Using Inquiry-Based Learning to Support Newly-Arrived Chinese Intermediate-Aged Immigrant Students

By

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Abstract

An increasing number of Chinese students are coming to study in Ontario and many of them are adolescents who have been largely exposed to the Chinese education but are new to the Ontario learning environment. This qualitative research study examined the question: how is a small sample of Ontario intermediate teachers using an inquiry-based learning approach to support the learning needs of newly arrived Chinese students? Data was collected through semi-structured interviews with three Ontario intermediate teachers who have worked with a large number of Chinese immigrant students. Four themes emerged from the interview transcripts: challenges reportedly faced by newly-arrived Chinese intermediate-aged students; teachers’ interpretation and application of inquiry-based learning (IBL) approaches to support Chinese newcomer students; Chinese students’ reported responses to IBL; and challenges faced by teachers when supporting Chinese immigrant students.

Implications for the Ontario education community and personal practice are discussed. Recommendations are made for the Ontario education community and teachers in particular.

**Key Words:** late immigrant, Chinese intermediate students, inquiry-based learning, teaching practices
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Chapter One: Introduction

1.0 Research Context and Problem

Canada is a well-known immigrant country which has absorbed a wide variety of immigrants from different countries. Ontario, as one of the most developed provinces across Canada, is rich in natural and cultural resources. Its high quality of education attracts lots of Chinese people to come to study in Ontario. According to statistics issued by The Canadian Magazine of Immigration (2016), the number of immigrants from China grew 63.9% from 332,825 in 2001 to 545,535 in 2011, making Chinese the second largest foreign-born group in Canada. Over 49% of Chinese immigrants chose to reside in Ontario and most of them (224,915 or 84%) lived in the Greater Toronto Area in 2011.

Given how more and more Chinese students are studying in Ontario, how to help these new Chinese immigrants adapt to the local elementary or high school has become a challenge not only for these children, but also for their parents and teachers. In contrast with the Chinese education system that tends to feature a more rigid, fixed curriculum and a more didactic pedagogy, Ontario curriculum is more flexible, practical and is more concerned with inquiry-based pedagogy (Dai et al., 2011). If the learning activities of Chinese education are mostly regarded as teacher-centered, then the inquiry-based learning is conceptualized as a student-centered approach that encourages learners to utilize prior knowledge and experience in exploring their inquiries in Ontario school curriculum (Kahn & O’ Rourke, 2005). Scardamalia (2002) emphasized that students need specific skills to achieve these inquiry-based learning activities. They are expected to be able to identify causal relationships, to explain the reasoning process, to use data as proof and to evaluate etc. All these required skills are higher-order thinking skills that need to be taught by teachers. However, this teaching and learning process
can be extremely challenging for Chinese students because of the modes of curriculum and teaching styles which differ from their prior experiences in the Chinese system.

Despite there being a long-standing Chinese immigrant community in Toronto and Ontario, there has been little research on the experiences of teachers who work with newly-arrived Chinese students to adapt and thrive in Toronto’s Westernized education system, especially given the increasing use of inquiry-based learning approaches in that system. By collecting data from teachers, this study will call more researchers to think about this problem and provide more in-depth research findings to help teachers’ practices. On teachers’ side, I hope that my findings will help them to better understand the different learning needs that can emerge from different cultures and thus consider the appropriate teaching strategies and adjust inquiry-based pedagogies to suit differentiate students’ learning needs.

1.1 Purpose of the Study

The purpose of this study is to explore the experiences of Toronto intermediate school teachers who have worked with recently-arrived Chinese immigrant students. I interviewed three intermediate teachers about their beliefs, values, perceptions and practices regarding Chinese intermediate-aged students and the inquiry method of teaching and learning.

As the amount of immigrants to Canada is constantly going up, providing these recent immigrants with better and adaptable education is becoming increasingly important. Within the scope of my research, I found that a lot of research has focused on examining the challenges encountered by ELLs and the strategies to support them; however, little attention has been paid to evaluating the effectiveness of a specific teaching and learning technique for a specific age group within a particular immigrant group. Thus, through reporting and sharing inquiry-based related practices that these Canadian intermediate teachers are using to support new Chinese
immigrant students, a further purpose of this study is to inform the instructional practices of more teachers in a broader context. I hope that these findings can strengthen teachers’ cultural awareness of diverse ethnic groups in addition to Chinese students, realizing all these different learning needs of students from different cultures. In another sense, I hope the research findings will help teachers develop inquiry-based learning approach to accommodate the learning needs of more diverse cultural identities.

1.2 Research Questions

The primary question guiding this study is: How are a small sample of Canadian intermediate teachers using an inquiry-based learning approach to support the learning needs of newly arrived Chinese immigrant students? Sub-questions to further guide this inquiry include:

- How do teachers perceive that inquiry-based learning addresses the learning needs of Chinese immigrant students?
- How do teachers define inquiry-based learning and reportedly apply it in the classroom given the many definitions of inquiry-based learning?
- What inquiry-based learning strategies do teachers think are most effective in supporting Chinese students?
- What challenges do teachers associate with teaching newly-arrived students from China?

1.3 Background of the Researcher

I am always interested in cross-cultural communication and this interest became even stronger after I began to study in the U.S. and Canada. Since I am enrolled in the Master of Teaching program at University of Toronto, I have been introduced to a variety of teaching and learning perspectives and pedagogies such as incorporating Indigenous perspectives into
classrooms, culturally responsive pedagogy, backward design, inquiry-based learning practices etc. Among all of them, I found inquiry is most attractive to me because not only is this approach a brand new educational concept that I have never heard of, but also the critical role it has been played in shaping students’ higher order thinking skills, which I personally think is seriously overlooked in Chinese education.

