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**UNDERSTANDING THE CHALLENGES FACED BY CHINESE INTERNATIONAL
GRADUATE STUDENTS IN ACQUIRING INFORMATION LITERACY: THE IMPACT
OF INTERNET CENSORSHIP**

By

Haoying Wang

A Thesis
Submitted to the Faculty of Graduate Studies
through the Faculty of Education
in Partial Fulfillment of the Requirements for
the Degree of Master of Education
at the University of Windsor

Windsor, Ontario, Canada

2021

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OF INTERNET CENSORSHIP**

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August 10, 2021

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ABSTRACT

Previous research identified that Chinese international students face challenges in acquiring information literacy. However, few studies have addressed the influence of Internet censorship. Thus, this study aims to explore the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada, with reference to their information literacy skills under the impact of Internet censorship in China. Data collection for this study was comprised of two components: an online survey and individual interviews with four participants. Examined through the mechanism of Internet censorship in China created by Roberts (2018), the findings conclude that Internet censorship affects the Chinese international graduate students' information literacy acquisition by restricting expression of and access to information. Finally, to enhance the development of students' information literacy, it is vital that they seek support and advice from the university, and their teachers and peers.

Keyword: Internet censorship, information literacy, Chinese international graduate students, academic research, Canadian post-secondary institutions

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LIST OF ABBREVIATIONS/SYMBOLS

ACRL Association of Colleges & Research Libraries

CERNET The China Education and Research Network

CNKI The China National Knowledge Infrastructure

GFW The Great Firewall

GSP The Golden Shield Project

IL Information Literacy

IT Information Technology

MOE The Ministry of Education

PRC The People's Republic of China

UNESCO The United Nations Educational, Scientific and Cultural Organization

VPN Virtual Private Network

CHAPTER 1

INTRODUCTION

In most developed countries, the generation born between 1980 and 1994 is known as the first generation who grew up using digital technology (Gallardo-Echenique et al., 2015). This generation, raised up by intensive support from this new technology, especially from the Internet, was labeled with many names to highlight their aptitudes for the Internet (Kolikant, 2010). For example, a term coined by Marc Prensky in 2001, digital natives, is used as a designation refers to the students who were brought up in the digital area with natural ability of speaking digital language (Prensky, 2001). As the digital technology grew, the Internet has pervaded individual's lives via computers, social network platforms and texting (Dingli & Seychell, 2015). In research conducted by Kennedy et al. in 2008, it was revealed that most first-year college students have high familiarity with digital technology. However, their expertise in utilizing modern technology to entertain does not guarantee their skills in information literacy for academic study (Kennedy et al., 2008). The lack of information skills among college students aroused academic concerns over the development of information literacy in higher education (Christe et al., 2016).

Information literacy (IL), as defined by the Association of Colleges & Research Libraries (ACRL), refers to a series of abilities that allow individuals to find, organize, evaluate and employ information (ACRL, 2000). Bundy (2004) outlined information literacy elements with three main skills: 1) general skills: problem solving, collaboration, teamwork and critical thinking; 2) information skills: information search, information

use, information technology 3) values and beliefs: information ethics, social responsibility, and community participation.

According to the Information Literacy Competency Standards for Higher Education's requirement, an information literate person is able to: recognize the need of information; access information effectively and efficiently; critically evaluate information; integrate needed information into one's knowledge base; employ information effectively to achieve a specific goal; understand the issues related to economic, legal and social with the use of information literacy; ethically and legally use information (Association, 2019). Information Literacy Competency Standards for Higher Education prepares a framework for assessing the information literate individual, which includes five standards and twenty-two performance indicators with a focus on the need of students in higher education at all levels (Association, 2019). Based on the first standard that the information literate student discovers the nature and extent of needed information, which demonstrates four performance indicators for information literate student: 1) determines and express the demand for information; 2) recognizes various types and formats of potential information resources; 3) examines the costs and benefits of obtaining needed information; 4) redefines the nature and extent of the needed information. The second standard requires information literate student accesses needed effectively and efficiently, which indicates the student to 1) choose the most applicable analytical approaches for accessing the needed information; 2) build and achieve effectively designed investigative strategies; 3) employ various methods to retrieve information online or in person; 4) clarify the search strategy when it is necessary; 5) obtain, record and administer the information as well as its sources. The

third standard demands the information literate student critically assesses information and its sources and absorbs chosen information into his or her knowledge base and value system. There are seven performance indicators listed in the third standard for information literate student, which are 1) summarizes the main ideas from the gathered information; 2) clarifies and adopts initial principle for evaluating both the information and its sources; 3) incorporates main ideas to build up new concepts; 4) compares new knowledge with previous knowledge to define the added value, conflicts, or other unique feature of the information; 5) defines whether the new knowledge impacted the students' value system and accommodate differences; 6) verifies understanding and analysis of the information by discussing with other individuals, experts in subject-field or practitioners; 7) defines whether the initial inquiry should be adjusted. Based on the fourth standard, the information literate student is able to apply information effectively to achieve a specific goal individually or as a group, The fourth standard provides three performance indicators that requires information literate student to 1) employ new and previous information to the preparation and creation of a specific product or performance; 2) adjust the improvement process for the produce or performance; 3) communicate effectively with others about the product or performance. According to the fifth standard, the information literate students are be able to interpret most of the economic, ethical, legal and social issues related to the application of information and access as well as use information ethically and legally. The fifth standard suggests three performance indicators for information literate students, which are 1) acknowledge the economic, ethical, legal and social issues around information and information technology; 2) obey laws, regulations, policies and code related to the access to and use of information

resources; 3) recognize the application of information resources in advertising the product or performance (Association, 2019).

In September 2003, The United Nations Educational, Scientific and Cultural Organization (UNESCO) signed The Prague Declaration, Towards an Information Literate Society, to propose that “information literacy is a concern to all sectors of society and should be tailored by each to its specific needs and context” (Prague Declaration, 2003, para. 6). In 2015, The Alexandria Proclamation announced information literacy as a fundamental competency of lifelong learning in the 21st century that empowers individuals to accomplish their goals by seeking, handling, valuing, adopting and generating information constructively (Breivik et al., 2006). The Proclamation emphasized the necessity of fostering habits of inquiry as a requirement for achieving one’s educational goal in the information society, which demands integration of information literacy instruction into curricula and practices information literacy curriculum at all levels of education, especially in higher education (Breivik et al., 2006).

Owing to the rapid development of educational tools, information ecosystem and higher education environment, the application of IL has expanded from the academic library to Internet resources (ACRL, 2015). As a result, the Association of College and Research Libraries (ACRL), design the Framework for Information Literacy for Higher Education in 2015 to guide the implementation of IL programs in higher education institutions (ACRL, 2015). Structured by six frames, the Framework offers six conceptual comprehensions focusing on IL, including: (1) Authority is constructed and contextual; (2) Information creation is a process; (3) Information has value; (4) Research has its basis

in inquiry; (5) Scholarship has value as conversation; and (6) Searching can be strategic exploration (ACRL, 2015, para. 3).

The Framework encourages educators and librarians to discuss the new approach discovered in IL education and think about the implication of the implementation of IL in higher education, so it can be used as a guidance document in an innovative way (ACRL, 2015). The advocacy of IL specifies the essential role of IL in higher education as an essential academic skill that prepares students ability to explore, employ and analyze information in an independent and innovative way (Amarakoon, 2013).

Problem Statement

Previous research identified that Chinese international students face challenges in acquiring information literacy (Zhao & Mawhinney, 2015), including seeking information (Chen & Ullen, 2011) and using the library (Liao et al., 2007). The studies have suggested some factors that caused the challenges faced by Chinese international graduate students, which have been pointed out as language difficulties: non-English speakers have difficulties in finding synonyms (Jackson & Sullivan, 2011); cultural difference, cultural norm of not bothering others in Asian countries (Liu & Winn, 2009); different primary learning and researching experience (Liu & Winn, 2009); Chinese students are accustomed to rote learning more than independent research (Chen & Ullen, 2011); and the impact of Internet censorship: preference for searching engines (Jiang, 2013).

As stated above, a literature review of this topic reveals that only a limited number of researchers have studied the impact of Internet censorship on Chinese international graduate students' challenge regarding information literacy (Chao et al.,

2017; Crist & Popa, 2020; Jiang, 2017; Jiang, 2018; Lopez-Tarruella, 2012; Lu, 2016; Lu & Singh, 2017; Lyu, 2018; Pomfret, 2017; Steinhardt, 2017; Xiao, 2019; Zhang, 2018; Zhao, 2016a). Through searching previous studies by using Google Scholar and ProQuest, most of the studies were focused on the impact of language barriers, cultural differences, and unfamiliarity with library uses. Hence, it is necessary to address the impression of Internet censorship on Chinese international graduate students' acquiring of information literacy.

Purpose of Study

This study explores the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada, with reference to their information literacy skills under the impact of Internet censorship in China. The overarching focus of the thesis is encapsulated in four main research questions:

1. How do Chinese international graduate students assess their IL during their undergraduate study in China?
2. How do Chinese international graduate students assess their IL during their graduate study in Canada?
3. What are the perceptions of Chinese international graduate students regarding Internet censorship in China?
4. How do Chinese international graduate students describe the role of Internet censorship in their acquisition of IL?

Theoretical Framework

To explore the impact of Internet censorship on student's IL, it is vital to understand how the implementation of Internet censorship in China functions. In this study, I will apply the mechanism of Internet censorship in China by Roberts (2018) to analyze the operation of Internet censorship and to examine its impact on Chinese international students' ability in accessing information.

Based on the instrument that Internet censorship applies in restricting information flow, Roberts created a trilogy of censorship restrictions to understand how censorship affects its users, which is framed by three categories: fear, friction and flooding (Roberts, 2018). Each of the categories influence the media and citizens in their cost-benefit analysis of accessing or expressing information, which impacts their decision in information filters. In this study, I will employ this trilogy to examine why Chinese international graduate students feel challenged in seeking, using, and valuing information under the impact of Internet censorship in China.

The first layer in the mechanism of Internet censorship is fear. By discouraging the users from accessing, analyzing, storing or consuming certain types of information, the application of fear can affect the distribution of information (Roberts, 2018). Owing to its disciplinary consequence, fear makes the price of accessing or expressing information higher (Roberts, 2018). Served as a tax on information, friction is applied as the second type of censorship by directly expanding the cost on accessing to information or spreading of information (Roberts, 2018). As Roberts explained, the citizens or media will be less likely to distribute or access to information if the price of collecting, analyzing or spreading information is simply higher, even without the punitive actions

(Roberts, 2018). Flooding is employed in the last level of censorship to increase the costs of competing information while immensely decreasing the relative cost of certain information (Roberts, 2018). Flooding can distract media and individuals from information by presenting them with cheap, packaged and irrelevant information (Roberts, 2018).

Importance of the Study

While constructing my final paper for my last year of undergraduate study in China, rather than adopting the free academic resources offered by my university and the unlimited access to Baidu Scholar, I gathered most scholarly articles by applying monthly paid Virtual Private Network (VPN) services to access Google Scholar. Short in relevance, pop-up advertisements, unauthorized resources inside the Great Fire Wall (GFW) forced me to find a way to access the outside world. In China, because of the Internet censorship, foreign websites like Google and YouTube are blocked (Sapore di Cina, 2020). After multiple attempts to cross the GFW, I managed to complete my paper with a long reference list.

A year later, my graduate study in Canada began as scheduled, as well as the cancellation of the VPN service. However, after getting rid of the mandatory use of VPN, I started to face new challenges: citing the resources, generating new ideas and thinking critically. Later, I noticed that I am not the only one who have encountered such difficulties. I realized that Internet censorship functions not only in blocking individual's access to information, it also restrains the improvement of one's abilities in seeking, measuring, recognizing and utilizing information.

To understand these challenges in academic research, it is necessary to examine how Internet censorship impacts Chinese international graduate student's IL. This research can help Chinese international graduate students who study in Canada to cope with the overwhelming amount of information, and use the information effectively. Studying this problem can also help Canadian international educators to understand the challenges that Chinese international graduate students' meet while conducting research. Faculties/administrators will be able to develop more effective approaches to help Chinese international students assessing their IL by providing instructions on seeking, citing, evaluating and using information. The research is beneficial and supportive for them to involve better in the future information literacy instruction because they will understand the differences in information literacy instruction between Chinese and Western universities, which could promote the extra-curriculum setting at Canadian post-secondary institutions.

CHAPTER 2
THEORETICAL FOUNDATION

Introduction

The mechanism of Internet censorship in China illustrates how Internet censorship impacts Chinese international graduate students' learning by explaining the implementation of Internet censorship and the effects of Internet censorship on Internet users. Moreover, the mechanism of Internet censorship in China explains Chinese international graduate students' academic research behavior and provide frameworks for understanding their IL acquisition and their perceptions on Internet censorship. This research is led by the mechanism of Internet censorship, which is a theory developed by Roberts (2018).

The Mechanism of Internet Censorship in China

Roberts is an associate professor in the department of Political Science at the University of California. Much of her research employs social media, online experiments to study the influence of censorship and propaganda on access to information and beliefs about politics (Roberts, n.d.). Roberts' research interests lie in the intersection of political methodology and the politics of information, with a specific focus on the politics of censorship and propaganda in China (Roberts, n.d.). The mechanism of Internet Censorship in China came from Roberts' book, *Censored: Distraction and Diversion Inside China's Great Firewall*, published in in 2018, which was listed as one of the Foreign Affairs Best Books of 2018 (Roberts, n.d.). In her book, Roberts (2018) created “a typology of censorship restrictions based on the mechanism through which censorship

slows the flow of information” (p. 39), which is illustrated as three types of censorship: fear, friction, and flooding. According to Roberts (2018), the first type of censorship, fear, can be explained as:

Fear, the first way that censorship operates, affects the flow of information by deterring the media or individual from distributing, analyzing, collecting, or consuming certain types of information (p. 40).

Fear creates the awareness of consequences of producing and consuming information, which makes expression or access to information more costly due to its punishing consequences. Thus, fear is obviously consequential and very observable (Roberts, 2018). Roberts (2018) explains how fear manipulates the flow of information by introducing how it is applied in the mechanism of Internet censorship, which was explored through three aspects: *legal deterrence*, *intimidation* and *reward* (p. 44-47).

| Legal Deterrence | Intimidation | Reward |
|---|--|---|
| <ul style="list-style-type: none"> • Governments create laws that prohibit particular types of expression or consumption of information and then publicize the law so that citizens and the media are aware of the punishment what will befall them if they commit the crimes associated with the laws (p. 44). • Censorship laws is the most observable way (p. 44). | <ul style="list-style-type: none"> • Fear can also take the form of extra-legal intimidation or threats, where government actors or other authorities can dissuade citizens from consuming, expressing, or collecting particular types of information (p. 46). • These types of threats are less observable to the public than censorship laws (p.46). | <ul style="list-style-type: none"> • A government may facilitate the promotion of a journalist who refuses to say negative things about the government or may pay off a media outlet for keeping particular information secret (p.47). |

Figure 1. The Operation of Fear in the Mechanism of Internet Censorship in China. Adapted from Roberts (2018, p.44-47). Drawn by the Researcher.

Roberts (2018) explains, to apply the fear-based method to affect the access to information and expression, citizens and the media must 1) be acknowledged of the consequences after producing or consuming information; and 2) believe that these consequences will be governed (p. 49)

According to Roberts (2018), the second type of censorship, friction, imposes restrictions on the information feed:

Friction acts like a tax on information by directly increasing the costs of distribution of and access to information, diverting the media and individuals away from censored information (p. 40).

Individuals and media will be less likely to access or distribute information if the information becomes more costly to access, gather or spread, they may not even notice the cost to collect information becomes higher since the access to information can be easily frustrated (Roberts, 2018). As a result, friction is not consequential and is often less observable than fear. However, friction is usually imposed without fear and is often applied when fear is too pricey for the government (Roberts, 2018). According to Roberts (2018), friction is imposed on three procedures of the flow of information: “the distribution of information, the collection of primary information and data collection” (p. 59-69).

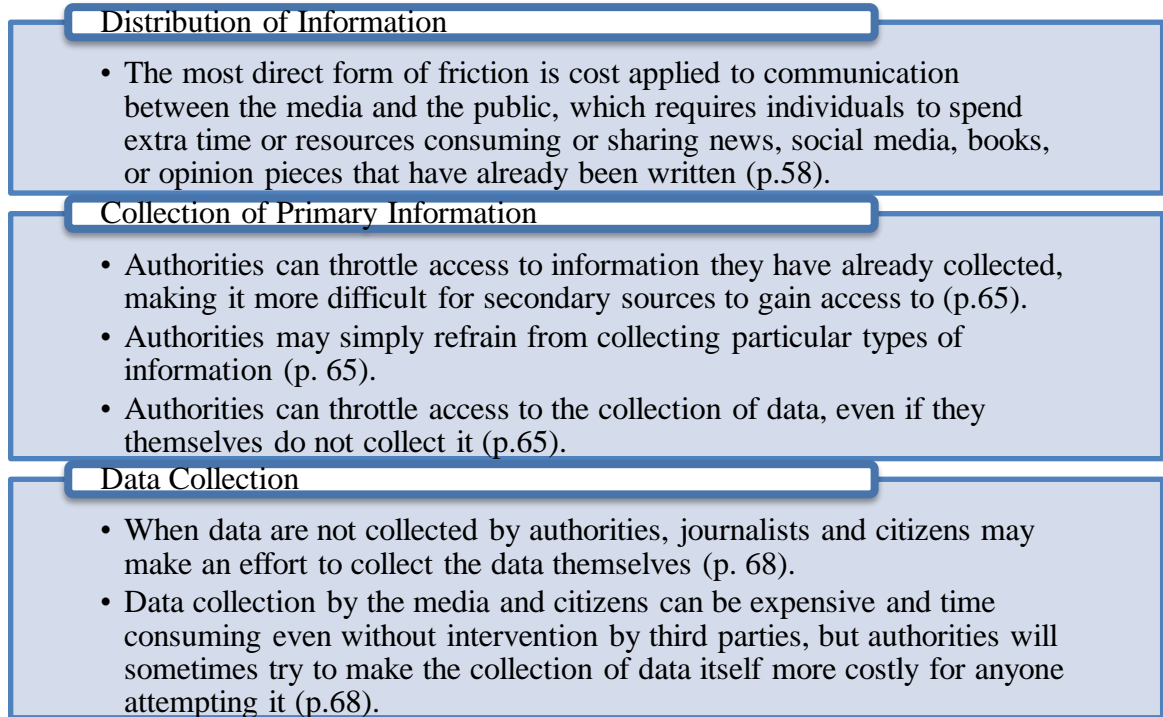


Figure 2 The Imposition of Friction in the Mechanism of Internet Censorship in China. Adapted from Roberts (2018, p.59-69). Drawn by the Researcher.

