]

- Based on your experience searching for Japanese sources, if you could create the “perfect” multilingual retrieval system, what features would you want and why?

[In Japanese: 日本語資料を検索した経験を通して、もし「完璧な」多言語情報検索システムを作ることができるとしたら、どのような特徴が入っていてほしいですか。

- With regard to Japanese language sources, what would you like to tell me about your research process and strategies that I haven’t asked you about?

[In Japanese: 日本語資料に関して、その研究過程と戦略について伺っていないお話はありますか。]

Concluding remarks

That’s all for today. Thank you very much for sharing all of your stories. Please feel free to contact me if any questions about the research arise in the future. Also, if you want, I will send you additional information about the background context of the research and share the links to

my published thesis once it's submitted. If you don't have any questions now, this is the gift card for you. Thank you very much for your time and participation. [Stop the recorder]