Based on my curiosity, I further question how teachers in Ontario introduce the concept of inquiry to their students and implement the inquiry process in their own classes. More specifically, I am interested in exploring the instructional strategies that Canadian intermediate teachers use to accommodate different students’ learning needs when teaching inquiry-based classes. I finished the elementary and secondary education in China, so I have a solid foundation of Chinese language skills and the characteristics of Chinese education. However, I am quite new to the Canadian education system and have found many significant differences in terms of teachers’ ways of delivering class, students’ learning activities, school programs, assessment methods and so on. As an adult learner in Canadian graduate school, the biggest academic challenges for me involve creativity, critical thinking skills and group work. These challenges inspired me to consider the life (especially the academic aspect) of recent Chinese immigrant students at intermediate level in particular. The reason why I chose this age group is based on the assumption that students come at this age have developed comparatively stronger Chinese literacy skills than younger immigrants and have had some knowledge of Chinese education system. Based on the extent to which they have been exposed to Chinese education, it would take extra time for them to transit to the Canadian learning environment. This will cause more difficulties to these Canadian intermediate teachers when they consider using new approach to learning such as inquiry etc.
1.4 Overview of the MTRP

This research project is organized into five chapters. Chapter One includes the introduction to the research context, problem, purposes of the study, and research questions as well as how I came to be involved in this topic of study. In Chapter Two I review the literature in the areas of Chinese intermediate-aged immigrant students and inquiry-based learning. Chapter Three provides the methodology and procedure used in this study, including information about the participants, data collection instruments, and strengths and limitations of the study. Research findings are detailed in Chapter Four. Chapter Five includes the broad and narrow implications of the findings, corresponding recommendations, and future directions for research. References and a list of appendices follow at the end.
Chapter Two: Literature Review

2.0 Introduction

In this chapter I review the literature on inquiry-based learning, Chinese newly-arrived intermediate-aged students, and suggested inquiry-based teaching practices. More specifically, I explore the varying definitions, types and features of inquiry-based learning. Next I overview the Chinese intermediate-aged immigrant students’ challenges and learning needs, considering why the inquiry-based learning approach has been found to be particularly helpful and beneficial for them. Finally, I discuss some of the inquiry-based teaching practices that have been recommended, implemented and tested to be effective in supporting Chinese immigrant students.

2.1 Inquiry-Based Learning

There is no universal definition of inquiry-based learning. Instead, it has a number of proposed and related definitions. Chiarotto (2011) defines inquiry-based learning as “a dynamic and emergent process that builds on students’ natural curiosity about the world in which they live” (p. 7). This definition presents a broad idea of the groundwork of inquiry; however, it is too broad to conceptualize in a universal way.

More specifically, Love et al. (2015) defines inquiry-based learning as “a method of teaching that engages students in sense-making activities” (p. 746). She looks at it as a two-pronged concept and splits it into two fundamental elements: deep engagement in rich class contents collaboration opportunities. Instead of merely teaching specific content, students are encouraged to think critically, create a variety of plans to solve problems on their own, share ideas in class and also try to understand others’ thoughts. This way of interpretation is helpful in that it clearly articulates the general process and many facets of inquiry-based learning.
Inquiry-based learning is also conceptualized as a student-centered approach that encourages learners to utilize prior knowledge and experience in exploring their inquiries (Kahn & O’ Rourke, 2005). Scardamalia (2002) emphasizes that students need specific skills to achieve these learning activities. They are expected to be able to identify causal relationships, to explain the reasoning process, to use data as proof and to evaluate. This explanation gives a more detailed description of required student qualities, but fails to address the corresponding evaluation criteria.

Further definitions can be found in educational resources, often incorporating elements mentioned above. The Ontario Curriculum stresses that asking questions and making sense of information to expand understanding lies at the core of all inquiry. It places inquiry at the heart of learning in all subject areas (The Ontario Curriculum, Grades 1-8: Language, 2006, p. 29; The Ontario Curriculum, Grades 1-8: Science and Technology, 2007 pp.12-18; The Ontario Curriculum, Grades 1-8: The Arts, 2009, pp. 19-28). Ontario’s Ministry of Education (2011) perceives inquiry-based learning as a pedagogical mindset that can be applied across a variety of contexts in addition to school and classroom life. It is built upon students’ interests and ideas and the explicit instruction, small-group and guided learning will move students forward in their paths of intellectual curiosity and understanding. Perhaps the most comprehensive illustration of inquiry comes from the Capacity Building Series published by the Student Achievement Division (2013) who indicates that inquiry is an approach to learning whereby students find and use a variety of sources of information and ideas to increase their understanding of a problem, topic or issue of importance. Teachers, as active facilitators, enhance students’ learning outcomes by establishing a positive context where ideas are respectfully challenged, tested, and improved, trying to move students from initial curiosity to further questioning. In this sense,
students and educators have their own specific roles to play but also co-construct the learning experience, planning, refining, assessing for learning and eventually transforming the individual achievements into class-wide understanding of meaningful content and ideas.

Inquiry activities are often categorized into four types based on the nature of inquiry (National Research Council, 2000). Confirmation inquiry, as the first level of inquiry-based learning, is carried out with the notion of results in advance. Structured inquiry is guided by teachers’ outline and problems. Students need to find out answers through investigation. In guided inquiry, teachers ask questions to stimulate inquiry but students are self-directed to explore these questions whereas open inquiry enables students to generate questions themselves and experience the full inquiry cycle (Banchi & Bell, 2008). In their study of exploring many levels of inquiry, they found that although confirmation and structured inquiry are considered lower-level inquiry, they are effective in helping students gradually develop abilities to conduct more open-ended inquiry (Banchi & Bell, 2008). Open-ended inquiry, as the highest level of inquiry, requires excellent reasoning skills and ample experience at the first three levels of inquiry (Sproken-Smith et al., 2011). Although these definitions give audience a sense of what each type of inquiry looks like, again, taken together they lack specificity in the assessment criteria.