Roberts (2018) explains that due to the elasticity of demand for information, friction will leave a greater impact when it is invisible to the public – “if the friction induced by the authority becomes known to its target, the citizen or media may take it as a signal that the information is important and their demand for this information might become more inelastic” (p. 72)

The third type of censorship is flooding, which is the coordinated production of information by the government to attempt to distract individuals from information (Roberts, 2018):

Flooding is applied to vastly decrease the costs of particular information in order to increase the relative costs of competing information (p. 40)

Flooding can influence the media by providing them with cheap, easy-to-publish information or influencing the public by spreading a particular type of information to de-

emphasize others (Roberts, 2018). Flooding with irrelevant or useless information reduces the amount of time that individuals can spend on more valuable information, which raises the costs of accessing good information because individuals have to take times and energy to separate valuable information from less valuable information (Roberts, 2018). According to Roberts (2018), flooding and friction are often applied together; like friction, there are two main types of flooding that affect individual's consumption of information: "flooding directly to the public" and "flooding directed at the media" (p. 81-83).

Flooding Directly to the Public

- The first type of flooding competes directly with information already available to the public (p. 82).
- This type of flooding operates at the dissemination stage, where the flooded material competes for attention with information being disseminated by media or individuals (p. 82).

Flooding Directed at the Media

- The second type of flooding occurs when the authority directs the information to the media (p. 85).
- By collecting data, analyzing it, and presenting these results to the media in an easily reportable format, the authority can encourage the media to report on a particular story. The media then may present this story to the public using the prepackaged version to reduce media costs. The public, however, may not recognize that the source of the information is the government itself, but instead view the news as independent (p. 85).

Figure 3 Two Types of Flooding in the Mechanism of Internet Censorship in China. Adapted from Roberts (2018, p 81-83). Drawn by the Researcher.

According to Roberts (2018), like friction, flooding is more effective when the individuals have a higher elasticity of demand for information, as well as when it is invisible to the public.

In conclusion, fear, friction and flooding are comprehensive types of censorship, which can be presented simultaneously. In the digital age, the Internet has made fear the costliest. Due to the increasing number of Internet users, the act of repression must be valid to a large number of people so that the self-censorship can be enforced. Moreover, since information is easily replaced and duplicated, small changes in the cost of access can lead to huge impacts on the information the majority of people consume online. Correspondingly, flooding has been made relatively cheap by the Internet since online propaganda can be more easily programmed and disguised by authority (Roberts, 2018).

An Assumption of Internet Censorship on Students' IL Acquisition

As a result, the theoretical foundation of this study integrates the mechanism of censorship by Roberts (2018) to investigate how Internet censorship affects Chinese international graduate students' IL acquisition.

By understanding the implementation of Internet censorship in China and its impact on the Internet users, the theoretical foundation for this study displays the influence of Internet censorship on Chinese international graduate students with a specific reference to their IL learning. Internet censorship in China impacts the consummation of online information (Roberts, 2018), however, the transition from China to Canada removed the Internet censorship from accessing information. The researcher believes, since Chinese international graduate students completed their bachelor's degree in mainland China, their IL was more likely influenced by Internet censorship in China.

CHAPTER 3

LITERATURE REVIEW

The literature review conducted in this chapter provides an account of the academic context for the issues introduced in the first chapter, that is, an inquiry concerning Chinese international graduate students' challenges in acquiring IL under the impact of Internet censorship. With an aim to examine the task met by the Chinese international graduate students in developing IL, this chapter introduces the definition of IL and investigates the current state of research and explores how the Chinese graduate student's IL is obtained through their study in China and how China's implementation of Internet censorship affects their development of IL during their study overseas.

Writing on the topic, the search for relevant resources was mostly conducted using the Google Scholar, ProQuest, Leddy Library, Springer Link, Sage Journals, and Research Gate. Based on the research focuses, the literature review will be delivered in two parts. The first part explores the acquisition by Chinese students of IL throughout their undergraduate education in China, while the second part examines the influences of China's Internet censorship on overseas graduate students' IL. This first part of this review helps explain the issues addressed in the context of China; the second part assists the identification of the gap existed in the current research as well as addresses the need to conduct the study.

Information Literacy (IL)

To understand the challenges faced by Chinese international graduate students in IL acquisition, it's necessary to address the definition of IL in this chapter.

In 2000, ACRL published a document *The Information Literacy Competency Standards for Higher Education* and brought information literacy into conversations at higher education, which enabled higher education institutions to put information literacy as a basic learning outcome in the curriculum. The framework seeks to address the great benefit for information literacy as a deeper learning agenda. In 2015, the ACRL developed this document to address the limitations of the Standards. I am using the definition of the ACRL Standards from 2000 since the Chinese education system has integrated the ACRL Standards from 2000 into its curriculum reform (Sun, 2000).

As defined by the American Association of College and Research Libraries (ACRL), information literacy is “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning” (ACRL, 2015, pp. 8). Broken down into twenty-two performance indicators and eighty-seven outcomes, the framework provides five overarching standards for information literate student to: 1) discover the nature and extent of needed information; 2) access needed effectively and efficiently; 3) critically assess information and its sources and absorb chosen information into his or her knowledge base and value system; 4) apply information effectively to achieve a specific goal individually or as a group; 5) interpret most of the economic, ethical, legal and social issues related to the application of information and access as well as use information ethically and legally (Association, 2019). Furthermore, this framework is classified into six frames and each frame consists a concept integral to information literacy, a set of knowledge practices, as well as a set of dispositions, which are displayed alphabetically: 1) authority is

constructed and contextual; 2) information creation as a process; 3) information has value; 4) research as inquiry; 5) scholarship as conversation; 6) searching as strategic exploration (ACRL, 2015, pp. 8),

The first frame shows that various communities may identify various types of authority, as a result, the need information may assist to define the level of authority required. The knowledge practices suggest the learners who are developing their information literate abilities to “define different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event); use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility; understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered “standard,” and yet, even in those situations, some scholars would challenge the authority of those sources; recognize that authoritative content may be packaged formally or informally and may include sources of all media types; acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice; understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time” (ACRL, 2015, pp. 12-13). The dispositions offer suggestions to the learners to “develop and maintain an open mind when encountering varied and sometimes conflicting perspectives; motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways; develop

awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview; question traditional notions of granting authority and recognize the value of diverse ideas and worldviews; are conscious that maintaining these attitudes and actions requires frequent self-evaluation” (pp. 13).

The second frame indicates that the process of information creation could result in a range of information formats and methods of delivery, which address the need to foresee format when choosing information resources to use. The knowledge practices suggest the learners who are developing their information literate abilities to “articulate the capabilities and constraints of information developed through various creation processes; assess the fit between an information product’s creation process and a particular information need; articulate the traditional and emerging processes of information creation and dissemination in a particular discipline; recognize that information may be perceived differently based on the format in which it is packaged; recognize the implications of information formats that contain static or dynamic information; monitor the value that is placed upon different types of information products in varying contexts; transfer knowledge of capabilities and constraints to new types of information products; develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys” (ACRL, 2015, pp. 14-15). The dispositions offer suggestions to the learners “are inclined to seek out characteristics of information products that indicate the underlying creation process; value the process of matching an information need with an appropriate product; accept that the creation of information may begin initially through communicating in a range of formats or modes; accept the ambiguity surrounding the

potential value of information creation expressed in emerging formats or modes; resist the tendency to equate format with the underlying creation process; understand that different methods of information dissemination with different purposes are available for their use” (pp. 15).

The third frame indicates that the value of information is reflected in a variety of contexts, including publishing practices, access to information, the commercialization of personal information, and intellectual property law. In this frame, the knowledge practices suggest the learners who are developing their information literate abilities to “give credit to the original ideas of others through proper attribution and citation; understand that intellectual property is a legal and social construct that varies by culture; articulate the purpose and distinguishing characteristics of copyright, fair use, open access, and the public domain; understand how and why some individuals or groups of individuals may be underrepresented or systematically marginalized within the systems that produce and disseminate information; recognize issues of access or lack of access to information sources; decide where and how their information is published; understand how the commodification of their personal information and online interactions affects the information they receive and the information they produce or disseminate online; make informed choices regarding their online actions in full awareness of issues related to privacy and the commodification of personal information” (ACRL, 2015, pp. 16-17). The dispositions offer suggestions to the learners to “respect the original ideas of others; value the skills, time, and effort needed to produce knowledge; see themselves as contributors to the information marketplace rather than only consumers of it; are inclined to examine their own information privilege” (pp. 17).

The fourth frame demonstrates that in any field, research is repetitive and depends on asking increasingly complicated or new questions, the answers to which in turn develop additional questions or lines of inquiry. The knowledge practices suggest the learners who are developing their information literate abilities to “formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information; determine an appropriate scope of investigation; deal with complex research by breaking complex questions into simple ones, limiting the scope of investigations; use various research methods, based on need, circumstance, and type of inquiry; monitor gathered information and assess for gaps or weaknesses; organize information in meaningful ways; synthesize ideas gathered from multiple sources; draw reasonable conclusions based on the analysis and interpretation of information” (ACRL, 2015, pp. 18). The dispositions offer suggestions to the learners to “consider research as open-ended exploration and engagement with information; appreciate that a question may appear to be simple but still disruptive and important to research; value intellectual curiosity in developing questions and learning new investigative methods; maintain an open mind and a critical stance; value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process; seek multiple perspectives during information gathering and assessment; seek appropriate help when needed; follow ethical and legal guidelines in gathering and using information; demonstrate intellectual humility (i.e., recognize their own intellectual or experiential limitations)” (pp. 19).

The fifth frames indicates that a community of scholars, researchers, or professionals engages in ongoing discussions, and over time, new insights and discoveries emerge as a result of different perspectives and interpretations. The

knowledge practices suggest the learners who are developing their information literate abilities to “cite the contributing work of others in their own information production; contribute to scholarly conversation at an appropriate level, such as local online community, guided discussion, undergraduate research journal, conference presentation/poster session; identify barriers to entering scholarly conversation via various venues; critically evaluate contributions made by others in participatory information environments; identify the contribution that particular articles, books, and other scholarly pieces make to disciplinary knowledge; summarize the changes in scholarly perspective over time on a particular topic within a specific discipline; recognize that a given scholarly work may not represent the only or even the majority perspective on the issue” (ACRL, 2015, pp. 20-21). The dispositions offer suggestions to the learners to “recognize they are often entering into an ongoing scholarly conversation and not a finished conversation; seek out conversations taking place in their research area; see themselves as contributors to scholarship rather than only consumers of it; recognize that scholarly conversations take place in various venues; suspend judgment on the value of a particular piece of scholarship until the larger context for the scholarly conversation is better understood; understand the responsibility that comes with entering the conversation through participatory channels; value user-generated content and evaluate contributions made by others; recognize that systems privilege authorities and that not having a fluency in the language and process of a discipline disempowers their ability to participate and engage” (pp. 21).

The sixth frame shows that searching for information is often non-linear and repetitive, requiring evaluation of a range of sources and the mental flexibility to seek

alternative pathways as new understandings develop. The knowledge practices suggest the learners who are developing their information literate abilities to “determine the initial scope of the task required to meet their information needs; identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information; utilize divergent (e.g., brainstorming) and convergent (e.g., selecting the best source) thinking when searching; match information needs and search strategies to appropriate search tools; design and refine needs and search strategies as necessary, based on search results; understand how information systems (i.e., collections of recorded information) are organized in order to access relevant information; use different types of searching language (e.g., controlled vocabulary, keywords, natural language) appropriately; manage searching processes and results effectively” (ACRL, 2015, pp. 22). The dispositions offer suggestions to the learners to “exhibit mental flexibility and creativity; understand that first attempts at searching do not always produce adequate results; realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search; seek guidance from experts, such as librarians, researchers, and professionals; recognize the value of browsing and other serendipitous methods of information gathering; persist in the face of search challenges, and know when they have enough information to complete the information task” (pp. 23).

Information Literacy (IL) Education in Chinese Higher Education

To recognize the issues that the Chinese international graduate students faced when being required to perform their skills in accessing information, it is important to address their learning of IL during their study in their local universities.

Among Chinese academia, there has been a famous traditional saying: “equip a person with hunting rifles rather than bags of food”, in which “rifles” meant people’s ability to learn (Sun, 2002). However, in 21st century, the meaning of “rifles” changed to IL due to the development of digital technology (Sun, 2020). To teach students the skills of seeking, organizing, evaluating and using information, a document of “Information Literacy Competency Standards for Higher Education” published in 2000 by ACRL in the United States was integrated into the guidance for Chinese education curriculum reform (Sun, 2000).

In response to the advocacy of developing IL as a central skill in an individual’s lifelong learning from the UNESCO, the Chinese government held an international conference on “Teaching and Learning in the Networked Environment: Practice, Challenge and Prospect in China” in January 2001 with an emphasis on the importance of improving skills in processing information and an announcement regarding the need to integrate basic computer literacy instruction in schools and colleges (Sun, 2002). In January 2001, a group of academic librarians and educators held a “National Workshop on Information Literacy for Higher Education” in a northeastern city of China, Harbin, followed by a discussion on implementing IL programs in educational institutions by suggesting the employment of electronic database as a part of IL programs (Sun, 2002). Following the aim of networking every school in China, the Ministry of Education (MOE) launched the China Education and Research Network (CERNET), which connected 80 percent of Chinese universities in 2002 (Sun, 2002). The establishment of CERNET enables student self-learning via virtual distance education any time and any

place, which makes it available for students to increasingly utilize current information (Sun, 2002).

Based on the resources and methods involved by the Chinese government in promoting IL education among universities, this section is organized by two categories: the establishment of the China National Knowledge Infrastructure (CNKI) Base and the integration of IL in Chinese higher education curriculum.

The Establishment of China National Knowledge Infrastructure (CNKI) Base

To accumulate knowledge and sharing scholarly information, the CNKI project was first proposed by Tsinghua University in December 1996 (CNKI, n.d.). Three years later, the China Academic Journal Network Publishing Database (CAJNPD) was introduced online as the central part of CNKI which covers 99.6% of Chinese scholarly journal articles (Xu & Yuan, 2013). Launched in June 2000, the China National Knowledge Infrastructure consists of over 70 special databases, including journals from Springer, Taylor & Francis and Wiley (CNKI, n.d.). Additionally, the CNKI knowledge base provides the functions of monthly subscription and keywords subscription, which enables the users to read the latest articles with convenience (Luo, 2010). By 2011, over 95% of scholarly journals published in China were available on CNKI, the largest academic database in China, within six months (Xu & Yuan, 2013). The CNKI database is currently the primary platform used for academic research searches in China (Cai & Zuo, 2019).

However, in the study conducted by Xu and Yuan in 2013, publishing on China's current online academic database failed to meet the demands of Chinese scholars owing to its limited access to reliable scholarly articles (Xu & Yuan, 2013). Wang (2019) also

found the problems of the unregulated database and the biased journal evaluation systems on CNKI (Wang, 2019). Furthermore, Xu et al. (2020) discovered that there is a huge number of profit-seeking and misconducts in scholarly publishing (Xu et al., 2020). According to the financial report of 2018 from CNKI's mother company Tsinghua Tongfang, CNKI has posted an average annual profit margin of nearly 60% for the past decade (Zellmer, 2019). The exorbitant profit made from CNKI's dominance in China's academia led CNKI to fall under criticism (People's Daily Overseas New Media, 2019).

The Integration of IL in Chinese Higher Education Curriculum

IL courses are considered essential to all university students in China (Li and Wang, 2009). In Chinese higher education institutions, IL has been offered as a required course for Library and Information Science (LIS) majors and an elective course for social science and natural science majors. IL courses introduce methods and techniques of information retrieval. Students are taught how to use information devices including computers and smartphones. Moreover, they also learn how to use tools such as library catalogs, digital platforms, databases, and search engines to obtain information (Huang et al., 2016).

The earliest research on the development of IL instruction in Chinese higher education was published in 1997 (Yao, 1997). In the beginning of the 21st century, to promote IL in Chinese higher education, the Chinese State Department issued, "The issue of the Decision on the Deepening of Educational Reform and the Full Promotion of Quality-Oriented Education" to emphasize the need for employing information technology (IT) in school curriculums has been gradually realized across the country (Cui & Zhu, 2014). In 2001, The Basic Education Curriculum Reform Outline (Trial) listed

the improvement of students' IL as its six main objectives (Cui, 2001). During the following decade, integration of IL instruction into school curriculum has enabled 15,000 Chinese schools' teaching of IT basics (Danappa, 2015), some top university introduced IL program as credit program (Jabeen et al., 2014). In 2012, the "Ten Years of Education Informalization Development Plan (2011-2020)" framed by the MOE explained the directing ideology and planned targets of promoting IL in China's Education (Cui & Zhu, 2014). In recent years, MOE announced the necessity of implementing IL instructions by releasing "the revised Rules and Regulations on Libraries in Institutions of Higher Education" in January 2016; and provided guidance for universities to implement IL instructions by designing "the Guiding Opinions on Further Strengthening Information Literacy Instruction by the Institutions of Higher Education (Exposure Draft)" in July 2017 (Guo & Zhu, 2019).

However, the IL program has not been standardized among universities and colleges (Jabeen et al., 2014). According to Li's (2016) study, the development of overall IL education in colleges was found to be uneven (Li, 2016). Furthermore, apart from the science-related majors, the IL program also has not been offered as required courses in most majors (Li et al., 2016). Based on a study conducted by Li et al. in 2016, there are 45.86% of graduate students learnt IL by attending IL courses (Li et al., 2016). In a study presented by Sun (2018), some problems existed in the current IL education, including the insufficient IL training for teachers and the weak awareness in IL among students, as well as inadequate funding and resources (Sun, 2018).

Moreover, although students have acknowledged basic information in IL, most of them are still incapable of utilizing and criticizing information as well as respecting

intellectual property rights (Li et al., 2016). According to Li et al. (2016), there are 68.15% of students find resources by using different searching engines and databases; 60% of students are unfamiliar with the Boolean operators; 37.58% of students have met difficulties in accessing the original resources; 63.69% of students have upload resources without authorization (Li et al., 2016).