Overall, all these diverse definitions and types of inquiry-based learning point to one of its most prominent characteristics: it values students’ interests, questions and ideas and puts them at the center of the learning experience. Asay and Orgill (2010) highlighted that “inquiry stimulates students’ curiosity, leading to progressively deeper questions and habitual critical thinking” (p. 59). In a study of how students’ motivation was affected by inquiry-based learning, Hidi (1990) found that valuing student’s questions increases students’ motivation for study,
promotes a higher level of engagement and improves understandings of class content. Additionally, Prince and Felder (2006) found that inquiry-based learning helps students improve various learning outcomes such as academic accomplishment, process skills, analytic abilities, and creativity.

2.2 Challenges and Learning Needs of Recently-Arrived Chinese Intermediate Students

According to the teaching divisions released by Ontario College of Teachers, junior and intermediate (J/I) divisions refer to grade 4 to 10. More specifically, intermediate level ranges from grade 7 to 10, which means the age of students is generally between 12 and 16 years old. Thus, students at intermediate level are often considered older, more mature and more cognitively active as a result of increased life and scholarly experience. Ying et al. (2006) conducted a research on challenge Chinese Americans experienced due to their migration status. They found that late immigrants (who arrived after age of 12) reported more academic, social and general living-related problems than American-born Chinese and early immigrants (who arrived by the age of 12). Ying et al. (2004) in their study of analyzing the college challenges for newly-arrived ethnic minority students gave a detailed description of the academic, social and general living challenges these students usually encounter. Academic challenges mostly involve academic demands, unfamiliarity with school systems, and difficulty with academic expression. The common problem for late immigrants in regard to academics is language proficiency. Social challenges include racism, social isolation, and cross-cultural communication. General living challenges are comprised of counseling needs, financial worry and housing. In spite of all these challenges, the intermediate years of schooling are a critical time for cultivating the ability to learn as well as developing their identity as independent thinkers and informed, responsible citizens (Dai et al., 2011). Therefore, it is crucial for educators and schools in Ontario to identify
these newcomer students’ learning needs and preferred learning styles to find the best teaching practices suited for them.

A rigid text-based curriculum mandated from top down for decades, exams-based learning activities, and the didactic nature of teaching are deeply rooted in the education system in China (Lan, 2010). Given the priority of Chinese education lies in the prescribed content knowledge rather than high-order thinking skills, direct teaching coupled with drill and practice is preferred by Chinese teachers and is perceived as the most effective way of covering large amounts of information and getting students ready for answering the pre-designed questions (Dai et al., 2011). In Park’s (1995) study on the learning styles of Chinese students, she found that the students in her sample learned better through rote memorization and observed that there are hardly any experiential and interactive small group learning activities in the Chinese classrooms. Students are taught to be polite, silent and listen to teachers. Classes are highly structured and are dominated by teachers’ talk.

In Parks’ (1997) another research on identifying Asian Americans’ preferred learning styles, the sample of her study is 803 students, with 98 Chinese students involved in it. Within the scale of her study, she found that Chinese students in her sample tend to be passive, nonverbal and rarely initiate class discussion until they are called on. Dunn et al. (1990) conducted a comparative research of learning styles of elementary students from four different ethnic backgrounds: African American, Mexican American, Asian American and Greek American. Chinese students in her study were reported to demonstrate negative attitudes towards group work and greater needs for more structured guidance. However, Dunn et al. (1990) also discovered an interesting phenomenon: although Chinese students in her study are more used to auditory learning, they showed strong preference for kinesthetic and tactile learning.
Inquiry-based learning is a curricular and pedagogical imperative in North American educational system in that it historically values critical thinking and productive use of knowledge for real life problem solving (Dewey, 1997). In inquiry-based classrooms, social climate is characterized by openness to different possibilities and support for exchanges of different opinions and arguments. Assessment is used to enhance learning and inform teaching, rather than used solely for accountability. The passive knowledge absorption is replaced by the active learning and knowledge building activities. These hands-on activities guided by inquiry satisfy Chinese students’ preferences for kinesthetic and tactile learning as found in a study conducted by Dunn et al. (1990). Curriculum structure is not limited to the discipline-based knowledge but with interdisciplinary thinking, integrated and adaptive approaches to knowledge. Curriculum content shifts from a focus on book knowledge to connecting school learning to the broader social and scientific contexts as well as student experience and interests (Dai et al., 2011). Most importantly, inquiry-based learning emphasizes the process of exploring “how we know” and “why we believe what we know over alternatives” instead of merely reviewing “what we know” (Duschl & Duncan, 2009). “Goals of inquiry-based learning suggest a new level of cognitive and meta-cognitive sophistication not tapped into by the tradition pedagogy in Chinese classrooms” (Dai et al., 2011, p. 141). The new level of cognitive sophistication includes information searching and processing abilities, communication and cooperative competency, critical thinking and creative problem solving skills, all of which are at odds with Chinese traditional education. However, they are the essential skills that Chinese students lack and need to be cultivated in Chinese education to meet the key goal of education today, which is to develop the ability to learn (Wang, 2010). Thus, it is natural that inquiry-based learning has been proposed to support such high-end learning especially for Chinese immigrant students.
2.3 Effective Inquiry-Based Teaching Practices

As there is a lack of research about inquiry-based learning activities designed specifically for Chinese immigrant students, an increasing need for teacher learning and development is essential in order to prepare a teaching faculty capable of appropriately organizing student inquiry and active learning (Xu, 2002). In Ontario, according to the ministry’s website (2006), primary students experience play-based learning where their questions are often heard and honored. These students are accustomed to opportunities for student-directed inquiry. In contrast, Chinese intermediate-aged immigrant students who come from a highly controlled and structured classroom environment may not be prepared for this more open and flexible Canadian classroom where small group activities and free discussions are the norm (Park, 1995). Therefore, it requires educators to pay extra attention to the needs and responses of Chinese newcomer students when organizing inquiry learning activities.

2.3.1 Teachers’ roles in inquiry-based classroom

The role of “teacher as facilitator” is a fundamental component of inquiry-based instruction (Chiarotto, 2011). To facilitate students’ learning and help them become independent problem-solvers, teachers normally need to model inquiry-based thinking process in sequence for students by posing the kinds of open-ended questions they want their students to learn (Scardamalia, 2002). Additionally, teachers act as co-learners in the inquiry, which “helps facilitate an academic community of practice including both academics and students” (Spronken-Smith, 2010, p.17). Furthermore, teachers provide as many opportunities as possible for students to express what they know in multiple ways, such as visual production, written work or oral presentation (Chiarotto, 2011). Another role of teachers is to guide students to a variety of
different resources and experiences that will assist them in the investigation of their questions (Deborah et al., 2005).

There is no doubt that the effectiveness of teachers’ inquiry skill and the appropriate choices of questions directly impact the quality of teaching and achievement of learning. On that account, the selection of appropriate types of questions along with the sequence and pattern of delivery are important in the stages of planning and implementing (Chin, 2007). Tofade et al. (2013) found that students improved their answers both in quality and quantity when they were asked open referential questions, which involve exchange and negotiation of meaning and are most often heard in real life communication. They also suggested the revised Bloom’s taxonomy by Andersen and Krathwohl (2001) can be utilized when adopted as the guidelines of questioning. Based on this theoretical framework, teachers should be able to design and organize questions and activities including these cognitive skills to use as many question types as possible (Tofade et al., 2013). Through effective questioning, the teacher is able to probe into the patterns of error made by students and their levels of comprehension as well as to make judgment and assessment on the learning outcomes (Lee, 2014).

2.3.2 Interdisciplinary inquiry-based teaching practices recommended for Chinese students

Science and mathematical education embrace inquiry-based learning approach to provide students hands-on experiences that challenge them to make their own discoveries (Ontario Ministry of Education, 2013). For example, field trips were found to be new to Chinese students in Ogu and Schmidt’s (2009) study about using inquiry-based approach to accommodate different learning styles. They believe that field trip can help Chinese students have more in-depth learning experiences because students are involved in collecting samples, making observations, documenting, sorting and classifying products.
Although the inquiry instructional model has primarily been applied to the teaching in science and math, its concept and question-answer mechanism are equally well suited to other subjects (Lee, 2014). In ESL class, teachers need to integrate the vocabulary and grammatical structure intended to be taught into questions and deliver them in a recurrent pattern to initiate a successful inquiry-based learning activity (Lee, 2014). Researchers in the field of literacy have demonstrated that inquiry-based classroom discussions strongly support students’ learning of disciplinary practices (Applebee et al., 2003; Nystrand, 2006). Positive learning effects of classroom discussions have been associated with improvements in students’ understanding of literary texts (Applebee et al., 2003), improved reading comprehension, writing performance, increased self-regulation and “the capacity to critically examine the sociostructural forces affecting students’ everyday lives” (Chisholm & Godley, 2011, p. 437). Nevertheless, in a study of group work in an ESL classroom guided by Kinsella (1996), she observed that despite the merits of paring ad grouping strategies, not all ESL students in middle and high school embraced collaborative classroom learning. “In fact, such well-intended instructional efforts as grouping strategies could be met with reluctance on the part of some ESL students due to their cultural backgrounds or pre-immigration schooling experiences” (p. 27). Teachers need to be careful when placing newly-arrived Chinese students in small groups. Kinsella (1996) recommended that teachers put these new students in pairs, preferably with students who are from the same cultural background rather than in groups during their initial adjustment period. In addition, she suggested put students between the same genders rather than between boys and girls.

Younker and Bracken (2015) further added that effective pedagogical approaches for implementing inquiry-based curriculum include constructivist approaches, making connections across ideas, using projects to investigate problems, and inviting experts from different subject
areas as opposed to simply memorizing facts. Their study mainly focuses upon employing project-based curriculum unit to actively make cross-disciplinary connections and to immerse students in learning opportunities. Teachers’ ability to enable transfer of knowledge across disciplines through inquiry-based learning is required for implementing effective inquiry projects. “Active teacher participation in guiding the learning process and students’ habits of mind to inquire and to develop a mind-set for valuing lifelong learning are keys to success with this approach” (Younker & Bracken, 2015, p. 47). Meanwhile, they also noted the importance of the application of technology in the inquiry classrooms. Technology not only facilitates exploration and discovery in the classroom but also acts as a starting point to extend learning beyond the realm of the classroom.

Despite the successful experiences of using inquiry-based learning, teachers are also struggling for finding out the best practices of implementing the inquiry-based learning. Olagoke et al. (2014) indicated in their study of the best practice for basic science teachers that teacher’s lack of good knowledge and resources guiding the use of inquiry-based learning, too large class size and the inadequate time allocation in the school-time table all cause difficulties in implementing effective inquiry-based learning. These challenges may lead to the low quality of inquiry and if not scaffolded well, students may feel lost and unmotivated (Colwell et al., 2013).

2.4 Conclusion

In this literature review I examine research related to inquiry-based learning and teaching practices as well as a brief overview of features of Chinese education system and learning styles of Chinese intermediate-aged immigrant students. This review emphasizes that inquiry is an effective pedagogical approach in supporting the learning needs of these comparatively late immigrant students. It also raises questions about the potential challenges and obstacles that
teachers faced when implementing this approach to learning and points to the need for further
research about more adaptive inquiry teaching and learning process specifically for Chinese
students.

By focusing on how teachers conceptualize inquiry-based learning in theory and practice,
I aim to contribute further to the instructional practices emphasized in existing research,
especially the useful strategies that Ontario teachers utilize to support Chinese intermediate-aged
immigrant students in their own classrooms. I will conduct semi-structured interviews with
intermediate teachers in Ontario to collect information about their perceptions of inquiry and
Chinese immigrant students, the best inquiry-based teaching practices, maybe blended with other
pedagogical approaches they have applied to help students, and the challenges they encountered
while helping these students adapt to the local learning environment. I hope to provide a better
understanding of the inquiry learning process and Chinese students learning needs to help with
teacher training and policy development.
Chapter Three: Methodology

3.0 Introduction

In this chapter, I first state the research approach that I chose and explain the reasons behind it. Second, I describe the main instruments of data collection before introducing the participants of the study. Then I list my sampling criteria, illustrate the sampling procedures, and introduce the background information of the participants. Next, I describe my data analysis procedures, followed with the review of ethical considerations for my study. Then, I analyze the strengths and limitations of my methodology. Finally, the chapter ends with a conclusion summarizing all of the key methodological decisions and a brief note on the next chapter.