The Implementation of Internet Censorship in China

To investigate how Internet censorship affects the Chinese international graduate students' IL, it is essential to understand the implementation of Internet censorship in China. Internet censorship in China has also been widely known as the Great Firewall of China (GFW), a massive surveillance and censoring system launched by the Chinese government for the purpose to monitor and control the Internet internally (Mozur, 2015). The Internet was brought into China in 1994 owing to the economic need to expand the socialist market (Bi, 2001). As the introduction of Internet technology speeded up the booming economy, the explosion of Internet also encouraged the spread of information along with the diversity in thoughts (Pingp, 2011). The sudden expansion of the Internet triggers the Chinese government's concern over the maintenance of the state's political solidity (Pingp, 2011). In the fear of losing control over the new network, the Chinese government launched the Golden Shield Project (GSP, also called as the GFW) in 2008 as a political tool to filter information and censor politically sensitive speech (Chandel et al., 2019). Having been successfully evolved into the most complicated and regulated online censoring system in the world (Normile, 2017), the implementation of the GSP has also directly impacted on Chinese population's belief and thinking pattern by blocking access to blacklisted domains, such as Google, Facebook and Twitter to control the

information flow and monitoring all domestic social networking platforms to censor dissident ideas (Bu, 2013).

The second part of this literature review will be framed by three categories to research regarding the performance of China's Internet censorship: (1) limiting access to blocking websites; (2) lacking awareness of intellectual property rights; and (3) suppression on freedom of expression.

Limited Access to Blocked Websites

Since President Xi has become one of the most influential leaders in the People's Republic of China (PRC) history (BBC, 2017), he has been trying to revive communism as an official ideology to reinforce his grip on power and maintain political stability (Pomfret, 2017). Thus, the largest ideological campaign that China has experienced was launched (Zhao, 2016b). One of the biggest targets of the ideological campaign is higher education. The propaganda of the ideology campaign has taken over large proportions of China's universities' official webpages (Zhao, 2016a).

According to the study conducted by Jiang (2017), since most of the information on university websites are in relation to politics and the rest of the information are often unrelated to students' life in universities, Chinese university websites were regarded as "authoritative", "one-way communication", and "less informational" (Jiang, 2017, pp. 130). The limited access to informative websites explains the reason that caused Chinese international graduate students' lacked awareness of school resources (Jiang, 2017). An investigation on the Chinese university students' information selection for course work by Zhang et al. in 2019 also finds that the choice of official websites is the least favorable among other sites, while the use of social media is most welcome (Zhang et al., 2019).

Furthermore, Jiang (2017) also found that most of useful websites are blocked due to the Internet censorship, which led the Chinese International graduate students to ignore the utility of digital searching (Jiang, 2017). However, in Xiao's (2019) finding, even though Chinese international students have more freedom in directly accessing the blocked websites by the GFW, Internet censorship still influences their online activities, even in Canada (Xiao, 2019). According to Xiao's (2019) explanation, being able to directly access the uncensored world behind censorship, the Chinese international students perceive themselves as the group of educated people who can see the "truth" than those who cannot, which justified the existence of censorship in their perceptions (Xiao, 2019).

Lacking Awareness of Intellectual Property Rights

Since the rise of Chairman Mao and Communism in 1949, the abandonment of existing methods and schemes for rewarding and encouraging creation have turned concepts of private property rights into meaningless notions (Alford, 1995). Although a system of limited rewards has followed, any material inducement to innovation is still rejected by hard-core ideology (Alford, 1995). As a result of the Cultural Revolution, which distributed a final blow to intellectual property rights (IPRs) and prohibited all motivations to creation by regarding all such creations as national assets, innovative creations virtually ceased in China for several decades (Mercurio, 2012).

In 1979, China began to take account of IPRs as part of its greater strategy to engage the rest of the world (Mercurio, 2015). Having no experience in engaging issues involving IPRs, China was reluctant to include them, and thus began intensively studying intellectual property (IP) shortly thereafter (Ezell & Cory, 2019). China has continued to update and revise its laws and regulations relating to the protection of IPRs since 2001

(Toohey et al., 2015), for example, the Chinese Patent Law was revised in October 2009 to call on more effectively protect over patent rights while at the same time promoting native innovation (Mercurio, 2015). Congruently, the Judicial Interpretations of the Supreme People's Court on Several Issues Concerning Adjudicating Patent Infringement Disputes came into effect on 1 January 2010, and Implementing Regulations followed in February 2010 (Toohey et al., 2015). Furthermore, the Chinese Copyright Law was revised in April 2010 and the latest draft version of Chinese Trademark Law is also released in October 2011 after years of consultation (Zhang et al., 2014). However, inadequate laws for the protection and enforcement of IPRs are no longer the problem, but rather the enforcement of those laws and regulations is lacking (Mercurio, 2012).

Under the Internet censorship imposed by the Chinese government, the growth of Internet has been obstructed and the free flow of information has been controlled (Economy, 2018), which declined room for innovation (Lopez-Tarruella, 2012). To harness innovation, it is important to protect intellectual property rights (Wunsch-Vincent, 2011). The Chinese government holds a belief that the only way to develop the economy harmoniously is to carry out Internet censorship to keep social stability. However, to continue maintaining social stability, it is necessary to reduce innovation and abolish intellectual property rights (Lopez-Tarruella, 2012).

In the study conducted by Jiang (2018), Chinese international graduate students were concerned about plagiarism because the awareness of respecting intellectual property rights had not been addressed as a major issue during their undergraduate study (Jiang, 2018). In Xiao's (2019) study, the privacy awareness among Chinese undergraduates was found to be quite poor (Xiao, 2019).

Suppression on Freedom of Expression

Xi's ideological campaign in campus has created an atmosphere of anxiety among the university (Steinhardt, 2017). In 2019, party propaganda officials issued a notice at the Anhui Mechanical and Electrical Vocational and Technical College, calling students to register details of their public and private accounts on WeChat and QQ (Xi & Han, 2019). Fearful of a repeat of the pro-democracy protests in 1989 that were led by students, the Chinese government aims to control students' speech and thought and tries to influence them to control their professors and teachers through deploying students as spies because they believe isolating grievances helps them contain the society-wide discontent (Zhao, 2016a). Living under the scare of getting reported by students, any radical opinion against the government will be considered as anti-china. In 2018, You Shengdong, a professor, was fired by a university in China last year after students reported him for questioning a political slogan favored by Xi Jinping, the country's leader (Hernández, 2019). To avoid getting reported by the group of nationalists, any dissenter would rather remain silent in the classroom, as well as in social media. In 2017, a Chinese academic who called the founder of modern China Mao Zedong a "devil" on social media had been sacked by a prominent Beijing university (Blanchard, 2017).

According to the study by Lu and Singh (2017), the systematic political pressure has created widespread practice among Chinese scholars, which made them detect the borderline between legal and illegal while thinking critically (Lu & Singh, 2017). Lu (2016) stated that under the political pressure, the Chinese citizens also need to be cautious while expressing critical views (Lu, 2016). In the research conducted by Xiao (2019), although the Chinese international students believe that censorship has no effect

on them, they show a willingness to self-censor (Xiao, 2019). As noted by Jiang (2018), self-censorship becomes common (Jiang, 2018). For example, to avoid challenging the Chinese authorities, the Chinese international graduate students will intentionally ignore the writing topics that may contain possible questions or omit citation based on sensitive content (Chao et al., 2017). Due to the political limitation of online expression in China, professors and students are not allowed to post any comment that subvert the state power, even when it is related to their research field (Lyu, 2018). In the research conducted by Crist and Popa (2020), they revealed that Chinese international graduate students have strong reliance on the formative information and their personal/biased experience when coming to evaluate information (Crist & Popa, 2020).

Deficiencies in Current Literature

Based on the previous studies I found in the former literature examining the impacts of Internet censorship on the Chinese international graduate students' IL performance, conclusions should be drawn from four aspects according to students' IL: information seeking, information citing and information evaluating and information applying.

According to the current studies, it shows that the uninformative official websites discouraged the students from information seeking; the absence of promoting on intellectual property rights encouraged students' deficiency in citing habits; the suppression on free speech limited students' evaluating competency; the fear of violating Internet censorship prevent students from employing political sensitive information. However, the previous literature failed to present a strong relationship between the Internet censorship in China and the Chinese international graduate students' IL. With a

large proportion of studies focusing on the insufficiency of IL education on the students' IL development, only a small body of literature examined the role of Chinese Internet censorship in students' IL performance. As a result, a deeper examination of the impact of Internet censorship on Chinese international graduate students' IL performance is necessary.

CHAPTER 4

RESEARCH METHOD

To examine the influence of China's Internet censorship on the IL of the Chinese international graduate students, it's necessary to understand the students' perspectives on the role of Internet censorship in China as well as in their acquisition of IL. My research was guided by four research questions: 1) How do Chinese international graduate students assess their IL during their undergraduate study in China? 2) How do Chinese international graduate students assess their IL during their graduate study in Canada? 3) What are the perceptions of Chinese international graduate students regarding Internet censorship in China? 4) How do Chinese international graduate students describe the role of Internet censorship in their acquisition of IL?

To gain a broad and rich understanding regarding Chinese international graduate students' perceptions on the relationship between their IL and Internet censorship in China, a qualitative case study was employed and data were collected via one-on-one interviews featuring closed and open-ended questions. Furthermore, it's necessary to establish a detailed research design that is suitable to this topic and outlines participants selection, recruitment approaches, instruments, data collection and analysis, and ethical consideration.

Research Design

Qualitative case study is a research methodology that helps exploring a phenomenon within some particular context through various data sources, and it undertakes the exploration through variety of perspectives to discover multiple facets of

the phenomenon (Baxter & Jack, 2008). In qualitative research, case study is one of the frequently used methodologies (Yazan, 2015). According to Yin's (2009) recommendations for case study designing, four criteria were listed for consideration: first, research questions should be posed; second, exploring current experience within a real-world setting should be focused in this research; third, the data collected in this study will probably be a begin to future research due limitation of the scope of availability of participants; and forth, research should aim on revealing an in-depth, detailed reports of participants' experiences through case study questions.

I chose to study Chinese international graduate student's challenges in IL under the impact of Internet censorship of China, after I studied and cited research that provided evidence of the challenges faced by Chinese international graduate students in acquiring their IL, I specified my research questions through reading these literatures. As a result, the first two research questions were left specifically: "How do Chinese international graduate students access their IL during their undergraduate study in China?" and "How do Chinese international graduate students assess their IL during their graduate study in Canada?" By asking these questions, I could observe and learn first-hand, the students' own learning experience in IL during their study in China and in Canada. Therefore, it can be said that this case study explored research questions that were initially uncertain by the researcher, and which required exploration prior to launching this study.

I first aimed to understand the IL learning experiences of Chinese international graduate students during their both undergraduate study and graduate study, and then attempted to explain how the impact of Internet censorship in China could affect the students' IL assessment. Subsequently, my next two research questions, "What are the

perceptions of Chinese international graduate students regarding Internet censorship in China?” and “How do Chinese international graduate students describe the role of Internet censorship in their acquisition of IL?”, were addressed with an aim to understand the relationship between students’ IL acquisition and Internet censorship.

Yin (2009) implies that it is essential to endorse a case study that accompaniment a study’s theoretical framework, no matter it is for the purpose of improving or testing a theory. This study is investigating students’ IL learning under the impact of Internet censorship through the perspectives of Internet censorship mechanism. Thus, to develop a detailed understanding on the challenges faced by Chinese international graduate student in acquiring IL under the impact of Internet censorship, multiple case studies are adopted in this study. In conducting this case study, I pulled aspects from the mechanism of Internet censorship in China presented by Roberts (2018). The mechanism of Internet censorship allowed me to examine the impact of Internet censorship on students’ IL acquisition. The Internet censorship mechanism is framed by three categories that I employed to explain how Internet censorship in China affects its users, Chinese international graduate students, by using fear, friction and flooding (Roberts, 2018, pp.41-42). I collected the information about the challenges that Chinese international graduate students encountered from the literature review and obtained the information about the students’ IL learning experience from the semi-structured interview. I then use the Internet censorship mechanism in China to explain the behavior conducted by the students in building up their IL under the influence of Internet censorship. By having immersed the trilogy of censorship restriction in their IL acquisition through this qualitative study, I was better prepared to describe, analyze and explain Chinese

international graduate students' behavior under the restrictions of Internet censorship in China during their IL learning.

Participants Selection

The research site for this study was the University of Windsor located in Windsor, Ontario, Canada. The university has more than 4,000 international students including 660 from China (Caton, 2020). This research included students of Chinese-origin who enrolled in the University of Windsor as full-time or part-time students. They also met three other additional conditions.

1. They had to be a Chinese-origin graduate student at the University of Windsor.
2. They had to have taken their bachelor's degree in China mainland. Since the GFW only blocks people in mainland China from the outside world (Tilley, 2018), all these participants are the Chinese international students who have completed their bachelor's degrees in mainland China.
3. They had to be willing to participate in a 60-75 minutes, in-depth audio interview recording.

Participants who met these criteria made a voluntary decision to participate in this research. According to Schoch (2016), having three to four distinct cases in a multiple-case study is the most cases that one can practically handle (Schoch, 2016). As a result, the sample size for this study was four participants.

Recruitment Approaches

In this research, I applied one approach when recruiting the potential participants, which involved sending a recruitment post through WeChat, a trending social media

application used by Chinese international graduate students (see Appendix G). Since most of Chinese international graduate students have joined the same WeChat chat group, where users communicate useful information in chat groups to help each other, which was easy for me to find potential participants in these groups. After posting the recruitment flyer in these WeChat discussion groups, students who wanted to participate in this study clicked the survey link on the poster to schedule the interview and leave their email address. The online survey was preceded by a consent letter that requested for participants' consent, which they provided by checking a box. Once they did that, they were required to click another button to begin. Qualitative data collection followed a similar process.

Potential participants were forwarded a consent letter, and participants were asked for a signature to confirm that they consented to having an audio recording of their interview being made. The consent letter includes a summary of my study: what participants will be expected to do, as well as the expected duration of their participation. It also states very clearly that the participation is voluntary, and the information will be kept confidential. The forms also included my contact information so that participants can contact me with any questions. After reading and signing the forms, the participants were asked to answer three demographic questions. Then the interviews started. In this setting, each interview took around 60-75 minutes. According to Jamshed (2014), duration of 60 minutes or more allows enough time for the research and respondent to explore and discuss issues in depth (Jamshed, 2014).

The researcher later recruited four participants who showed interests through an online survey to participate in a one-on-one interview. A sample of four was determined

by an understanding of the balance between the limited potential participant pool and having in-depth interviews of participants in the limited research duration. An agreement with the University of Windsor Research Ethics Board that the maximum number of participants is four also suggested the sample size of this research. To protect their privacy, participants' names were replaced with codes: A, B, C, and D.

Instrument

The instrument adopted in this study is a self-administered questionnaire, which aimed at encouraging respondents to follow a prescribed path through the questionnaire (Jenkins & Dillman, 1997). To guide participants' responses toward specific interview questions, I organized and coded the interview questions into several themes, and the coding principle was based on their appearance in the interview instructions (Table 1). Generally, the S2* question group set in step 2 targets at participants' academic background; S3a* question group focuses on participants' academic research behavior during their undergraduate study in China; S3b* question group investigates participants' academic research behavior during their graduate study in Canada; S4* question group investigates participants' IL learning experience during their undergraduate study back in China; S5a* question group focuses on participants' awareness of Internet censorship; S5b* question group explores the participant' perceptions on Internet censorship; S6* question groups in step 6 explores participants' assumptions on their academic research behavior; and S7* question group aims to ask participants' suggestions on improving IL.

Table 1 Coding Modules of the Interview Questions in the Interview Instructions

| Step | Group | Questions related to | Coding |
|------|-------|----------------------|--------|
|------|-------|----------------------|--------|

| | | | |
|----------------|------|---|--------------------------|
| Step 2 (S2) | S2* | Participants' academic background | Q1-Q2 |
| Step 3 (S3) | S3a* | Participants' academic research behavior during undergraduate study | Q3, Q4, Q7, Q10 |
| | S3b* | Participants' academic research behavior during graduate study | Q5, Q6, Q8, Q9, Q11, Q12 |
| Step 4 (S4) | S4* | Participants' IL learning experience | Q13-Q16 |
| Step 5 (S5) | S5a* | Participants' awareness of Internet censorship | Q17-Q19 |
| | S5b* | Participant' perceptions on Internet censorship. | Q20-Q21 |
| Step 6 (S6) | S6* | Participants' assumptions on their academic research behavior | Q22-Q25 |
| Step 7 (S7) | S7* | Participants' suggestions on improving IL | Q26-27 |

This coding sheet outlined the specific topics for me to categorize the participants' response so that I could organize the finding sections based on the coded modules, so as assigning the data to be more evidently and accessibly displayed. The fundamental goal of gathering interview data was to examine the impact of Internet censorship on Chinese international graduate students' IL.

Specifically, the research investigates the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada, with reference to their information literacy skills under the impact of Internet censorship in China. The interview questions helped me obtain participants' understanding of the impact of internet censorship on their IL acquisition.

Data Collection

Data collection for this study included two parts: online survey and individual interview. To mitigate the risk of dual roles and conflict of interest, I created a recruitment pathway where potential participants can engage in this study by clicking on the survey link (<https://www.surveymonkey.com/r/BW97YSX>) in the WeChat recruitment poster to schedule an interview. The online anonymous survey contained two questions in total: 1) Please let me know which one of the following time slots you would prefer? 2) Please leave your email address for future correspondence. I listed five options for the first question, which are from 10 AM EST to 5 PM EST on each day between May 10th to May 14th. If the participants were unavailable during the time slots I provided, they wrote down their free time to schedule an interview. The purpose of the second question is to send the consent form and future correspondence to the participants.

Creswell (2015) suggests that a “one-on-one interview is a data collection process in which the researcher asks questions and records answers from only one participant in the study at a time” (p. 217). The purpose of conducting one-on-one interviews is to examine individuals’ experiences, visions, perceptions, principles, and inspirations on specific matters (Gill et al., 2008). The one-on-one interview approach also grants researchers to have more in-depth conversation with the participants. For example, when there were vague or undetailed information in participants’ responses, the researcher could continually ask additional questions to obtain more specific answers.

In this study, since the majority of the data is about personal experience, the data is more contextual and illustrative than numerical. Each participant was required to complete a one-on-one interview, and each interview took approximately 60-75 minutes.

Based on the interview guidelines, participants were required to sign the document of consent to participate in research (see Appendix A), and consent to video recording and audio taping (see Appendix B&C) before the beginning of the interview. After signing the forms and before participating in the interview, participants were asked two demographic questions. The data collected from this part provided participants' demographic data and allowed the researcher to examine participants' responses to specific interview questions based on their answers. Before the interview began, the researcher also declared several factors that participants need to know. Firstly, they were reminded of their rights to pass over or refuse to answer any questions in the interview, to withdraw from the interview, to raise questions when the interview questions confused them, or withdraw their data before the data interpretation. Participants were also informed that the researcher would record the audio tape of the interview conversation for data analysis, and they all chose to conduct the interview in Mandarin. Furthermore, the researcher requested them to help checking the accuracy of the interview transcript. These illustrations were designed to make sure that the interviews were carried out in a professional manner and to establish trust and understanding between the researcher and the participants.