3.1 Research Approach and Procedures

I employed qualitative research methodology involving a literature review and conducted semi-structured, face-to-face interviews with three Toronto-area intermediate school teachers to gain insights into their experiences supporting recently-immigrated Chinese students with inquiry-based teaching and learning approach. As defined by Corbin and Strauss (2008), qualitative research is “a process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge” (p. 1). Miles and Huberman (1994) have pointed out that the researcher’s role in qualitative research is to gain a “holistic overview of the context under study: its logic, its arrangements, its explicit and implicit rules” (p. 6). Good qualitative data can help researchers get beyond initial conceptions and generate or revise conceptual frameworks (Silverman, 1997).

Unlike quantitative studies, which emphasize the measurement and analysis of causal relationships among variables, qualitative research seeks answers to questions about how social experience is created and given meaning (Denzin & Lincoln, 2000). Both quantitative and
qualitative researchers are concerned with the individual’s point of view and descriptions; however, Denzin and Lincoln (2000) argues that qualitative research can get closer to participant’s lived experience through detailed interviewing and observation as well as eliciting rich descriptions of the social world. Quantitative researchers are generally less concerned with such detail in that it impedes the process of developing generalizations.

According to Creswell (2015), “qualitative research is best suited to address a research problem in which you do not know the variables and need to explore” (p. 16). This suggestion meets my research purpose and questions, which are related to teachers’ knowledge of recent Chinese immigrant students’ learning experiences in Ontario’s more inquiry-based learning environment. In contrast to the more rigid and structured format of quantitative methods, the “fluid, evolving, and dynamic nature of qualitative research” is more suitable for my given research area (Corbin & Strauss, 2008, p. 13). The qualitative procedures provide a means of discovering the endless of possibilities for learning more about people’s lived experience and perspectives, which will contribute to the development of empirical knowledge (Berg, 2004). As I mentioned before, another major feature of qualitative data is their richness and holism due to their specific focus on local contexts. This feature guaranteed the strong potential for revealing my research data’s complexity and understanding a focused phenomenon embedded in its context (Miles & Huberman, 1994).

3.2 Instruments of Data Collection

In qualitative interviews, researchers ask interviewees general and open-ended questions and record their answers (Creswell, 2015). Silverman (1997) describes how “a strength of qualitative interviewing is precisely its capacity to access self-reflexity among interview subjects, leading to the greater likelihood of the telling of collective stories” (p. 104). Qualitative
interviewing includes a wide variety of forms. Interviews can be structured, semi-structured, or unstructured.

The structured interview, which is also known as conventional interview, is conducted with a script of pre-established questions with a limited set of response categories (Fontana & Frey, 2000). The questions are asked in the same sequence each time and there is generally little room for variation in responses except where open-ended questions (which are infrequent) may be used (Packer, 2011). A more flexible approach than structured interviews with a few open-ended questions is semi-structured interviews in which the researcher has a general plan for the topic but does not follow a fixed order of questions or word these questions in a specific way (Packer, 2011). This type of interview enables participants to fully express themselves in details as well as helps interviewers to better understand the interviewee’s personal and social context of beliefs and feelings (Selltiz et al., 1962). Selltiz et al. claim that the freedom and flexibility of the semi-structured interview achieves its purpose to the extent that “the subjects’ responses are spontaneous rather than forced, are highly specific and concrete rather than diffuse and general, are self-revealing and personal rather than superficial” (p. 263). Many of the data gathered from participant observation come from unstructured interviewing in the field (Fontana & Frey, 2000). Such non-directive interviewing leads to a minimum of direct questioning or guidance. The interviewer’s role is simply to encourage the respondent to talk more about a given topic but without committal and recognition of the subjects’ feelings (Selltiz et al., 1962).

Given the different features of three types of interviews, I used semi-structured, face-to-face interviews as the instrument of data collection in my research. Semi-structured interviewing, as a mediator between structured and unstructured interviews, absorbs the advantages of both. It not only has a general guideline for interviewers to elaborate on the interview questions—
allowing for adjustment—but also encourages a great deal of latitude in the way that respondents answer. Since the focus of my research is to collect and analyze the experiences of junior instructors working with recent Chinese immigrant students using inquiry-based learning approach in particular, the strengths of semi-structured interview allowed me to dive into deeper dialogues.

I organized my interview protocol into four sections, beginning with an inquiry about participants’ career background, followed by questions about his/her experiences working with newly-arrived Chinese students, then their strategies for helping these students with inquiry-based learning approach, and specific concerns and challenges while working with Chinese immigrant students. Some sample questions:

1. What are some of the challenges and barriers that you have observed for newly-arrived students from China, specifically?
2. Can you tell me more about what inquiry-based learning looks like in your teaching practice?
3. In your experience, how do your students who are newly arrived from China respond to this approach? Why do you believe they respond the way they do?
4. What were the challenges you faced while helping immigrant Chinese students?

3.3 Participants

Here, I review the sampling criteria I established for participant recruitment, and select the sampling strategies that I have used. I have also included a section to introduce the background information of my participants.

3.3.1 Sampling criteria

The teacher participants have to adhere to the following criteria:
Five or more years’ teaching experience in the intermediate grades (4-9) in Ontario.

Teachers will have taught at an elementary school with a sizeable population of intermediate level Chinese immigrant students.

I also anticipate that my participants are experienced with teaching a significant amount of intermediate-aged Chinese immigrant students because I am interested in gathering data on teachers’ experiences of working with students who have been immersed in Chinese educational environment for some time (8 years or more) and who have recently immigrated to Ontario. This means that the students have been deeply influenced by Chinese traditional ethics and culture and have formed their own understanding of the Chinese education system, which would contribute to the comprehension of my research.