Finally, in agreement with the protocols set in the consent form and the confirmation from the researcher's ethics board, all participants' interview transcripts were eligible and used into the data analysis.

Data Analysis

In qualitative research, Creswell (2015) suggests the researcher should explain information provided by each research participant during or immediately following data

collection. Thus, I translated and transcribed the data within one week after the interviews. I listened to the transcripts of the tapes and made some initial notes of the general findings of the conversations and specific quotes related to the research objectives. I also recorded any strange responses and made a list of all relative responses. The findings were then classified into different themes. Through data analysis, researchers interpret text segments and themes by reflecting on how the findings relate to existing research, as well as eliciting more abstract meanings, as suggested by Creswell (2015). Finally, I used critical thinking to synthesize the data and used the data to corroborate findings with other data sources.

Risk, anonymity and confidentiality

The current research ensured that privacy and confidentiality was ensured for each participant by following the TCPS 2 guidelines (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2014). All data is protected as any confidential information. During the completion of the online survey, potential participants were reminded to avoid providing identifying information to ensure their anonymity. The data were collected via SurveyMonkey, and all data were erased when research was completed.

For the individual interviews, participants' names were switched with codes to protect their identities. I have put 4 types of safeguards in place to protect the confidentiality and privacy of research participants: 1) physical safeguards, individual interviews were scheduled on Zoom with the each participant only; 2) administrative safeguards, the research data were only accessible to the researcher and the faculty

advisor; 3) technical safeguards, the personal computer were physically secured by the researcher, password-protected with strong, unique passwords, and encrypted so that data cannot be easily viewed by others if a computer is lost or stolen and a password cracked; and 4) research design safeguards, the process of anonymizing the information of participants and transcribing were completed as soon as possible. Further, to protect participants' own privacy, they were asked not to expose/share interview experience (content/ procedure) with anyone else.

Ethical Consideration

To respect the informed consent of the participants, the researcher first applied for approval to the Research Ethics Board and the permission from the University of Windsor to conduct this study. Secondly, the study respected the privacy of all participants, which means the participants remained confidential. The participants voluntarily agreed to participate in this study. They were not required to respond to all the questions if they felt uncomfortable. All participants are treated equally. The researchers respected all the human participants in the study and they balanced the risks and benefits.

CHAPTER 5

FINDINGS

Introduction

This chapter presents analysis of the data collected in my study. The study's findings provide a number of perceptions regarding several themes abstracted from the research questions, which includes the participants' academic background, their academic research behavior during their undergraduate study in China and their graduate study in Canada, their IL learning experience during their undergraduate study in China, their perceptions on Internet censorship and the relationship between Internet censorship and their IL acquisition, their assumptions on their academic research behavior, and their suggestions on improving IL. To contextualize the findings, it is important to introduce the participants' experience. The findings regarding their experiences are based on responses to S2Q1 and S2Q2, which can help explain the different IL learning experiences. It likewise offers university administrators insights on the setting of IL instructions and actions that an institution can launch to facilitate IL development.

Participants Academic Background

Information on participants' academic experience provides explanations to their different IL experience and perceptions.

Participant A

Participant A majored in language study during her post-secondary study in China. She has been studying for her master's degree in Education for 18 months in Canada.

Participant B

Participant B completed a bachelor's degree in Civil Engineering. After working as a university teacher for several years, she came to Canada to begin her graduate study in Education from September, 2020 till now.

Participant C

Participant C was studying electrical computer engine during both her undergraduate study in China and graduate study in Canada. She has been studying in Canada for a year and a half.

Participant D

During her undergraduate study in China, participant D majored in civil engineering. She has been a graduate student in the Master of Education program for two years.

Participants' Academic Research Behavior and IL Learning Experience

The questions in Step 3 (Q3-Q12) and Step 4 (Q13-Q16) were designed to explore findings of my first and second research questions: 1) How do Chinese international graduate students assess their IL during their undergraduate study in China? 2) How do Chinese international graduate students assess their IL during their graduate study in Canada? The findings in this section can be sorted into two themes: participants' academic research behavior and their IL learning experience.

Participants' Academic Research Behavior

To broadly understand the participants' academic research behavior during their study in China and Canada, questions in Step 3 (Q3-Q12) are essential. The findings in this part can be divided into two groups: participants' academic research behavior during their undergraduate study in China and participants' academic research behavior during their graduate study in Canada. Among the questions, findings from S3Q3, S3Q4, S3Q7 and S3Q10 answered the questions on participants' academic research behavior during their undergraduate study in China; while findings from S3Q5, S3Q6, S3Q8, S3Q9, S3Q11 and S3Q12 responded to the questions on participants' academic research behavior during their graduate study in Canada.

Participants' Academic Research Behavior during Undergraduate Study

To develop a better understanding on the participants' academic research behavior in their graduate study, it is vital to draw responses from S3Q3, S3Q4, S3Q7 and S3Q10. Among these four questions on how participants conducted their academic research during their undergraduate study in China, S3Q3 and S3Q4 aims to obtain information collection, S3Q7 focuses on information evaluation, and S3Q10 centers on information citation.

Information Collection. To understand how participants collect information studying in post-secondary institutions, it is necessary to explore their preference for search engines. Table 2 demonstrates participants' responses to S3Q3.

Table 2 Participants' Preference for Search Engines during Undergraduate Study

| | |
|---|---|
| | S3Q3: Which search engine do you prefer to use during your undergraduate research in China? (e.g., www.baidu.com, www.goolge.com, www.bing.com, etc.) |
| A | Google was most frequently used during my undergraduate study. Sometimes I would consider using Bing. However, I rarely used Baidu. |
| B | I often used Baidu to conduct research during my undergraduate study. During the senior year of university, my teacher taught us on how to use google scholar to conduct academic research. |
| C | I often used Baidu to conduct research. Sometimes I would also search academic information through some video websites, for example, Bilibili. |
| D | I usually use Baidu. |

There were several common responses regarding participants' explanations of choosing Baidu as their most preferred search engine (Table 3), which can be concluded as three factors: 1) Baidu's popularity among Chinese Internet users; 2) Baidu's convenient usage and free content; 3) Limited options for search engines. There was also a different response regarding participants' choice on preferred search engine.

Table 3 Participants' Reasons of Choosing Search Engine during Undergraduate Study

| | |
|---|---|
| | S3Q4: Why did you prefer to use this search engine to collect information? |
| A | I've learned how to use VPN during my undergraduate study. Since Google is a much bigger platform for collecting information, it was the best option for me to conducting academic research. I sometimes would consider using Bing since Bing has not been banned from China. |
| B | Since I have completed my bachelor's degree in 2008, which has been a decade ago. During that time, Baidu was the most popular and the most used search engine in China. Both of its abundant content and convenient usage made it my first option to conduct research. |
| C | I often used Baidu because it's the most popular and the biggest search engine in China. So, when it came to collect information, the first thing bumped into my head is opening Baidu website. |
| D | Because the options for search engines are limited and there are no better option than using Baidu. |

Participant A reported that she barely used Baidu during her undergraduate study in China, and she also explained the reason:

I have rarely used Baidu due to its enormous advertisements on the website. Also, I'm not sure if its marketing strategy or somewhat, the displayed search results may have been sorted according to its commercial intent. Furthermore, the information given on Baidu didn't deliver a deeper understanding on the subject you want to acknowledge. It seems that the information has not been organized or verified.

Information Evaluation. To understand how participants evaluated the information during their undergraduate study in China, it is vital to have them respond to S3Q7, which are listed in Table 4.

Table 4 Participants' Information Evaluation Strategy during Undergraduate Study

| | |
|---|---|
| | S3Q7: Could you describe how you evaluated the authority of information during your undergraduate study in China? |
| A | I would like to explain my evaluation strategy from three aspects: 1) I usually went to consult with my professors in my university because they would offer me some professional insights; 2) During my undergraduate study, I have conducted several field researches. Since most of my findings were first-hand, its authority was more convincing to me; 3) When it came to journal articles, I usually went to look up the author's previous study and his title in his university to evaluate the authority of his study. |
| B | I mainly relies on two strategies: 1) if it's about academic journals or books, I often evaluated its authority by checking its popularity among academia; 2) if it's about the information I gathered from online searching, I would evaluate it by the authority of the website. |
| C | Firstly, I would evaluate the information based on my own logics to see if the information reflects my assumptions. If not, I would go to find if there is any different views on the topic and I would go through the information again. Secondly, I would check the source of this information to evaluate its credibility. |
| D | I would check which party does the website belong to. If it is owned by an education institution or a government department, its credibility is generally higher than other sources; if it is owned by some individual program, it would seem doubtful to me. |

Among these four participants, all of them indicated that they would check the source of the information to evaluate the authority of information. Participant A and D

reported that they would also look up the credibility of the author to evaluate the information. However, there was a different response. According to participant C, she indicated that she would firstly evaluate the information based on her own logic. If the information failed to match her assumptions, then she would check the source's credibility.

Information Citation. As outlined in Table 5, the participants reported the citation format they have employed during their undergraduate study. Among these answers, most of them has indicated that the participant was not clear about the format they used in citation. Participant A indicated that the format she used was kind of like APA format; participant B and C reported that due to the major they studied during their undergraduate study, the citation format they employed was like IEEE format; while participant D stated that she used the citation standard required by school.

Table 5 Participants' Information Citation Method during Undergraduate Study

| | |
|---|---|
| | S3Q10: Could you describe how you cited information during your undergraduate study in China? |
| A | It's kind of like the APA format, but it's not completely the same as APA format. I don't know what it is called actually. |
| B | Due to the major I studied during my undergraduate study; we were required to use format like IEEE for information citation. |
| C | I have only written a few papers due to my major in undergraduate study. The exams and assignments rarely required citations, only papers did. |
| D | The way I cited information during my undergraduate study was basically the same as the way I used currently, which is, to find academic articles and use the citation format required by school. |

Participants' Academic Research Behavior during Graduate Study

The responses to S3Q5, S3Q6, S3Q8, S3Q9, S3Q11 and S3Q12 are associated with the research question on how participants assess their IL during their graduate study

in Canada. Among these six questions on participants' IL, S3Q5 and S3Q6 focus on information collection; S3Q8 and S3Q9 stress on information evaluation; S3Q11 and S3Q12 centers on information citation.

Information Collection. Table 6 listed the participants' explanations regarding the changes made in their choice on search engine. Among these four responses, only participant A indicated that she did not change her preference on search engine since she has been using Google for her undergraduate study. Participant B, C and D indicated that they have switched from Baidu to Google. Regarding their reasons for switching to use Google, participant B explained that because the content on Google is free. She also added that:

I could find academic information quickly, especially on Google Scholar.

Information like articles, publishers, journals and organization are well organized.

Participant C and D both indicated that the main reason they started to use Google is because they need to search English written information. Other than that, participant C indicated a second reason:

Furthermore, the authority of the academic information on Baidu is not very reliable. However, if you use Google Scholar, it is more convincing.

Regarding to their responses, it can be concluded as four factors: 1) free content; 2) well-organized information; 3) different language use; and 4) information reliability.

Table 6 Participants' Preference on Search Engines during Graduate Study

| | | |
|---|--|---|
| | S3Q5: Have you changed your preference on search engines during your graduate study in Canada? Why? | |
| A | No. | I'm still using Google. |
| B | Yes. | After I came to Canada, I used Google more often because it's free. |

| | | |
|---|------|--|
| C | Yes. | In Canada, I would use Google because I have to read English-written materials, while most of the content I found on Baidu were written in Chinese. |
| D | Yes. | I switched to Google only because of the language. I would use Baidu to search Chinese written information and use Google to search English written information. |

Among the reviews on difficulty of collecting information during graduate study, participant A reported that since she has learned how to collect information during her undergraduate study, she did not feel challenged while searching information during her graduate study. Participant B did not feel challenged as well because of the various content that school library and Google provided information. Participant D also indicated that, due to the abundant information in Canada, collecting information was not difficult. However, participant C expressed that collecting information during her graduate study was a little difficult for her due to her lack of skills in searching information:

First of all, it depends on what kind of information you want to search, because there could be a few sources you can find in some fields. Secondly, as a Chinese student, the main difficulty for me to collect information is the language barrier, which made me spend a lot of time on translating information.

The findings from S3Q6, listed in Table 7, emphasize the participants' experience on collecting information.

Table 7 Participants' Review on the Difficulty of Collecting Information during Graduate Study

| | | |
|---|-----|---|
| | | S3Q6: Is it hard for you to collect information for your master's study in Canada? Why? |
| A | No. | Since I have gained some experience during my undergraduate study, it was a lot easier for me to search academic the difficulty of collecting information during participants' graduate study, three out of four participants indicated that the difficulty is low. |

| | | |
|---|------|---|
| B | No. | First of all, the school library has provided us with various resource. Secondly, Google gives me the chance to access abundant content, which is very easy to operate. |
| C | Yes. | I personally find it more difficult, maybe it's because my skills in collecting information are not very high. |
| D | No. | Because it feels like you can find anything you want in Canada. The resources in Canada are more various and unlimited. |

Information Evaluation. The findings on how participants evaluated information during their graduate study were generated through participants' answers on S3Q8, which are listed in Table 8. Among these responses, participant C and D indicated that the strategy they employed to evaluate information was basically the same as what they used during their undergraduate study. Participant C explained

Because in Canada, the information are easier to access and more transparent. For example, if you find a literature, you can easily find the author's past experience, works and titles.

Participant D indicated that

Generally speaking, I evaluated the authority of the information based on whether it comes from a reliable academic organization. For example, I would evaluate the authority of academic articles based on their reputation in journals or whether they have a peer review.

While participant A and B reported that their evaluation strategy has changed after studying in Canada. Participant A recalled that the only difference is that she stopped relying on interview to evaluate information. Participant B stated that she has learned a new strategy to evaluate the authority of information:

There one strategy I learned while studying in Canada, which is to evaluate the credibility of academic article based on the authors' academic ability and credibility.

Table 8 Participants' Information Evaluation Strategy during Graduate Study

| | |
|---|---|
| | S3Q8: Could you describe how you evaluated the authority of information during your master's study in Canada? |
| A | Comparing to the methods I used during my undergraduate study, the only difference is that I rarely relied on interviews to evaluate information. |
| B | The methods I used in Canada are quite similar to the ones I applied during my undergraduate study. |
| C | It's basically the same as the one I used during my undergraduate study. |
| D | I used the same method that I applied during my undergraduate study. |

Regarding the difficulty of evaluating information during participants' graduate study in Canada, participants A and B indicated that the process of evaluation was difficult for them. Participant A explained that there is a lot of information she could access in Google:

Since Google is only responsible for displaying the information from other source, which means you cannot tell the credibility of the information searched on Google. Moreover, since I majored in liberal arts, most of the theories are subjective, which means during most of the times, you have to distinguish and evaluate the theory, or the argument based on your own perspectives.

Participant B indicated that since this was her first time studying in education:

Because I had studied civil engineering for 4 years as an undergraduate, and I already knew about the more famous academic platforms, so it was easier to judge the information. But after I came to Canada, because it was my first time to study education as a graduate program, you don't particularly know those academic

platforms that are more famous and authoritative in Canada. So, you need to take your time to collect and observe and filter the information yourself, because you know less, so it is relatively difficult.

Information evaluation was difficult for participants C and D. They believed that information in Canada is more reliable.

Table 9 Participants' Review on Difficulty of Evaluating Information during Graduate Study

| | | |
|---|---|--|
| | S3Q9: Is it hard for you to evaluate information for your master's study in Canada? Why? | |
| A | Yes. | Because I could access a lot of information. |
| B | Yes. | Because this is my first time studying in education. |
| C | No. | It's relatively easier for me. Because I could find more information to evaluate the authority of the information. |
| D | No. | It seems that in Canada, there are no fake news and less advertisement. |

Information Citation. Findings from S3Q11 are illustrated in Table 10, which shows the methods that participants employed while citing information during their graduate study. Among these four answers, only participant C indicated that apart from APA format, she would also use IEEE format due to the major she studied.

Table 10 Participants' Information Citation Method during Graduate Study

| | | |
|---|---|--|
| | S3Q11: Could you describe how you cited information and your master's study in Canada? | |
| A | Using APA format. | |
| B | Using APA format. | |
| C | I firstly learned APA format. Later I began to use IEEE format. | |
| D | If it were a scholarly article, I would use the latest version of APA to cite it. | |

Findings from S3Q12 are illustrated in Table 11. While reviewing on the difficulty of citing information during their graduate study, participant A and D indicated

that the level of difficult was low. Participant A thinks APA format is not that hard to understand. She also added

You may find it difficult at first, but after you get used to it, it's not difficult. I would also ask the teacher there to help me double check it, so I don't think it's difficult.

Participant D also thinks citing information was not difficult because the format is easy to understand. However, participants B and C reported that they felt challenged while citing information because they are unfamiliar with the APA format. Moreover, participant C explained “Since I’m not good at English, I always find paraphrasing is difficult for me.”

Table 11 Participants' Review on Difficulty of Citing Information during Graduate Study

| S3Q12: Do you feel challenged when citing information for your master’s study in Canada? Why? | | |
|--|------|--|
| A | No. | Because there is a standard format to refer to, and the APA format is not that difficult to understand. |
| B | Yes. | Because APA format has strict rules, which seems a little complicated to me. Also, the rubrics of each assignment requires using APA format correctly. |
| C | Yes. | It was difficult at first. After several practices by using templates, I find it is not that difficult. |
| D | No. | The template of APA format makes it easier for me to understand. |

Participants’ Information Literacy Learning Experience

To develop a deeper understanding and a better analysis on participants academic research behavior, it is essential to acknowledge participants’ IL learning experience. The S4* question group are still focused on research question: How do Chinese international graduate students assess their IL during their undergraduate study in China? In this section, participants’ IL learning experience is investigated in four aspects: 1)

information evaluation; 2) IL instructions; 3) information collection; and 4) information citation.

Information evaluation

The findings on participants' IL learning experience on evaluating information were obtained from participants' responses to S4Q13 (Table 12). Among these responses, three out of four participants reported that they haven't been taught to evaluate the authority of the information during their undergraduate study in China. Participant A recalled that although she has been taught about information evaluation, she didn't learn it in class. She explained

I went to ask the professor by myself. The professor would tell me to look at the credit of the author of the paper to see if the credibility of the article is reliable.

Participant B also indicated that she did not learn from teachers:

I remember when I was an undergraduate student, my teachers left assignments and I would do it by myself. We students would sometimes help each other to figure it out, but there was no formal class taught by teachers.

Participant C reported that she learned to evaluate the authority of information by herself:

I learnt by myself and evaluated the information based on if it seems logical.

However, participant D indicated that she was taught to evaluate information during her undergraduate study:

The teachers would make us ask us to cite information from reliable sources.

Table 12 Participants' Learning Experience on Information Evaluation

| | |
|--|---|
| | S4Q13: Have you been taught to evaluate the authority of the information during your undergraduate study in China? |
|--|---|

| | |
|---|---|
| A | Yes, I have, but it was not officially taught in class. |
| B | No, I haven't. |
| C | No, I haven't. |
| D | Yes, I have. |

Information Literacy

The findings on participants' IL learning experience were explored from their response to S4Q14.

Table 13 Participants' Learning Experience on Information Literacy

| | | |
|---|--|---|
| | S4Q14: Have you taken any IL courses during your undergraduate study in China? If you had, do you find it beneficial for your IL acquisition from the courses? If you had not, where did you learn from and did you find it helpful for you IL acquisition? | |
| A | No. | I learned by asking my professor and I found it useful for my IL acquisition. |
| B | No. | I didn't pay much attention to my IL acquisition. |
| C | No. | I learnt it by myself and it's not helpful. |
| D | No. | I learned it by asking my classmates and it's useful. |

As shown in Table 13, these responses highlighting the experience that all the participants share, which is that none of them have taken any IL courses during their undergraduate study in China. Participant A reported

During my undergraduate study, I was lucky to have a good professor who inspired me a lot. Before that I just had this awareness, I knew I had to protect other people's intellectual property, but I didn't know exactly how to do it and what form it should be taken. At that time, he showed me how to do it, and I found it very useful, although I still did not understand it completely. I always have a strong awareness of information literacy. It has something to do with my childhood education. When I started to travel to foreign countries from about 5th or 6th grade, I tended to be interested in western culture. Since I enjoyed reading

foreign news, I often saw issues of plagiarism in China reported by foreign medias. Maybe it's because of the shame, I would subconsciously pay more attention to these issues. Then I gradually realized that it's vital to respect copyright.

Participant B explained

During my undergraduate study, only a few teachers would offer us some tips on IL, but we haven't taken any official IL course in school. To be honest, I haven't learnt many concepts about IL during my undergraduate study. I only began to notice it after I became a university teacher. Because when I was an undergraduate student, I only focused on how to complete this assignment as soon as possible, as long as I could finish it and reach my target score. Since I was studying civil engineering, most of my assignments were usually about solving calculative problems, and rarely involved IL. Therefore, my awareness of IL was rather weak at that time.

Participant C said

I think it's quite a pity that I haven't take any IL course during my undergraduate study. If I had a teacher to teach me some relevant knowledge, I would have gained more expertise on this. However, no one has ever taught me, so I have to develop my IL on my own. Since the ability of self-learning was limited, so it's not very useful to me.

Participant D indicated

I figured it out by myself and communicated with my classmates. It's useful, because some of my classmates were good at digital technology and they would

help me if I have any questions. Furthermore, when I was studying my undergraduate degree, the internet was not as popular as it is now. Also, it's more convenient and faster for me to ask for help from my classmates than from my teachers.

All the participants have not taken any IL courses when they were undergraduate students. They developed their IL mainly by asking for help from classmates or friends, or figuring it out by themselves.

Information Collection

Findings on participants' learning experience on collecting information were gathered from S4Q15. As shown in Table 14, Participants A and D reported that they have been taught on information collection during their undergraduate study, while participants B and C have not.

Table 14 Participants' Learning Experience on Information Collection

| | S4Q15: Have you been taught about collecting information via Internet during your undergraduate study in China? |
|---|--|
| A | Yes, but not through an official course offered by the school, but by asking professors by myself. |
| B | No. I haven't. |
| C | No, I haven't. |
| D | Yes, I have. But not from any formal IL course. |

Participant A indicated that she has learnt from asking teachers by herself:

I was taught by my professor, who would recommend me some useful websites.

My sister and my friend would also help me because my sister was studying in Canada and my friend was in the US. They would lend me their school accounts so I can login into their school libraries to search literature.

While participant D reported that she also has not learnt from any official course:

My teacher would briefly mention which website should we use when writing papers.

Participant B added

I remember that my teacher only taught me about computer hardware and software, but not about how to process information and collect information.

Information Citation

According to the responses to S4Q16 (Table 15), none of the participants were asked to make citations in every assignment they have done when they were undergraduate students.

Table 15 Participants' Learning Experience on Information Citation

| | S4Q16: Have you been required to make citations in every assignment you have done during your undergraduate study in China? (e.g., oral presentation, essay, thesis, etc.) |
|---|---|
| A | No, I haven't. |
| B | No, I haven't. |
| C | No, I haven't. |
| D | No, I haven't. |

Among these responses, three out of four participants indicated that they haven't been asked to make citation in every assignment unless in paper. Participant B explained

Due to my major in undergraduate study, I was not asked to make citation for my assignments. But if I was writing a paper, my teacher would ask me to add references.

Participant C said

Unless I was asked to write a paper.

Participant D also indicated

Citation was not required for assignments. It was only required when writing papers, and the requirements were also strict.

Participant A reported that she cited sources in her assignments by herself:

Because the number of times we are required to do a presentation in this profession is very small. I did all of these on my own, not required by the school.

I think I might be the only one in my class who would do that.

Participants' Perspectives on Internet Censorship

The S5*question groups explored my research questions: What are the perceptions of Chinese international graduate students regarding Internet censorship in China? In this section, participants' perspectives on Internet censorship were investigated from two dimensions: 1) participants' awareness of internet censorship, and 2) participant' perceptions on Internet censorship.

Participants' Awareness of Internet Censorship

To ensure the participants understood what Internet censorship is, findings from S5Q17, S5Q18 and S5Q19 are vital.

Table 16 Participants' Application of VPN during Undergraduate Study

| | S5Q17: Have you ever used VPN while conducting your undergraduate research in China? Why? | |
|---|--|--|
| A | Yes. | Because I couldn't find enough information during my undergraduate study. |
| B | No. | Because I can find enough information for my study. |
| C | No. | I rarely need to use foreign information because of my major. |
| D | No. | Because my undergraduate major is civil engineering, I could find enough information in our school library and also in CNKI. |

Among these responses illustrate in Table 16, only participant A reported that she did use VPN for her undergraduate study. Three out of four participants indicated that they have not used VPN while they were studying their bachelor’s degree due to their major. Participant B explained

I was study civil engineering for my bachelor’s degree, most of my assignments or thesis is experimental. For example, I have to design a house by myself. first you have to draw its floor plan, and then you have to calculate its benefits according to the building materials you choose. Since the experimental methods and calculation methods were relatively fixed, and I could only apply the methods I had learned in class. So I rarely go to foreign websites to find academic information.

Table 17 listed the responses from S5Q18 and S519, which explores participants’ awareness of and experience with Internet censorship.

Table 17 Participants' Experience with Internet Censorship

| | S5Q18: Were you aware of the Internet censorship in China? | S5Q19: Have you ever written or cited any politically sensitive content in your undergraduate research? |
|---|---|--|
| A | Yes. | No. |
| B | No. | No. |
| C | Yes. | No. |
| D | Yes. | No. |

Among the responses from S5Q18, only participant B indicated that she wasn’t aware VPN during her undergraduate study. Participant B explained

I started my undergraduate study from 2004, while the Internet censorship was probably existed from in 2014.

Participants A, C and D indicated that they have briefly acknowledged VPN. Participant A reported

I was aware of it, but I didn't learn it specifically. But I'm aware that the Internet censorship in China did not block the access to foreign sites completely.

Participant C added

I remember when I was in the first or second grade, the computers in our school could access Google; several years later, the connection to foreign websites was lost. However, I managed to get used to the situation, so I also didn't really need to use VPN.

Participant D said

I just knew its existence, but have not acknowledged it in detail.

Among the responses to S5Q19, none of the participants reported that they have written or cited any politically sensitive information due to their major in their undergraduate study.

Participant' Perceptions on Internet Censorship

Among the participants who completed a bachelor's degree in mainland China, Internet censorship influenced their access to information. However, there are a few studies on exploring how students from mainland China perceive the existence of Internet censorship. Thus, findings in this segment investigates participants' perspectives on Internet censorship, which were obtained from the participants' responses to S5Q20 and S5Q21. S5Q20 attempted to identify participants' understanding of Internet censorship.

Participant A indicated her perception on Internet censorship, which is

Internet users can access to information freely, even to the information that could lead to inequality. In my opinion, censorship exists in global and local networks, which should be used for censoring the negative information, such as human trafficking, organ trafficking, child pornography, etc. Filtering out the information that against our ethical standards from dark webs are okay to me.

In participant B's perspective, Internet censorship is a system used for reviewing Internet users' opinions:

I have thought about this question that why do we need Internet censorship?

When we were in the era of traditional paper media, the review rubric was relatively strict. For example, if I want to publish an article in a newspaper or magazine, which would be reviewed by some specialists who possess right to decide whether your article should be published or not. But now it's the era of digital media, everyone can speak their own opinions online without permission. So the government would feel the need to review the users' speech in consideration of maintain social stability, since some speech could contain exotic information which could leave negative impact on society.

Participant C described her ideal Internet censorship as you can access all information, while you should also classify the content based on user's age:

If you don't want to visit the websites, like gambling or adult website, you can filter it out. However, there's always someone else who wants to reach the information you refused to see. From my perspective, I think there should be more freedom in this world. Everyone has the right to access to any information, but it needs to be restricted based on the content and the age of the user.

Participant D stated that she's not sure what exactly Internet censorship is about, but according to her own understanding, Internet censorship is some rules applied to block foreign websites:

I'm not sure about the details, but I know that if I want to access academic articles from foreign university's website, I might need to access it by using our school's IP or some special IPs. If I want to access information that have nothing to do with academics, it might be difficult for me to search for it.

S5Q21 attempted to explore participants perspectives on the advantages and the disadvantages of the Internet censorship, which are illustrated in Table 18.

Table 18 The Pros & Cons of Internet Censorship

| S5Q18: In your perspectives, what are the pros and cons of Internet censorship? Could you explain? | | |
|---|---|---|
| | PROS | CONS |
| A | It's beneficial to maintain our social stability. | The Internet censorship turns information into a privilege, because you can only access some information by making certain efforts. |
| B | The advantage of Internet censorship is to maintain social stability. For example, to prevent the spread of hate speech. | However, this might be a violation of free speech in Canada or North America. |
| C | 1) the censorship could filter the information that might potentially threaten public safety, such as gambling, people may want to try it after saw it on Internet; 2) if there is a classification on information, the spread of information would be safer; 3) This is also sort of market protection, to support the development of domestic Internet enterprises. | First of all, you can only see the information that they want you to see. Secondly, since there are a lot of useful information in foreign websites as well as advanced learning tools, for example, YouTube. |
| D | It's necessary to block negative information to maintain our social stability. | The source of information may be too limited. |

Among the participants' explanation on the pros of Internet censorship, all of them believed that Internet censorship is beneficial to maintain social stability.

Participant A stated that

Since the population of our country is way too large and the portion of educated citizens are small, the chance of spread exotic speech are relatively high.

Participant B also pointed out that Internet censorship can prevent the spread of hate speech. Participant D thought it's necessary to block information that threatens the social stability. Apart from maintaining social stability, participant C listed one more benefit that Internet censorship could make, which is market protection. She stated

For example, since most of the foreign websites has already developed advanced technology, while most of the websites in China hasn't. If introduce the foreign one into our country, our homemade websites may become less competitive.

Among the participants' descriptions on the cons of Internet censorship, three out of four indicated Internet censorship could limit the spread of information. Participant A mentioned that this may lead to information privilege, because you must make certain efforts to access the information you want to see, for example, to pay for VPN services to access blocked websites.

Participant C believed that the limitation of information would affect the users' critical thinking. She indicated that over time, users' ability to think independently is gradually getting lower because the information is limited. Participant C also indicated that Internet censorship limited our access to useful learning tool. She believed that since students in mainland China do not have the access, they not only do not have the chance

of using it, but also not have the chance to make cultural exchange with the people all around world.

Participant D regarded the disadvantage of Internet censorship as limiting the source of information.

However, participant B indicated the cons of Internet censorship as a violation to people's freedom of speech in Canada and North America countries She stated:

Before there was COVID-19, I used to see a lot of protests in public. In Canada, everyone has their freedom of speech. Anyone can protest if their rights are violated. I think it's may be the characteristics of North American countries; people live for freedom. Even during the lockdowns in pandemic, they still go to protests for their freedom of going out.

Thus, according to the participants, the advantages of Internet censorship are 1) maintain social stability, and 2) protect domestic market. The disadvantages are 1) limit information; 2) violate freedom of speech; and 3) cannot access useful learning tools.

Participants' Perspectives on the Role of Internet Censorship

The findings on this section explore my last research question: how do Chinese international graduate students describe the role of Internet censorship in their acquisition of IL? which were investigated by obtaining participants' responses through S6*question group. To understand how participants view the existence of Internet censorship from the perspective of IL learning, it is vital to ask the S6Q22 question. The responses are illustrated in Table 19.

Table 19 Participants' Perspectives on the Role of Internet Censorship

| S5Q22: Do you think Internet censorship impacts your IL learning? Why? | | |
|---|------|--|
| A | Yes. | Internet censorship has stimulated my desire for information and developed my ability to distinguish between information. |
| B | Yes. | For example, since some sites has been blocked, which could limit the limitation we collected. |
| C | Yes. | I think Internet censorship has had some impact on my information literacy: it limited my sources of information. |
| D | No. | Because my undergraduate major is civil engineering, I could find enough information in our school library and also in CNKI. |

Among the participants, three out of four claimed that the Internet censorship has impacted their IL learning. While participant B and C indicated the impact was negative, participant A reported the impact on her IL acquisition was positive. She believed that the existence of Internet censorship made her curious of the outside world, which motivated her will to search for more information. However, according to participant B, she believed that the censorship impacted her IL by blocking information. She stated

Because the censorship only censored information that it considered as bad, while leaving the information that it considered as harmonious. However, the trueness of information are not guaranteed. Furthermore, for those students who study arts and history, the less information they get to access, the less real information they would find, which would negatively impact their research.

In participant C's view, Internet censorship has impacted her IL learning like the way that education system did:

Internet censorship is kind of like our education system, you can only see what they want you to see, they don't teach you how to search or judge the information you want to know, so it becomes a completely passive learning mode.

There's only participant D indicated that her IL learning has not been affected by Internet censorship.

S6Q23, S6Q24 and S6Q25 are questions setting up for participants to make assumptions, each question makes up a situation that requires participant making decisions. Findings from these three questions explore how Internet censorship affects participant IL.

Table 20 Participants' Assumptions on Blocked Websites

| | | |
|---|--|-------------------------------------|
| | S6Q23: Thinking of your experience of conducting academic research during undergraduate study in China, if the access to the website you want to open is blocked. | |
| | What would you do? | How would you feel? |
| A | The most important thing is to finish my paper, so I would go ask my friends in other country to help me find the information. | I would feel confused. |
| B | I may change to other similar website to get the information. | I would feel surprised and curious. |
| C | I usually just went to another site. | I might be disappointed at first. |
| D | I probably think it caused by the break down the server. I would reopen this site in the next day. | I would feel nothing. |

According to participants' responses to S6Q23 (Table 20), if the website cannot be opened, participant A would ask her friends for help. Participants B and C would choose to go to other websites to find information. Participant D would wait until this website reopens.

Among the participants, all of them would feel differently under this situation. Participant A would feel confused. Her first thought would be "was this website collapse?" and her second thought would be "why even an academic website was blocked?" Participant B would be surprised and curious about the factor that led to this situation "why was it blocked?" Participant C would be disappointed. While participant

D would feel nothing, she would just assume the server needs maintenance and wait patiently until it goes back to normal.

Table 21 Participants' Assumptions on Information Cannot be Found

| S6Q24: Thinking of your experience of conducting academic research during undergraduate study in China, if you cannot find the information you want to cite. | | |
|---|---|---|
| | What would you do? | Why? |
| A | I would interview the local people to obtain the information I couldn't find. | Because this was what I did when I was writing my undergraduate thesis. |
| B | I'd probably change my way of thinking. | Because I don't want to get into some unnecessary trouble. |
| C | I would ask my teacher for help. | Because my teacher knows better than I do. |
| D | I would ask my teacher for help. | Because I think my teacher is better at searching than I am. If I can't find the information I want, I would ask the teacher and he would help me to find it. |

Among the participants' responses to S6Q24 (Table 21), two of them indicated that they would go to ask their teacher for help, because their teachers knew better than they did. However, participant A reported that she would get first-hand data through interviews, because she did it during her undergraduate study. Participant B would just change her way of thinking to avoid unnecessary trouble, she stated

Because if the information I am looking for may have been blocked, which implies the authenticity of this information may have not been verified in China. If I insist on citing it in my paper, I might get into some trouble. So, I would switch to a different way of thinking.

Table 22 Participants' Assumptions on Politically Sensitive Information

| S6Q25: Thinking of your experience of conducting academic research during undergraduate study in China, if the information you want to cite is politically sensitive. | | |
|--|--|--|
|--|--|--|

| | What would you do? | How would you feel? | How about during your graduate study in Canada? |
|---|--|--|---|
| A | I would avoid citing information that contains political sensitivity, I might just change to a different topic | I think talking about politics is very tired and very sensitive. | If I were in Canada, I would only write the topics related to foreign countries. |
| B | I would delete this kind of information. | I would feel helpless. Because you are just doing academic research for no other purpose. | If in Canada, I think Canada is relatively open. I would firstly ask my professor by email that whether I could cite politically sensitive information in my paper. If I am writing about a sensitive topic related to China, I would express my opinion base on my own limited knowledge on political information. |
| C | I wouldn't use it. | I think it would be strange, if something bad happened, why we are not allowed to talk about it? | If I would stay in Canada afterwards, I would cite whatever I want to cite. However, if I would go back to China, I would be careful to cite the information. |
| D | I would probably seek help from my teacher and ask his advice. | I feel that I will be more curious and want to find out why it is politically sensitive. | I would feel the need to find out why this information is politically sensitive and seek help from my teacher. |

Among these responses, three out of four participants indicated that they would not cite politically sensitive information in their undergraduate papers, because according to participant B

Because in China, it is better not to cite information that is politically sensitive information. You need to be careful with what you say in avoidance of getting into some unnecessary trouble.