3.3.2 Sampling procedures

There are three representative sampling strategies: convenience, purposeful, and theoretical sampling (Berg, 2004; Corbin & Strauss 2008; Creswell 2015). Purposeful sampling refers to a strategy in which the researchers use their special knowledge or expertise about a certain group and therefore intentionally select subjects who can represent this population to gather data on the central phenomenon (Creswell, 2015). The convenience sample is sometimes called an accidental or availability sample (Babbie, 1998; Mutchnick & Berg, 1996). It heavily relies on available participants who are easily accessible. Convenience sampling in some cases can be very effective when used to obtain preliminary information about some research questions quickly and inexpensively, but it has to be evaluated carefully for appropriateness of fit for a given study (Berg, 2004). Lastly, theoretical sampling is concept driven and cumulative, enabling researchers to discover the relevant concepts and explore the concepts more in depth.
(Corbin & Strauss, 2008). This strategy is best suited to studies about new areas in that it allows for discovery.

In my particular study, I proceeded with a combination of purposeful and convenience sampling. I used purposeful sampling to carefully select my teacher participants based on my above defined criteria in order to maximize the collection of the richest possible data. Markham and North York region possess a huge portion of Chinese immigrants, and I have some connections with a local elementary school teacher, so it was easy for me to locate the junior schools and teacher participants within the region. In this sense, convenience sampling was adopted through my existing contact.

3.3.3 Participant bios

I have interviewed three teachers in total. Laura and Katherine are elementary and middle school teachers whereas Maria is a high school ESL teacher. Laura is Canadian-born but her heritage is Irish and Scottish in the UK. Her family has been in Canada for three generations. English is her first language and she can speak some basic French. She has had 18 years of teaching experience and is working as a grade 7 homeroom teacher in a French-immersion elementary school in China town. The demographic of Chinese students in her school is approximately 1/3 out of the whole student population. Her school has the regular support such as guidance counsellor for newly-arrived students, resource support like special aid, and also the international language program which can help with translation and interpretation. She has taught from grade 4 to grade 8 and has taught basically all the subjects except French and PE. She took ESL Additional Qualification (AQ) courses part 1 and part two and had ESL core class a number of years ago.
Katherine was born in Ontario and she speaks English only. She is a grade 6 homeroom teacher and she used to work full-time as an ESL, ELD teacher in a middle school. In her 15 years’ teaching career, she first started with teaching overseas in England for two years. She taught English literature to high school students. Then she came back to Canada and did some adult education at a private international TESOL school. She is currently working in a public elementary school that possesses a large number of South Asian students (2/3) and Caribbean students (1/3).

Maria is a high school ESL teacher and she has finished the ESL part 1-3. She teaches ESL A-E courses to grade 9-12 international students and has had 8 years of teaching experience. Her school has 800 students, 250 of them are newly-arrived students from China. There are a lot of Chinese, Korean and Persian in that area in particular. Maria was born in Canada but her parents are Greek, so she has a strong Greek identity. She went to Greek school on weekends and studied at French-immersion school on regular days, so she speaks three languages: English, French and Greek. However, she also grew up in the area that is predominantly Chinese, so she has lots of Chinese friend. Having been immersed in a rich Chinese environment, she is quite familiar with Chinese culture, so it is interesting that she comes to a full circle that she is teaching students from China now.

3.4 Data Analysis

In qualitative research, “analysis is a process of generating, developing, and verifying concepts—a process that builds over time and with the acquisition of data” (Corbin & Strauss, 2008, p. 57). Ideally, the researcher begins the analysis after completing the first interview or observation (Strauss, 1987). Miles and Huberman (1994) identified three major approaches to qualitative data analysis: interpretative approaches, social anthropological approaches, and
collaborative social research approaches. Researchers who adopt interpretative approach 
transcribe interviews and observation data into written text for analysis. This approach is useful 
for discovering the practical understandings of meanings and actions (Berg, 2004). The social 
anthropological approach involves spending considerable time in a given community and 
interacting with the study population. It provides the researcher with a special perspective on the 
material collected during the research, as well as a special understanding of the participants and 
how these individuals interpret their social worlds (Miles & Huberman, 1994). Lastly, 
researchers using collaborative social research approaches work collectively with their subjects 
in a given setting in order to achieve some action (Berg, 2004). Given the different 
characteristics of each approach, I employed social anthropological approach because its process 
of collecting and analyzing data is corresponded with my research purpose. I am very interested 
in identifying and explaining the strategies my participants use when supporting Chinese 
immigrant students.

3.5 Ethical Review Procedures

According to Fontana and Frey (2000), ethical concerns associated with qualitative 
interview research have long revolved around three topics: “informed consent (receiving consent 
by the subjects after truthfully informed them about the research), right to privacy (protecting the 
identities of the subjects), and protection from harm (physical, emotional etc.)” (p. 662). 
Bermont Report in 1978 also identified three principles for research involving human subjects: 
respect for persons, beneficence, and justice.

To explain these ethical issues in more detail, first, informed consent is consistent with a 
commitment to individual autonomy. Social science insists that research subjects have the right 
to be informed about the nature and consequences of experiments in which they are involved
(Punch, 1994). It is also related to respect for persons. To achieve this, participants must voluntarily agree to participate and their agreement must be based on full and open information (Shalala, 1997). Therefore, before conducting the interviews, I told my participants about the duration, methods, possible risks and the purpose of my study.

Meanwhile, ethical research guidelines insist on safeguards to protect people’s anonymity. Confidentiality must be assured as the primary safeguard against unwanted exposure (Berg, 2004). To protect my participants’ privacy, I have secured all of their personal data. They had been notified that all data would be stored on my password protected computer and would be destroyed after 5 years. Beneficence requires researchers to be sensitive to the needs of their participants, securing the well-being of their subjects and avoiding harm (Silverman, 1997). They have the right to withdraw from participation in the study at any stage of the research study. The final aspect of ethic risks is the justice, which involves the fair distribution of both the benefits and burdens of research (Fontana & Frey, 2000). I have ensured the justice and have tried to maximize the research benefits and minimize risks by offering my participants assistance and explanations for questions they have been asked during the course of interview.

3.6 Methodological Limitations and Strengths

One of the biggest limitations of this study is the scope of the research. Three participants may lead to the outcomes that the research findings cannot be generalized into a broader context; however, generalization is not the goal of most qualitative research and this is the case here as well. Secondly, the interviews were conducted with teachers only. There was no way of gathering data from classroom observations or students and parents’ experiences and perspectives. In addition, the interviews might have provided only information “filled” through the views of both interviewers and interviewees (Creswell, 2015). This means that the researcher
has summarized the participants’ views in the research. Respondents, too, may have provided the perspective that they want the researcher to hear.

In terms of the strengths of this methodology, it allows for the in-depth description of teachers’ working experiences of working with Chinese immigrant students. The choice of using this interviewing technique was based on the “selected procedure’s ability to provide maximum opportunity for complete and accurate communication of ideas between the researcher and the respondent” (Cannell & Kahn, 1968, p.554). Therefore, these interviews have established effective communication as well as have offered a platform where researchers can delve into the lived experience of teachers and obtain their first accounts.

3.7 Conclusion

In this chapter, I described my research methodology. I began with a general statement about my research approach and procedures, reviewing the definition and features of qualitative research, followed with a comparison between quantitative and qualitative research, then summarized the strengths and values of qualitative research and justified using this approach to study my research topic. In the section of instruments of data collection, I identified semi-structured, face-to-face interviews as my primary source of data. I discussed the various types of interviewing and their features, particularly emphasized the advantages of semi-structured interviews and my reasons for choosing it. I also explained the organization of my interview protocol. Next, I proceeded with the participants of the study. I established and justified my sampling criteria as well as selecting the two sampling strategies: purposeful and convenience sampling. I then reviewed three major approaches in relate to the analysis of qualitative data and confirmed my adoption of social anthropological approach. Ethical issues such as informed consent, privacy, and justice and ways of addressing these risks were also discussed. Ultimately,
I examined both strengths and limitations of this research methodology. The next chapter elaborates on the findings of the research.
Chapter Four: Research Findings

4.0 Introduction

Based on the context where a large population of Chinese immigrant students coming to study in Canada, my first chapter introduced the purpose of the research: to explore the experiences of Toronto middle school teachers who have worked with and supported recently-arrived intermediate-aged Chinese students by using inquiry-based learning approaches. Chapter Two reviewed the literature about inquiry-based learning, followed with discussion of findings on Chinese students’ learning styles, and ended with teachers’ strategies for using this method to support Chinese students. Chapter Three described the methodology and provided anonymized participants’ biographies. This chapter shows and discusses the overall findings from the data collected from three semi-structured interviews. The discussion revolves around my research question: how does a sample of Ontario intermediate (grade 6-10) teachers use an inquiry-based learning approach to support the learning needs of new Canadian students from China? The participants’ experiences presented in this chapter are connected with the Chapter Two literature review. Findings are organized into the following four main themes:

1. Challenges reportedly faced by newly-arrived Chinese intermediate-aged students,
2. Teachers’ interpretation and application of inquiry-based learning approaches to support Chinese newcomer students,
3. Chinese students’ reported responses to inquiry-based learning,

Each theme will be explained by sharing and interpreting interview data. The values and the significance of the themes will be connected to the literature review. Lastly, I will transition to Chapter Five where I recommend next steps.
4.1 Challenges Reportedly Faced by Newly-Arrived Intermediate-Aged Chinese Students

It is reported by my participants that the challenges they have observed for Chinese students are social, general living and academic challenges. In particular, all participants provided stories indicating that social inclusion is their biggest concern for Chinese students, which is the first subtheme discussed below. Then the second subtheme touches briefly on the participants’ reported living challenges faced by newly-arrived Chinese students. The final subtheme discusses the teachers’ perceived causes and observations of the academic challenges faced by their Chinese students and how these challenges may cause obstacles for their inquiry-based teaching practices.

4.1.1 Perceived social issues

Teachers have perceived that the main social challenge faced by Chinese students is exclusion and isolation from peer groups due to language barriers, pre-established friendship, and cultural differences. When asked some of the challenges and barriers they have seen from Chinese students, all my participants agreed on social connections. Laura described how she can imagine the difficulty for newcomer students at intermediate age level to make friends, especially in a new country where another language is spoken. “It’s hard to adapt to a new place, particularly with grade 7 and 8 students, to make new friends is very difficult in a different culture.”

When asked about the reasons why the social exclusions happen to Chinese students, Katherine said that language is a big issue. First, she spoke of the reality that not a lot of people in her community speak mandarin, so there is a lack of language support. Further more, she pointed out that the new Chinese immigrant students she had worked with did not have the English language skills to effectively communicate their frustration, so they would get upset at
times. Laura expanded her response to the language issues, saying that even Chinese newcomer students find that they do share the same language with other students who are Chinese-descendent, they may feel difficult to join in the groups given the kids have had an established friendship.

In addition, Katherine and Maria emphasized the cultural aspect of social challenges. Katherine noticed that Chinese students have their own definition and standards of friendship, supported by a story she provided about one of her Chinese students. She had worked with a grade six Chinese girl for three months and had seen that she was getting along with other students in her classroom. However, when she was having a parent-teacher interview with this Chinese girl’s mom, she was surprised about how the girl’s mom described her daughter’s loneliness at school because the girl told her mom that she has no friends and feels so isolated. “Although I thought that girl was included socially, I realized that what I saw maybe different from what she felt. She didn’t have any true friends, like she really connected with.” This story exactly reflects the important role that cultural differences have played in affecting the ways of Chinese students’ socializing thus cause such social challenges. Maria also talked about how the conservativeness of Chinese culture makes it harder for Chinese students to integrate into the school community. She observed that Chinese students tend to stay together as an independent social group, with no interaction with other students, which hinders their immersion into Canadian experience that their parents probably want them to have.