Participant D stated

It depends on whether the information is useful and reliable to me. I don't think it has much to do with political sensitivity. I have never encountered this, so if I encounter this situation in the future, I would probably seek help from my teacher and ask his advice.

They all felt differently if encountered this situation, except for participants B and C, who have same question why we are not allowed to cite this information.

According to participants' responses to the assumptions that citing information in Canada, participants B and D would go to ask teacher to see if they can cite politically sensitive information in their papers, whether it's about Canada or China. According to participant B, she believed there is more freedom of speech in Canada, she added

In one of my classes, all of the students are Canadian except me. They actively shared their opinions in the classroom, including their critics on the school board management. If you were in a classroom in china's university, you were not allowed to criticize your school leaders, even if you were already a teacher. So, based on my experience in Canada, I think there is more freedom of speech.

However, participants A and C reported that they would not write any politically sensitive information involving China, but if it's about foreign country, they would cite it.

Suggestions to Information Literacy

As the last question set in the whole interview, S7Q26, attempted to demonstrate participants' suggestions to their peers on improving IL. Participant A gave two suggestions, which are do not plagiarize and take some IL courses:

My first suggestion is respecting other people's copyrights and citing whatever you got. Thinking independently and do not criticize others just because they

think different than you. My second suggestion is that before you come to study in Canada, please take some time to understand the academic culture in North America, which will not only help you to integrate the learning environment quickly, but also helps you complete your assignments easily. Furthermore, since most of the future graduate students have already gained a lot of experience in using digital technology, it would be also helpful for them to take some IL courses.

Participant B also listed two pieces of advice: 1) communicate with your classmates, and 2) practice your critical thinking skills. She explained

First of all, apart from having high Internet skills, it is also vital to communicate with your classmates. Especially during this period of the epidemic, when everyone is at home taking online classes. I think it is important to have a good teammate. In this way, when you are evaluating information, you can share your ideas and have new ideas. Secondly, it's necessary to exercise and improve your critical thinking. Because once you improved your critical thinking skill, you will not only be able to evaluate the authenticity of information more quickly, but also will solve problems faster.

Participant C stated four suggestions:

1) Please make good use of Google, where you can find wealthy information. There are also many academic forums that provide professional information; 2) When you read a paper, please read the abstract part at first. So, you can quickly understand what the research is about. Also, you can expand your information from its reference lists; 3) Please learn searching by using keywords, so that you

can improve the efficiency of searching information; 4) If there are IL courses online, please take them.

Participant D indicated three advice:

Firstly, searching information needs skills, so please practice your search skills; Secondly, you will also need to ask teacher for advice. Because I remember when I was writing my graduate paper for the first time, I spent a whole week on searching information but ended up in finding out nothing. So, I went to the teacher for help. Then I gradually understood that even a punctuation mark could affect the search results. So, if you encounter a problem, please ask your teacher in time; Lastly, the key to accurate your search result is to use keywords properly. It's also important to choose the right search engine, because sometimes you cannot find the literature in google scholar, but in Google.

Among these suggestions, taking IL courses, getting support from teachers and peers, improving digital searching skills are highly recommended in their suggestions.

Theory Development

According to the research findings, most of the participants have changed their methods on collecting, evaluating and citing information (see Table 6, 9, 10). None of the participants took an IL course during their undergraduate study in China (see Table 13). All the participants will avoid citing politically sensitive information (see Table 22). All the participants' IL learning has been affected by Internet censorship in China (see Table 19), which is consistent with the assumed mechanism of Internet censorship in Chapter 2.

Summary

Chapter 5 shows findings based on participants' responses to modularized interview questions that designed according to research questions. In general, they had no IL experience during their undergraduate study in China. They felt challenged while asserting their IL during their graduate study in Canada. All the participants perceived the Internet censorship as information filter which illustrated the assumed theoretical foundation of China's Internet censorship. Most of them admitted that Internet censorship has impacted their IL learning, while few of them didn't recognize its impact.

CHAPTER 6

DISCUSSION, IMPLICATION AND CONCLUSION

Based on the findings of this research, it is obvious that Internet censorship affect Chinese international students' IL acquisition. However, the findings provide several important insights that deserve further discussion. For example, the findings address the Internet usage experience, which refers to Internet users' different patterns of Internet usage. Furthermore, the findings also convey implications regarding impacts of both Internet censorship and IL learning experience, as well as the suggestions on improving IL learning that justify further investigation. It is important to understand how these implications can promote the future for Chinese international graduate students' IL acquisitions despite how broad these implications are. It is also vital to point out the questions arose from the findings, and these serves as a guide for the future research.

Discussion

The Internet Usage Experience

The Internet usage experience refers to the Internet users' different patterns of Internet usage. Previous research has discussed that Internet users have different attitudes towards Internet regulations when they experience Internet censorship in different Internet usage contexts (Fallows, 2008; GIUS, 2012; Shklovski & Kotamraju, 2011; Wang & Mark, 2015). However, these can also impact on students' perspectives on the role of Internet censorship in their IL learning.

According to Wang & Mark's (2015) study, Internet users with longer Internet usage experience indicated more awareness of Internet censorship. Their findings suggest

that users may get used to censorship and regard censorship as new normal, which associates with the previous research by Kiesler et al. (1984), which identified how usage of information technologies developed the norms (Wang & Mark, 2015). In analysis of the 1986 Shuttle challenger incident by Vaughan, a launch failure led by the phenomenon that engineers gradually accepts warnings as normal, a term of “normalization of deviance” was made, which explains the phenomenon that Internet censorship is getting normal among the users (Human Factors 101, 2016).

The findings of this study report how Internet usage experience affects the participants’ views on the role of Internet censorship in their IL learning. All the participants regarded Internet censorship as a system to censor information or people’s opinion. However, due to the different Internet usages experience, participant A, with longer experience on using VPN than other participants, addressed Internet censorship as normal and believed that the censorship improved her IL learning. In contrast, participants B and C, as new Google users after studying in Canada, indicated that their IL learning was passively influenced by Internet censorship Participant D considered Internet censorship has having nothing to do with her IL learning. She admitted that it was because her ability in collecting information was not good.

In conclusion, findings in participants’ perceptions on Internet censorship in context of their Internet usage are consistent with the previous findings that different longitude on Internet affects users’ attitudes towards Internet censorship (Wang & Mark, 2015). Moreover, the example of “normalization of deviance” also explains why participant A considered Internet censorship as normal phenomenon and found it useful to her IL learning.

The Impacts of Internet Censorship

Roberts (2018) defined censorship as the cutdown on free expression of or free access to information by the government, which will be implemented when the government considers the information has the power to hinder their authority. Thus, two types of actions will be constrained by censorship: expression of information and access to information (Roberts, 2018). This study found that the Internet censorship impacted students' IL acquisition during their process of collecting by restricting their access to information and expression of information, which can be explained through the mechanism of censorship: fear, friction and flooding (2018).

Fear. Participants' responses to the S5b* and the S6* question groups illustrate the impact of fear on their expression of information, which is consistent with the previous studies, such as Davies (2007), Berry (2008), Lu and Singh (2017). These past studies found that the pressure of censorship has produced self-censorship among Chinese intellectuals. During the interview on the S5b* questions, the participants regarding censorship as the authority's action on taking down the negative information to maintain social harmonious; and all of them referring it as the advantage of Internet censorship, which shows their supportiveness towards the censorship, in return, their fears on expression of information are also detected. According to Davies (2007), Chinese scholars must "detect where the border between safety and punishment is at any given moment" (p. 4). The participants' responses to the S6* question group highlighted the impact of Internet Censorship on fear, when being asked whether they would cite politically sensitive information in their research, the participants would avoid doing so in consideration of their future development in China. One participant reported

that she would avoid using the information if it is censored in China. Thus, fear, the first type of censorship, affects students' IL ability on citing information.

Friction. According to the participants' responses to S3*, S5* and S6* question groups reflected the second type of censorship, friction, that the Internet users must pay extra costs when accessing particular information, which is consistent with the previous studies conducted by Yuen (2015), Lu et al. (2017), Chandel et al. (2019). According to Yuen (2015), "many mainland scholars are now limited to do their research as they can rely mostly on domestic search engines and online research tools where English-language information is limited" (p. 58). In the findings from S3* question group, participants reported their reasons of changing their preferred search engine from Baidu to Google after studying in Canada due to the change of language use, while in the responses to S5a* question group, participants rely on the domestic search engines due to their limited needs of the information. IL is based on access to information, which means one cannot develop the abilities of analyzing, organizing, and employing information unless one has previously accessed information (Saunders, 2017). In the participants' responses to S5b* question group, participants indicated restricting information limited their ability on evaluating information. In the responses to S6* question group, most participants indicated that the Internet censorship has negatively influenced their IL because of the limited access to information. However, in contrast, one participant reported that her IL was improved by Internet censorship, which is consistent with the findings from the study by Hobbs & Roberts (2018). Their study suggests censorship as "a potential mechanism through which users actually have access to more information despite increased censorship" (p. 634-635), because the increasing level of censorship may motivate the

individuals to seek off-limits information. As a result, the study found that the function of friction affects students' IL on collecting and evaluating information.

Flooding. The impact of flooding can be found in the participants' responses to S3* and S5b* question groups, which is the information created by the authority affects the students IL learning. This finding is consistent with the findings from the study by Jiang (2017), that because of the limit amount of useful information and huge amount of propaganda in the university's official website, students find collecting information difficult. In the S3* question group's responses, participant A reported that she has started using Google Scholar when she began her undergraduate study in China, while participant B, C and D switch from Baidu to Google after they began their graduate study in Canada. However, all of them noted that the information sources on Baidu are limited and even fake. According to Roberts (2018), flooding and friction are tightly combined: flooding causes friction by making information more costly to access and thus increase the time of validating the information. The findings from S5b* question group suggest that the students find it difficult to tell the truth from the censored information due to the limited information source. Participant B also indicated that limited information source would restricts the student's ability on critical thinking. As a result, the function of flooding impacts students' IL on collecting and evaluating information.

In summary, the impact of Internet censorship is significant on the student's IL acquisition by affecting students' IL on collecting, evaluating and citing information. However, it is also important to address the students' IL experience in this part.

The Impacts of IL learning Experience

According to Sun (2002), to integrate IL into the Chinese education system, it is essential to strengthen the teaching of IL in school. However, during the interviews on S4* question group, when recalling their IL learning experience during their undergraduate school, all the participants reported that they haven't taken any IL instruction courses before (see Table 13), which is consistent with the study conducted by Li & Wang (2009). Li & Wang found that IL education in China faces the problem of inadequate IL course. Therefore, they emphasized the need for developing IL courses in school.

Information collection. Based on the participants' responses to S4Q15 (see Table 14), two out of four participants reported being taught how to collect information through online searching, however, none of them were taught through formal courses in university. Participants A and D both stressed the need to ask their teacher by themselves. According to participant A,

You have to go and ask your professor by yourself, otherwise you can only learn by yourself. There's no chance you can be taught in class. I was lucky enough to have such a responsible professor, he really helped me a lot.

Same as participant A, participant D also reported that she had to consult with her teacher after class. However, according to the participants' responses to S3b* question group, most of them reported that they found no difficulty when searching relevant information for their graduate research in Canada, which is consistent with the study by Liu & Winn (2009), that Chinese students showed confidence in their information searching skills.

Information evaluation. The finding from S4Q13 (see Table 12) suggests that most of the students haven't been taught about evaluating information from formal class during their undergraduate study except for one participant, who reported that she has been taught to evaluate information by identify the information sources in class. In contrast, the rest of the participants indicated that they have not learned any kind of evaluation strategy from class, but from their peers or their self-studies. Participant B shared her thoughts on this,

I think it would be great if we integrate information evaluation into our syllabus, because it is essential for one's study. I have thought about this before, especially when I began to study in Canada, I started to notice the importance of information evaluation, it's essential for us to develop our critical thinking ability.

Another participant also showed regrets on this, she indicated that it would be a great help for her study if she learned the strategy on information evaluation during her undergraduate study. As a result, according to the findings from S3b* question group, participants felt challenged on evaluating information due to the various sources displayed online, which is consistent with the previous study by Zhao & Mawhinney (2014), that Chinese students found difficulty in evaluating the information sources.

Information citation. The findings of S4Q16 (see Table 15) indicates that none of the students have been required to make citations in every assignment they have done, which is consistent with the finding from Wang et al. (2002), who suggested that the Chinese students do not necessarily cite the original sources (Wang, 2002, p. 99). One participant reported that most of her classmates would not make citations in their assignments since it has not been required. Based on the participants' responses on S3a*

question group, all of them were not clear with the citing format they applied during their undergraduate study. As a result, participants' responses to S3b* question group reports that they find it challenging when citing resources in their assignments due to the unfamiliarity with the format and the difficulty of paraphrasing, which are consistent with the study by Zhao & Mawhinney (2014), that the Chinese students find it difficult to tell when and how to cite as well as summarizing materials. According to participant C, she found paraphrasing is difficult because of her language barriers, which is also associated with the finding by Zhao & Mawhinney (2014).

Suggestions on IL Learning

To help future Chinese international graduate students' IL learning, the interviewed participants suggested three ways to improve IL acquisition: taking IL courses, getting support from teachers and peers, improving digital searching skills.

Taking IL courses. Participants' suggestions on IL instruction addressed the need to integrate IL instruction in education system. Due to their lack of IL learning experience through formal instruction courses in school, participants suggested that professional instruction is indeed important for developing IL. According to Ranaweera (2008), Information skills are vital to achieve success in education. Since lifelong learning has become one of the main topics in the higher education sector, students need to be educated with IL skills to develop the aspects of reasoning and critical thinking in student-centered learning by teachers and librarians. Therefore, IL curriculum plays a major role in cultivating these skills among the university and school students (Ranaweera, 2008). As Zhao & Mawhinney (2014) addressed in their study, promoting in-class IL instruction is essential in equipping students with required skills for their

academic research. As a result, integrating IL instructions in classroom can benefit students' development in IL.

Getting support from teachers and peers. The second strategy given by the participants is to seek assistance from tutors and classmates, which is consistent with the study by Crist and Popa (2020). In their study, Crist and Popa (2020) found that the most often mentioned strategy on improving IL is to ask professors and other classmates about the source. Zhao & Mawhinney (2014) also found that Chinese graduate students tended to start their academic research with their supervisors' instruction on the research process. One participant reported that she used to find difficulty in searching academic resources, after several appointments with the Writing Support in school, she found it useful for her research. Moreover, another participant also mentioned that she found it beneficial for her IL learning in discussing with her classmates, especially during the period of Covid 19, when most of the class were taken online, it's helpful to learn with other students.

Improving digital searching skills. Participants introduced two methods on improving digital searching skills: using keywords properly and picking the right search engine. Consistent with the previous studies, (Chu et al., 2009; Ayoub, 2016), keyword searching is perceived the most important and useful method for academic research by students. One participant noted that selecting the proper keywords helps locating the relevant resources effectively. According to the study by Ayoub (2016), the participants also claimed that keyword searching is most essential to searching databases effectively. Secondly, the participants suggested that picking the proper search engine is also important for collecting information. As an initial source, search engine is considered as

an assistance for collecting information (Bilal, 2000; 2012); “search engine is a searching tool providing information searching service to users, which can search, abstract, organize and process the internet information by referring to certain strategies and using specific computer programs” (Jiang, 2013, p. 229). As a result, it’s essential to select a right search engine for academic research. The findings of this study suggests that Google is the most welcomed search engine among the participants.

Implications

The findings of this study imply several significant suggestions for future practice. Based on the existing findings and literature review, the researcher has recognized two factors to improve the development of Chinese international graduate students’ IL learning: Chinese international graduate students, and post-secondary institutions. Students should consider finding support from institutions and practicing personal skills on IL, and post-secondary institutions should consider providing students sufficient resources and supports.

Chinese International Graduate Students

The findings of this research suggests students to get support from their tutors and classmates as well as to practicing their personal skill on digital search skills. However, regarding the resources provided by the university, there are extra approaches that could improve students’ IL acquisition. Firstly, students need to increase the awareness of school services on academic support. Apart from seeking support from supervisors and peers, students should also get familiar with the academic support service provided by universities (Zhao & Mawhinney, 2014), such as writing support services and writing

workshops, from which they can get professional instructions and advice. Moreover, although they must meet the English proficiency from the university's admission requirement to get enrolled, students should continue to practice and learn English since the impact of English proficiency can influence their understanding on academic materials, which in turn affects their motivation to do research and learning (Jackson & Sullivan, 2011).

Post-secondary Institutions

Universities and faculties should implement the IL training to non-English speaking students, for example, Chinese international graduate students (Zhao & Mawhinney, 2014) and assist teachers to help students' IL learning. Departments, like the international student center, should offer more opportunities for Canadian teachers to experience teaching international students IL, which would help the teachers understand the difficulties faced by students to develop better teaching strategies. Furthermore, universities should also help teacher create and employ evaluation that helps students' IL learning, such as giving instructions on making citations, providing academic resources, practicing students' critical thinking skills and helping students getting familiar with the services provided by universities. Moreover, the post-secondary institutions in China should also enhance IL instructions in curriculum, which would not only help Chinese international students adapt into studying aboard efficiently, but also benefits the IL education in China.

Conclusion

To clearly lay out the findings of the study, it is necessary to revisit the research questions:

1. How do Chinese international graduate students assess their IL during their undergraduate study in China?

2. How do Chinese international graduate students assess their IL during their graduate study in Canada?

3. What are the perceptions of Chinese international graduate students regarding Internet censorship in China?

4. How do Chinese international graduate students describe the role of Internet censorship in their acquisition of IL?

With regard to the first research question, three out of four participants chose Baidu as preferred search engine to collect information due to its popularity in China, except for one participant, who have already started using Google to do research; most of the participants evaluate information by identify the source of information except for one participant, who reported relying on self-judgement; regarding to citing information, none of the participants understood the citation format they employed during undergraduate study.

With regard to the second research question, after study in Canada, participants changed their preference of search engine mostly because of the change of language use, only participant felt challenged in collecting information; all of the participants learned efficient strategies to evaluate information, while two of them found it difficult due to the huge amount of information and insufficient knowledge base on the field of study; all of

the participants reported using APA format when citing information, while two of them felt challenged due to the unfamiliarity with the format and low English proficiency.

Regarding the third research question, during their undergraduate study, three out of four participants reported not using VPN while conducting research in China due to their majors. Only one participant was aware of Internet censorship. All of the participants considered Internet censorship as a system to censor information or people's opinion. Regarding the pros and cons of Internet censorship, all of the participants regarded Internet censorship as a strategy implemented by government to maintain social stability, however, it restricts the spread of information.

Regarding the fourth research question, three out of four participants indicated that Internet censorship has impacted their IL acquisition. Two of them reported that their development of IL were limited by Internet censorship while one of them indicated the impact of Internet censorship facilitated her IL learning. However, one participant did not find the impact of Internet censorship on her IL learning. Regarding their assumptions, none of the participants would cite any information related to politically sensitive.

By integrating the mechanism of Internet censorship in China by Roberts (2018), the research findings suggest that Internet censorship impacted students' IL acquisitions by restricting expression of and access to information, which confirm the assumed theoretical establishment suggested in chapter two.

Limitations and Future Research

There are four limitations existed in this research: researcher biases, study methodology, sample size, and research participants.

Researcher biases. The researcher and the participants have similar backgrounds that they have both completed their undergraduate study in mainland China and enrolled in a Canadian post-secondary institution, which offered the researcher insights into participants' experiences. However, it may have also narrowed the researcher's mindset when creating the interview questions, which has heavily depended on her own experiences. For example, the S5Q19 question were designed based on the researcher's research experience during her undergraduate study, while most participants reported that they had no such researching experience because of their field of study, which relatively restricted the research findings on S5Q19 and varied from the researcher's expectation.

Research methodology. The researcher conducted a qualitative case study; while she realizes that the majority of her method depends on self-report, which may be regarded as an unreliable approach to some researchers.

Sample size. This study may be limited because the researcher only investigated Chinese international graduate students from the University of Windsor. The findings of this study cannot be applied to students from other universities.

Research participants. Although the study tries to include Chinese international graduate students from different parts of China, implementation of information literacy in Chinese universities is varied from region to region (Guo & Zhu, 2019). The Chinese international graduate students' different learning experiences in IL may become a limitation to the study. Moreover, the participants were drawn from various disciplines, which means that the participants may have differential learning experiences in IL. For example, students from science-related faculties may have more opportunities to learn IL in the classroom because of required courses (Li et al., 2016). Furthermore, the

participants' misunderstandings of what Internet censorship is and the influences of their perceptions on Internet censorship on the study findings could be one of the factors that affects this study. The confusion about the definition of Internet censorship impacted participants' responses in the interview.

Recommendations for Future Research

This study explored the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada. Based on the study's findings and limitations, as well as related literature, the researcher makes three recommendations.

Firstly, a similar research study should be conducted in a broader range of population size to study the Chinese international students' IL acquisition under the influence of Internet censorship. For example, the study could draw participants from a broad range of Canadian post-secondary institutions.

Secondly, a mixed methods studies are recommended for examining the influence of Internet censorship on students' IL proficiency. A study could use a self-assessment survey to measure students' information literacy skills, for example, Standardized Assessment of Information Literacy Skills (SAILS), a 45-item multiple-choice, college-level test aligned with the ACRL Information Literacy Competency Standards for Higher Education from Kent State University. Individual interviews could then be employed to investigate the extent to which each censorship mechanism influences students' IL learning.

Thirdly, since the students from different disciplines have differential IL learning experiences (Li et al., 2016), further research should explore how IL affects a variety of

academic disciplines. This would also help to identify the impact of Internet censorship on Chinese international students' IL acquisition. For example, a future study could investigate students in STEM (science, technology, engineering, mathematics) and non-STEM disciplines.

In conclusion, a mixed methods study on the examination of the impact of Internet censorship on Chinese international students' IL acquisition in Canadian post-secondary schools is suggested for future study. It would be also helpful to further explore the impact of Internet censorship on Chinese international students' self-evaluation of their IL in Canadian post-secondary schools.

REFERENCES

- Alford, W. P. (1995). *To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization*. Stanford University Press.
- Amarakoon, L., Sakunthala, K., & Amarakoon, L. (2013, November 29). *Information Literacy and Higher Education: With Special Reference to University of Bolton, Academic Centre Sri Lanka*.
- Association of Colleges & Research Libraries. (2000). *Information literacy competency standards for higher education*.
<http://www.ala.org/acrl/standards/informationliteracycompetency>
- Association, A. L. (2019). ACRL STANDARDS: Information Literacy Competency Standards for Higher Education | Library Association | College & Research Libraries News. <https://doi.org/10.5860/crln.61.3.207>
- Association of College and Research Libraries (ACRL). (2016). *Framework for Information Literacy for Higher Education*,
<https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf>
- Ayoub, Y. (2016). An Investigation of Information Literacy of International Graduate Students: Skills, Challenges, and Needs. *Electronic Theses and Dissertations, 2004-2019*. <https://stars.library.ucf.edu/etd/5037>
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*, 544–559.
- BBC. (2017). Xi “most powerful leader since Mao.” *BBC News*.
<https://www.bbc.com/news/world-asia-china-41730948>

- Berry, M. (2008). *A History of Pain: Trauma in Modern Chinese Literature and Film* (p. 432 Pages). Columbia University Press.
- Bi, J. (2001). The Internet revolution in China: The significance for traditional forms of communist control. *International Journal*, 56(3), 421–441. JSTOR.
<https://doi.org/10.2307/40203576>
- Bilal, D. (2000). Children’s use of the Yahoo! search engine: I. Cognitive, physical, and affective behaviors on fact-based search tasks. *Journal of the American Society for Information Science*, 51(7), 646–665.
- Bilal, D. (2012). Ranking, relevance judgment, and precision of information retrieval on children’s queries: Evaluation of Google, Yahoo!, Bing, Yahoo! Kids, and Ask Kids. *Journal of the American Society for Information Science & Technology*, 63(9), 1879-1896. doi:10.1002/asi.22675
- Blanchard, B. (2017, August 4). Chinese academic who called Mao a “devil” says he was sacked. Reuters. <https://www.reuters.com/article/us-china-education-idUSKBN1AK0PE>
- Breivik, P., Byrne, A., Forest Horton, W., Ferreiro, S., Boekhorst, A., Hassan, H., Ponjuan, G., Lau, J., & Candy, P. (2006). *High-level Colloquium on Information Literacy and Lifelong Learning, Bibliotheca Alexandrina, Alexandria, Egypt, November 6-9, 2005: report*. <http://eprints.rclis.org/3829/>
- Bu, R. (2013). The Great Firewall of China. *Murray State University*.
- Bundy, A. (ed.) (2004). *Australian and New Zealand Information Literacy Framework principles, standards and practice*, 2nd ed. Adelaide: Australian and New Zealand Institute Information Literacy.

- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada (CIHR, NSERC, & SSHRC). (2014). *Tri-council policy statement: Ethical conduct for research involving humans*.
http://www.pre.ethics.gc.ca/pdf/eng/tcps2-2014/TCPS_2_FINAL_Web.pdf
- Cai, Y., & Zuo, B. (2019). From the Finnish Experience to the Chinese Path: Review and Reflections on Chinese Research on Finnish Education. *ECNU Review of Education*, 2(2), 217–233. <https://doi.org/10.1177/2096531119852251>
- Caton, M. (2020, February 6). University offers supports to Chinese international students. *Windsorstar*. <https://windsorstar.com/news/local-news/university-offers-supports-to-chinese-international-students>
- Chandel, S., Jingji, Z., Yunnan, Y., Jingyao, S., & Zhipeng, Z. (2019). The golden shield project of china: A decade later. *An in-Depth Study of the Great Firewall*. 111–119. <https://doi.org/10.1109/CyberC.2019.00027>
- Chao, S., Evans, B., Phillips, R., Polger, M., Posner, B., & Sexton, E. (2017). The CUNY-shanghai library faculty exchange program: Participants remember, reflect, and reshape. *Publications and Research*.
https://academicworks.cuny.edu/bb_pubs/93
- Chen, Y.-H., & Ullen, M. V. (2011). Helping international students succeed academically through research process and plagiarism workshops. *University Libraries Faculty Scholarship*. <https://doi.org/10.5860/crl-117rl>
- Christe, D., Mathur, R., Lee, S., Mazur, K., Badurek, C., Bhatt, J. & Morton, M. (2016). A game-based learning approach to information literacy. Knovel Global

Academic Challenge, Elsevier.

https://www.elsevier.com/___data/assets/pdf_file/0003/185592/Game-Based-Learning-white-paper.pdf

Chu, S. K. W., Chow, K., & Tse, S. (2009). The development of students' information literacy and IT skills via inquiry PBL and collaborative teaching. *Proceedings of the American Society for Information Science and Technology*, 46(1), 1–22.
<https://doi.org/10.1002/meet.2009.1450460245>

CNKI. (n.d.). Retrieved July 25, 2020, from

http://eng.oversea.cnki.net/kns55/support/en/about_cnki.aspx

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Upper Saddle River, N.J.: Pearson/Merrill Prentice Hall.

Crist, E., & Popa, D. (2020). Information literacy and cultural context: Chinese English language learners' understandings of information authority. *College & Research Libraries*. <https://doi.org/10.5860/crl.81.4.646>

Cui, Y. (2001). What's the 'new' for the new curriculum? – An analysis of the basic education curriculum reform outline (Trial). *Exploring Education Development*, 9: 5–10. (In Chinese.)

Cui, Y., & Zhu, Y. (2014). Curriculum reforms in China: History and the present day. *Revue Internationale d'éducation de Sèvres*.
<http://journals.openedition.org/ries/3846>

Danappa, P. V. (2015). Design and Development of Information Literacy Programmes and Practices in the Electronic Environment with special Reference to

Engineering College Libraries in Mumbai University.

<http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/63522>

Davies, G. (2007). *Worrying About China: The Language of Chinese Critical Inquiry*.

Harvard University Press. <https://research.monash.edu/en/publications/worrying-about-china-the-language-of-chinese-critical-inquiry>

Dingli, A., & Seychell, D. (2015). Who Are the Digital Natives? In A. Dingli & D.

Seychell (Eds.), *The new digital natives: Cutting the chord* (pp. 9–22). Springer.

https://doi.org/10.1007/978-3-662-46590-5_2

Economy, E. C. (2018). The great firewall of China: Xi Jinping's Internet shutdown. *The*

Guardian. <https://www.theguardian.com/news/2018/jun/29/the-great-firewall-of-china-xi-jinpings-internet-shutdown>

Ezell, S., & Cory, N. (2019). *The Way Forward for Intellectual Property Internationally*.

Information Technology and Innovation Foundation.

<https://itif.org/publications/2019/04/25/way-forward-intellectual-property-internationally>

Fallows, D. (2008k). *Most Chinese Say They Approve of Government Internet Control*.

Pew Internet & American Life Project, Washington, DC.

Gallardo-Echenique, E. E., Marqués-Molíás, L., Bullen, M., & Strijbos, J.-W. (2015).

Let's talk about digital learners in the digital era. *The International Review of Research in Open and Distributed Learning*, 16(3).

<https://doi.org/10.19173/irrodl.v16i3.2196>

- Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal*, 204(6), 291–295. <https://doi.org/10.1038/bdj.2008.192>
- GIUS. (2012). Global Internet User Survey. http://www.internetsociety.org/sites/default/files/GIUS2012-GlobalData-Table-20121120_0.pdf
- Guo, J., & Zhu, H. (2019). Embedded Information Literacy Instruction in the Mobile Environment: A Case Study. *International Journal of Librarianship*, 4(2), 94–110. <https://doi.org/10.23974/ijol.2019.vol4.2.129>
- Hernández, J. C. (2019, November 1). Professors, Beware. In China, Student Spies Might Be Watching. *The New York Times*. <https://www.nytimes.com/2019/11/01/world/asia/china-student-informers.html>
- Hobbs, W. R., & Roberts, M. E. (2018). How Sudden Censorship Can Increase Access to Information. *American Political Science Review*, 112(3), 621–636. <https://doi.org/10.1017/S0003055418000084>
- Huang, R., Li, B., & Zhou, L. (2016). Information literacy instruction in Chinese universities: MOOCs versus the traditional approach. *Library Hi Tech*, 34(2), 286–300. <https://doi.org/10.1108/LHT-02-2016-0013>
- Human Factors 101. (2016, August 9). Normalization of deviance. *Human Factors 101*. <https://humanfactors101.com/2016/08/09/normalisation-of-deviance/>
- Jabeen, M., Yun, L., Rafiq, M., Jabeen, M., & Tahir, M. (2014). Information literacy in academic and research libraries of Beijing, China Practices, methods and

problems. *Information Development*, 32.

<https://doi.org/10.1177/0266666914562845>

Jackson, P. A., & Sullivan, P. (2011). *International students and academic libraries: Initiatives for success*. Association of College & Research Library.

Jamshed, S. (2014). Qualitative research method-interviewing and observation. *Journal of Basic and Clinical Pharmacy*, 5(4), 87-88. doi:10.4103/0976-0104.141942

Jenkins, C. R., & Dillman, D. A. (1997). Towards a Theory of Self-Administered Questionnaire Design. In *Survey Measurement and Process Quality* (pp. 165–196). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118490013.ch7>

Jiang, M. J. (2018). The development of digital skills in adapting to the UK learning environment—A learner experience study on Chinese international postgraduate students.

Jiang, M. (2013). The business and politics of search engines: A comparative study of Baidu and Google's search results of Internet events in China. *New Media & Society*, 16, 212–233. <https://doi.org/10.1177/1461444813481196>

Jiang, Y. (2017). *A phenomenological study: Experiences of Chinese students using educational technology in American universities* [D.Ed., Indiana University of Pennsylvania]. ProQuest Dissertations Publishing.
<http://search.proquest.com/docview/2007197384/abstract/23C80A4A23394A3APQ/1>

Kennedy, G. E., Judd, T. S., Churchward, A., Gray, K., & Krause, K.-L. (2008). First year students' experiences with technology: Are they really digital natives?

Australasian Journal of Educational Technology, 24(1), 108-122.

<https://doi.org/10.14742/ajet.1233>

- Kolikant, Y. B.-D. (2010). Digital natives, better learners? Students' beliefs about how the Internet influenced their ability to learn. *Computers in Human Behavior*, 26(6), 1384–1391. <https://doi.org/10.1016/j.chb.2010.04.012>
- Li, G. (2016). Research on the Paths of Cultivating College Students' Information Literacy. *2016 International Conference on Management Science and Innovative Education*.
- Li, J., Zhong, Y., & Wang, L. (2016). The Status, Demanding and Curriculum Countermeasure Suggestions of Information Literacy for the Postgraduate: A Case Study of Capital Normal University. *Library and Information Work*, 34(6), 90–99. <https://doi.org/10.13266/j.isn.0252-316.2015.05.011>
- Li, X., & Wang, X. (2009), "Information literacy education for improving innovative ability of postgraduate in China", *Education Technology and Computer Science, ETCS' 09 First International Workshop on IEEE*, Vol. 1, pp. 408-412
- Liao, Y., Finn, M., & Lu, J. (2007). Information-seeking behavior of international graduate students vs. American graduate students: A user study at Virginia Tech 2005. *College & Research Libraries*. <https://doi.org/10.5860/crl.68.1.5>
- Liu, G., & Winn, D. (2009). Chinese graduate students and the Canadian academic library: A user study at the University of Windsor. *Journal of Academic Librarianship*, 35(6), 565–573. <https://doi.org/10.1016/j.acalib.2009.08.001>
- Lopez-Tarruella, A. (2012). Google and the law: Empirical approaches to legal aspects of knowledge-economy business models. *Springer Science & Business Media*.

- Lu, S. (2016). *Verification of intellectual equality: A case study of Chinese modes of critical thinking*. <http://hdl.handle.net/1959.7/uws:41239>
- Lu, S., & Singh, M. (2017). Debating the capabilities of “Chinese students” for thinking critically in Anglophone universities. *Education Sciences*, 7(1), 22.
<https://eric.ed.gov/?id=EJ1135096>
- Luo, L. (2010). Web 2.0 Integration in Information Literacy Instruction: An Overview. *The Journal of Academic Librarianship*, 36, 32–40.
<https://doi.org/10.1016/j.acalib.2009.11.004>
- Lyu, X. (2018). *The effectiveness of online discussion forums and recommendations for Chinese higher education*. <https://dspace.library.uvic.ca/handle/1828/9335>
- Lu, Z., Li, Z., Yang, J., Xu, T., Zhai, E., Liu, Y., & Wilson, C. (2017). Accessing google scholar under extreme internet censorship: A legal avenue. *Proceedings of the 18th ACM/IFIP/USENIX Middleware Conference: Industrial Track*, 8–14.
<https://doi.org/10.1145/3154448.3154450>
- Mercurio, B. (2012). The Protection and Enforcement of Intellectual Property in China since Accession to the WTO: Progress and Retreat. *China Perspectives*, 2012(2012/1), 23–28. <https://doi.org/10.4000/chinaperspectives.5795>
- Mercurio, B. (2015). China, Intellectual Property Rights, and the WTO: Challenging but Not a Challenge to the Existing Legal Order. In C. B. Picker, J. Greenacre, & L. Toohey (Eds.), *China in the International Economic Order: New Directions and Changing Paradigms* (pp. 293–318). Cambridge University Press.
<https://doi.org/10.1017/CBO9781107449480.018>

- Mozur, P. (2015, September 13). Baidu and Cloud Flare Boost Users Over China's Great Firewall. *The New York Times*.
<https://www.nytimes.com/2015/09/14/business/partnership-boosts-users-over-chinas-great-firewall.html>
- Normile, D. (2017, August 30). Science suffers as China's internet censors plug holes in Great Firewall. <https://www.sciencemag.org/news/2017/08/science-suffers-china-s-internet-censors-plug-holes-great-firewall>
- People's Daily Overseas New Media. (2019, February 20). *China's largest online academic library CNKI criticized for monopoly—People's Daily Online*.
<http://en.people.cn/n3/2019/0220/c90000-9548124.html>
- Pingp. (2011, June 1). The Great Firewall of China: Background. *Torfox*.
<https://cs.stanford.edu/people/eroberts/cs201/projects/2010-11/FreedomOfInformationChina/category/great-firewall-of-china/index.html>
- Pomfret, J. (2017, October 16). Opinion: Xi Jinping's quest to revive Stalin's communist ideology. *Washington Post*. <https://www.washingtonpost.com/news/global-opinions/wp/2017/10/16/xi-jinpings-quest-to-revive-stalins-communist-ideology/>
- Prague Declaration. (2003). Towards an information literate society.
<http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/PragueDeclaration.pdf>
- Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*, 9(5), 1–6. <https://doi.org/10.1108/10748120110424816>
- Ranaweera, P. (2008). *Importance of Information Literacy skills for an Information Literate society*.

- Roberts, M. (2018). Introduction. In *Censored: Distraction and Diversion Inside China's Great Firewall* (pp. 1-20). PRINCETON; OXFORD: Princeton University Press.
doi:10.2307/j.ctvc77b21.4
- Roberts, M. E. (n.d.). *Margaret (Molly) E. Roberts*. Retrieved June 24, 2021, from <http://www.margaretroberts.net/>
- Sapore di Cina. (2020). The list of blocked websites in China in 2020—Latest news. *Sapore Di Cina*. <https://www.saporedicina.com/english/list-of-blocked-websites-in-china/>
- Sara Kiesler, Jane Siegel, and Timothy W. McGuire. 1984. Social psychological aspects of computer-mediated communication. *Am. psychologist* 39, 10, 1123–1134.
- Saunders, L. (2017). Connecting Information Literacy and Social Justice: Why and How. *Communications in Information Literacy*, 11(1).
<https://doi.org/10.15760/comminfolit.2017.11.1.47>
- Schoch, K. W. (2016). Case study research. In Burkholder, Gary J., Cox, K. A., Crawford, L. M. (Eds.), *The Scholar-Practitioner's Guide to Research Design, 1st Edition* (pp. 227 – 241). [VitalSource Bookshelf Online].
- Shklovski, I., & Kotamraju, N. (2011). Online contribution practices in countries that engage in Inter-net blocking and censorship. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 2011, 1109–1118.
- Steinhardt, H. C. (2017). Discursive accommodation: Popular protest and strategic elite communication in China. *European Political Science Review: EPSR; Cambridge*, 9(4), 539–560. <http://dx.doi.org/10.1017/S1755773916000102>

- Sun, P. (2002). Information Literacy in Chinese Higher Education. *Library Trends*, 51(2), 210–217. <https://doi.org/10.1177/0266666914562845>
- Sun, Q. (2018). Research on the practice of information literacy education model based on students' information behavior analysis. *2018 3rd International Conference on Modern Management, Education Technology, and Social Science (MMETSS 2018)*.
- Tilley, M. (2018). *The Great Firewall of China: Implications of Internet Control for China Post-Tiananmen Square Massacre to Present Day*.
<https://dash.harvard.edu/handle/1/37945137>
- Toohy, L., Picker, C. B., & Greenacre, J. (2015). *China in the International Economic Order*. Cambridge University Press.
- Wang, F. (2019). Problems and countermeasures in the keywords of academic papers. *Journalism and Mass Communication*, 9. <https://doi.org/10.17265/2160-6579/2019.01.003>
- Wang, D., & Mark, G. (2015). Internet Censorship in China: Examining User Awareness and Attitudes. *ACM Transactions on Computer-Human Interaction*, 22(6), 1–22.
<https://doi.org/10.1145/2818997>
- Wang, Y., Martin, M. A., & Martin, S. H. (2002). Understanding Asian Graduate Students' English Literacy Problems. *College Teaching*, 50(3), 97–101.
<https://doi.org/10.1080/87567550209595885>
- Ward, Shirley (2008). *University of Bolton Information Literacy Framework*.
Manchester: UOB, 16p. www.bolton.ac.uk (2013/09/04).

- Wunsch-Vincent, S. (2011). *Harnessing public research for innovation – the role of intellectual property*. World Intellectual Property Organization.
<https://www.wipo.int/publications/en/details.jsp?id=227>
- Xi, W., & Han, J. (2019, April 8). Chinese Universities Ordered to Spy on Staff, Students in Ideological Crackdown. <https://www.rfa.org/english/news/china/universities-04082019144318.html>
- Xiao, R. (2019). *We know and we compromise: How do Chinese international students respond to Chinese Internet censorship*.
- Xu, J., & Yuan, X. (2013). Online scholarly publishing in China: Who? What? How? *Learned Publishing*, 26, 89–100. <https://doi.org/10.1087/20130205>
- Xu, J., Wang, Z., & Tang, W. (2020). *Who published in Chinese predatory journals? A study on the authorship of blacklist journals*.
<https://www.ideals.illinois.edu/handle/2142/106529>
- Yao, Q. (1997). A Preliminary Discussion on the Training of University Teachers' Information Accomplishment. *Bulletin of Medical Library*, (1):8-9.
- Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20, 134–152
- Yuen, S. (2015). Becoming a Cyber Power: China's cybersecurity upgrade and its consequences. *China Perspectives*, 2015.
<https://doi.org/10.4000/chinaperspectives.6731>
- Zellmer, J. (2019, July 27). Publish or Perish: How China's Elsevier Made its Fortune | *Schoolinfosystem.org*. <http://www.schoolinfosystem.org/2019/07/27/publish-or-perish-how-chinas-elsevier-made-its-fortune/>

- Zhang, W., Wei, L., & Li, Y. (2014). The Third Revision of Chinese Trademark Law – Analysis and Comment. *IIC - International Review of Intellectual Property and Competition Law*, 45(5), 556–586. <https://doi.org/10.1007/s40319-014-0218-7>
- Zhang, X., Li, S., & Zhang, H. (2019). Media and Information Literacy of University Students in China: Status Quo, Issues, and Improvement. *American Journal of Information Science and Technology*, 2(4), 83. <https://doi.org/10.11648/j.ajist.20180204.11>
- Zhao, J. C., & Mawhinney, T. (2015). Comparison of native Chinese-speaking and native English-speaking engineering students' information literacy challenges. *The Journal of Academic Librarianship*, 41(6), 712–724. <https://doi.org/10.1016/j.acalib.2015.09.010>
- Zhao, J., & Mawhinney, T. (2014). Identifying Challenges Faced by Chinese Undergraduate Engineering Students in Acquiring Information Literacy Skills – A Report on Survey Findings. 24.686.1-24.686.31. <https://doi.org/10.18260/1-2--20578>
- Zhao, S. (2016a). Xi Jinping's Maoist revival. *Journal of Democracy; Baltimore*, 27(3), 83–97.
- Zhao, S. (2016b). The ideological campaign in Xi's China rebuilding regime legitimacy. *Asian Survey*, 56(6), 1168–1193. <https://doi.org/10.1525/as.2016.56.6.1168>

APPENDICES

Appendix A: Consent to participate in an interview

CONSENT TO PARTICIPATE IN AN INTERVIEW

TITLE OF STUDY: *Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship.*

You are asked to participate in a research study conducted by Haoying Wang, under the supervision of Dr. Clayton Smith, from the Faculty of Education at the University of Windsor. This research will contribute to the researcher's thesis project.

If you have any questions or concerns about the research, please feel to contact Haoying Wang at wanglow@uwindsor.ca or her faculty supervisor, Dr. Clayton Smith, at Clayton.Smith@uwindsor.ca.

PURPOSE OF THE STUDY

This study explores the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada, regarding the development of their information literacy skills under the impact of Internet censorship in China. The overarching focus of the thesis are encapsulated in three main research questions: 1) What are the perceptions of Chinese international graduate students regarding Internet censorship in China? 2) How do Chinese international graduate students assess their information literacy after arriving in Canada? 3) How do Chinese international graduate students describe the role of Internet censorship in their acquisition of information literacy?

PROCEDURES

If you volunteer to participate in this study, you will be asked to complete an online questionnaire and an individual one-on-one interview lasting 60 to 75 minutes.

Owing to the Covid-19 pandemic, your interview will be conducted online. The interview time will be negotiated and informed through email prior to the one-on-one interview.

Interview times will be arranged between 9:00 AM EST and 3:00 PM EST on weekdays.

In this interview, participants will be asked to:

1. Read and sign the consent forms;
2. Answer two demographic questions;
3. Attend the 60-75 minutes, one-on-one interview with the investigator;
4. Let the investigator know if you have any questions about the interview questions (if necessary); and
5. Check the accuracy of the text data provided by or related to you through email. If you do not respond/send feedback to the member-checking email within four days or its receipt, your data will be regarded as accurate automatically.

You will need to sign the consent forms in advance, which will allow the investigator to record their conversation in the interview and translate it into text data for later analysis. The consent forms are also attempting to protect your right to withdraw, refuse to answer questions, and ask the researcher to repeat/interpret questions. You will then need to answer two demographic questions that include the participants' program of study (different programs of study have different learning experiences in information literacy) and the length of the participants' study in Canada (some participants may have not gotten used to studying in Canada if they have just arrived in Canada). In the ice-breaker phase, some open- and close-ended questions will be asked to explore your experience.

You will be asked for a description of your academic research behaviors in China and in Canada. Later, interview questions will feature more closed- and open-ended questions regarding your IL learning experience and your perceptions on Internet censorship. These questions will be used to probe/expand the academic research behaviors mentioned in the ice-breaker phase.

POTENTIAL RISKS AND DISCOMFORTS

There may be potential psychological risks associated with the research. You may feel uncomfortable sharing your past experiences, which may recall your unpleasant experience or make you feel a little nervous. Social risks and dual/multiple roles risks may be high given the likelihood that you and the researcher might be familiar with each other. The economic risks may be medium-high if your responses could influence your ability to gain employment in China. To mitigate the risk of dual roles and conflict of interest, I make sure to recruit participants by posting poster in group chats to ensure voluntary participation. To avoid the social risks and the economic risks, I make sure to keep an individual's participation confidential and protect the confidentiality of research participants' personal information.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

This research has no direct benefit to participants. However, some indirect benefits may still exist. This research can help Chinese international graduate students who study in Canada to cope with the overwhelming amount of information and use the information effectively. Studying this problem can also help Canadian international educators to understand the challenges that Chinese international graduate students' meet while conducting research. Faculties/administrators will be able to develop more effective approaches to help Chinese international students assessing their IL through providing instructions on seeking, citing, evaluating, and using information. This could lead to enhancements in the extra-curriculum setting at Canadian post-secondary institutions.

COMPENSATION FOR PARTICIPATION

Participants will be paid a \$10 prepaid credit card on completion of the study.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

You will be informed about how the data will be kept confidential in advance through the consent forms sent by email. Your personal information and audio recordings collected through interviews will be password-protected and maintained in the researcher's personal computer. The researcher and the faculty advisor will be the only two persons who can access and use raw materials. Before the raw data is interpreted, you have the right to review and edit the audio-record/ field text contents. Pseudonyms are used for all participants in the discussion section. When the researcher retells your experience, the data are carefully aggregated to protect your privacy. Even with the permission of disclosing your story, the researcher makes sure your privacy is not easy to identify. The destruction of the audio recordings will be completed after transcription and verification.

The researcher applies four types of safeguards to protect your confidentiality and privacy: 1) physical safeguards, the researcher schedule private interviews on Zoom with you only; 2) administrative safeguards, the researcher and the faculty advisor are the only two persons who can access the research data; 3) technical safeguards, the researcher physically secures her computer, password-protect her computer with strong, unique passwords, and encrypt her computer so that data cannot be easily viewed by others if a computer is lost or stolen and a password cracked; 4) research design safeguards, the researcher anonymize your information and transcribes raw data as soon as possible. To protect your own privacy, please do not expose/share your interview experience (content/ procedure) with someone else.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be involved in an interview. If you volunteer to participate in an interview, you will agree to be recorded. You may withdraw from the study up to three weeks following the interview without consequences of any kind. The three-week constraint does not include the period for member-checking. If you withdraw, the

information and the data belonging to you will be immediately deleted. You may also decline to answer any questions you do not want to answer during the interview, and still remain in the study.

If you decide to withdraw prior to the interview, you can leave the site without any consequences. If you decide to withdraw after the interview starts, you can do so by leaving the site.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

The study report will be published on the University of Windsor Research Ethics Board websites.

Web address: <https://scholar.uwindsor.ca/research-result-summaries/>

Date when results are available: *June 10, 2021*

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF THE RESEARCH PARTICIPANT/LEGAL

REPRESENTATIVE

I understand the information provided for the study [Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship] as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Name of Participant

Signature of Participant Date

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct the research.

Signature of Investigator Date

Appendix B: Consent for Video Recording

Consent for Video Recording

Research Participant Name:

Title of the Project: *Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship.*

I consent to the video-recording of interviews.

I understand these are voluntary procedures and that I am free to withdraw at any time by requesting that the recording be stopped. I also understand that my name will not be revealed to anyone and that recording will be kept confidential.

Tapes are maintained in the researcher's personal computer and password protected.

The destruction of the video records will be completed after transcription and verification.

I understand that confidentiality will be respected and that the video records will be for professional use only.

This research has been cleared by the University of Windsor Research Ethics Board.

(Research Participant)

(Date)

Appendix C: Consent for Audio Recording

Consent for Audio Recording

Research Participant Name:

Title of the Project: *Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship.*

I consent to the audio-recording of interviews.

I understand these are voluntary procedures and that I am free to withdraw at any time by requesting that the recording be stopped. I also understand that my name will not be revealed to anyone and that recording will be kept confidential.

Tapes are maintained in the researcher's personal computer and password protected.

The destruction of the audio records will be completed after transcription and verification.

I understand that confidentiality will be respected and that the audio records will be for professional use only.

This research has been cleared by the University of Windsor Research Ethics Board.

(Research Participant)

(Date)

Appendix D: One-On-One Interview Instructions

One-On-One Interview Instructions

Dear participant,

Step 1. Signing consent forms

Thank you very much for your time to participate in this interview. Before we get started, I would like to inform you that this interview will take approximately 60 to 75 minutes. This interview is pertaining to a research study conducted by Haoying Wang, entitled *Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship*. The interview aims to explore the adaptation of Chinese international postgraduate students during the transition from undergraduate study in China to postgraduate study in Canada, with reference to their information literacy skills under the impact of Internet censorship in China. More detail can be seen in the letter of information and the consent form that you will need to sign prior to beginning our interview. Let's take a few minutes to read through the consent and if you have any question please do not hesitate to ask.

Step 2, Answer the demographic questions

Please answer the two following demographic questions. This will help me to understand some of your personal characteristics and learning experiences.

1. Please tell me your program of study?
2. How long have you been studying in Canada?

Step 3. Broad description of the current position: ice-breaker phase

Next, I will ask some closed- and open-ended questions to broadly understand your academic research behavior during you study in China and Canada. You can decide to conduct this interview in Mandarin or English. If the question confuses you, please let me know. I will interpret as clearly as possible.

3. Which search engine do you prefer to use during your undergraduate research in China? (e.g., www.baidu.com, www.goolge.com, www.bing.com, etc.)
4. Why did you prefer to use this search engine to collect information?
5. Have you changed your preference on search engines during your graduate study in Canada? Why?
6. Is it hard for you to collect information for your master's study in Canada? Why?
7. Could you describe how you evaluated the authority of information during your undergraduate study in China?
8. Could you describe how you evaluated the authority of information during your master's study in Canada?
9. Is it hard for you to evaluate information for your master's study in Canada? Why?
10. Could you describe how you cited information during your undergraduate study in China?
11. Could you describe how you cited information and your master's study in Canada?
12. Do you feel challenged when citing information for your master's study in Canada? Why?

Step 4, Specific questions on IL learning experience

13. Have you been taught to evaluate the authority of the information during your undergraduate study in China?

14. Have you taken any IL courses during your undergraduate study in China?
- If you had, do you find it beneficial for your IL acquisition from the courses?
 - If you had not, where did you learn from and did you find it helpful for you IL acquisition?
15. Have you been taught about collecting information via Internet during your undergraduate study in China?
16. Have you been required to make citations in every assignment you have done during your undergraduate study in China? (e.g., oral presentation, essay, thesis, etc.)

Step 5, specific question on participants' perceptions on Internet censorship

17. Have you ever used VPN while conducting your undergraduate research in China? Why?
18. Were you aware of the Internet censorship in China?
19. Have you ever written or cited any politically sensitive content in your undergraduate research?
20. How do you define Internet censorship?
21. In your perspectives, what are the pros and cons of Internet censorship?
Could you explain?

Step 6, further questions

22. Do you think Internet censorship impacts your IL learning? Why?
23. Thinking of your experience of conducting academic research during undergraduate study in China, if the access to the website you want to open is blocked.
- What would you do?
 - How would you feel?

24. Thinking of your experience of conducting academic research during undergraduate study in China, if you cannot find the information you want to cite, what would you do and why?
25. Thinking of your experience of conducting academic research during undergraduate study in China, if the information you want to cite is politically sensitive.
- What would you do?
 - How would you feel?
 - How about during your graduate study in Canada?

Step 7, ending

26. Can you give Chinese international graduate students suggestions on how to improve their IL?

27. I have finished all of the interview questions. Is there anything further you want to discuss?

...

Thank you very much for your time. Now I am going to end our interview. I will translate our conversation into text data and send it to you through email. Please help me to check the accuracy of the content translated from our conversation. If there is anything you want to add or modify, please just send them back through email. If you do not respond/send feedback to the checking email you received in four days, your data will be regarded as accurate automatically. Once we guarantee the text data, I will interpret the raw data and report the findings in my thesis paper. At that stage, you cannot withdraw from this study anymore.

Thanks again.

Haoying Wang

Appendix E: Email of Transcription Confirmation

Email of Transcription Confirmation

Dear XXX,

Thank you again for your attendance at my research interview. Without your help, my research cannot progress smoothly.

I translated our oral conversation into text data and attached it to this email with a read receipt for your reference.

I hope you can review and check the transcription to see whether the real meaning that you want to express is present.

If you have any comments or suggestions, please feel free to let me know. I will correct the transcription with your input.

If you do not respond to this email, the transcription of your interview will be regarded as confirmed automatically on the fourth day after you received this email.

On the fifteenth day following your confirmation, your text data will be interpreted for analysis. At that phase, you cannot withdraw from this research, and your data cannot be modified anymore.

Thank you for your time.

Sincerely,

Haoying Wang

Appendix G: Recruitment Flyer

RECRUITMENT FLYER

We are currently recruiting participants for the study:

Understanding the Challenges Faced by Chinese International Graduate Students in Acquiring Information Literacy: The Impact of Internet Censorship

This research has been cleared by the University of Windsor's Research Ethics Board. This study is open to **Chinese international graduate students** over 18 years old who **have completed their undergraduate study in China**, and are taking or have, in the last one year, completed a **graduate program at the University of Windsor**.

You are invited to participate in a **one-on-one, online interview, which will** take around **60 minutes** to complete. As a reward, you will get a **\$10 prepaid credit card** on completion of the study.

Here's a link to schedule an interview: <https://www.surveymonkey.com/r/BW97YSX>

Your participation in this research study is voluntary. If you would like further information, please contact:

Haoying Wang: wanglow@uwindsor.ca

Dr. Clayton Smith: Clayton.Smith@uwindsor.ca

VITA AUCTORIS

NAME: Haoying Wang

PLACE OF BIRTH: XIAN, SHAANXI, CHINA

YEAR OF BIRTH: 1996

EDUCATION: Xi'an University of Science and Technology
Affiliated High School, Xian, Shaanxi, China, 2014

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