Given that a lot of Chinese students are coming to Canada with one parent or without the company of their parents, this poses a problem to their integration into local community and daily lives, all of which will be discussed in the next subtheme.
4.1.2 Perceived general living challenges

In the domain of general living challenges faced by Chinese intermediate-aged newcomer students, the insufficient family support and a lack of check on host families are considered two problems by the teachers. Maria expressed her concerns with these Chinese students studying and living in Canada alone by themselves. Without guardians’ supervision and instructions at home, “No one is checking these kids’ homework or watch them the same way as parents do, so that parent component is really hard.” She also noticed some issues with the host family because she saw some of these teenager students were not given proper clothes to wear in cold days. She was also told by students that their host families made them do a lot of chores in the house, so they felt tired. She emphasized the necessity to check on host families to make sure that they are treating these newcomer students appropriately. This response gives me a new perspective to consider other unexpected challenges that Chinese immigrant students encountered.

4.1.3 Perceived academic difficulties

The final subtheme discusses one of the perceived key causes of the academic challenges faced by Chinese students, teachers’ observation of their Chinese students’ three main academic difficulties and how these difficulties may impede their inquiry-based teaching practices.

When asked about the key causes of the academic difficulties encountered by Chinese newcomer students, the different school system is identified by my participants as the most important reason for various academic challenges such as limited higher order thinking skills, group work and presentation competency. When I further asked my interviewees if there is any access for students to learn about the local school system, both Laura and Maria answered yes. However, Maria said: “Chinese students and their families come here and haven’t had all these knowledge of how the school systems work. No one told them. They’re not sure about what is
like? How can I find out? Who do I ask?” Laura also articulated that parents and students lack the information of such access to help them navigate the school systems, which makes it difficult for them to know what to expect from the school. Obviously, from the description of the two participants, their perceived problem relating to the school system is not about the access itself. Instead, it is the lack of the knowledge of available resources, which is supposed to be provided by school community, caused students’ confusion about the school system and therefore a variety of academic challenges.

When asked about the most noticeable academic challenge for Chinese students, there is a striking similarity among the views held by my interview participants. It is the belief they shared about Chinese students’ limited higher order thinking skills, especially in the area of creativity and critical thinking. When asked about their knowledge of Chinese education system, Laura answered that her overall impression of Chinese education, based on her experience teaching late immigrant Chinese adolescent, is that it fosters a “more rigid learning style and classes, a lot more rote memorization, longer hours, and a real focus on math.” Katherine wondered how much critical thinking Chinese students have in China because she found that the critical thinking-related task is really challenging for her Chinese students. Echoing with Katherine’s confusion, Maria also asked her Chinese students the opportunities for them to think about higher order thinking questions in Chinese schools. Her students told her that they were given few opportunities to ask or answer critical thinking and open-ended questions. Maria further added her impression of Chinese education based on her communication with her Chinese students, saying that “students are passive learners and are used to receiving information from teachers.” Correspondingly, she said that “teachers are playing a more active role. They give information and minimal critical thinking. There is more right and wrong answers than the
open-minded questions”. This learning mode has been found to impede Chinese students from taking leadership in their own independent studies (Dai et al., 2011). The consequence of this teachers’ perceived passive learning mode is their Chinese students’ reported unfamiliarity with independent studies, which, however, is recognized as one of the essential qualities in a successful inquiry (Banchi & Bell, 2008).

In addition to the reported problem of minimal independent studies, Maria specifically talked about her worries about Chinese students’ inquiry and questioning skills because she found that most of her Chinese students do not even ask her any questions. Absence of questions, and most importantly, a lack of training of higher order thinking skills is perceived by my participants as another barrier to their inquiry-based teaching practices with their Chinese students. If Chinese students are not able to generate questions by themselves and self-directed to explore these questions, it would pose a great challenge for their teachers to introduce inquiry-based learning. Therefore, my participants suggested that higher-level thinking skills be taught by teachers. Katherine said, “Teaching them building on that skill is a whole process. It’s not an automatic thing that you can critically think or that you can choose for yourself and take power in the classroom. The teachers have to actually teach it to students.”

Another two academic challenges observed by my participants are group work and presentation skills. When asked about their Chinese students’ performances in presentations, all of my participants pointed out that language is the biggest issue for the students. What they did to help students understand the task and prepare for the presentations includes using dual language books, translators, dictionaries, and online resources. When asked about Chinese students’ behaviors in groups, Laura recalled: “obviously, they are not experienced with working with other students, so they are not clear about their roles and just stay quiet in the groups.” The
most important reason for this phenomenon is that group work and presentations are not often seen in the Chinese education environment (Xu, 2002). However, they are the norm in Canadian schools, so when newly-arrived Chinese students are required to work in groups and present their work, they become confused and lost (Park, 1997). Katherine acknowledged that even the Canadian-born students have a hard time working in groups. “It’s just a dynamic working with other people. Nobody knows and this might be more challenging for Chinese students who lack the group working experience.” Like higher level thinking skills, cooperative learning skills also need to be taught by teachers. Maria shared her ideas of helping Chinese students find their spot in the group. “You can’t just give group work. You have to be specific about the role of each student and make it clear to them.” She thinks that the balance of giving someone specific job and asking for communication and interdependence within groups is important in cooperative learning. Although group discussions has been found to support students’ inquiry-based learning (Applebee et al., 2003; Nystrand, 2006), Kinsella (1996) suggested teachers be careful when placing newly-arrive Chinese students in small groups. She recommended that teachers put these new students in pairs with students who are from the same cultural background during their initial adjustment period.

This discussion of teachers’ perceived challenges faced by Chinese students includes social, general living and academic challenges, which can be found in the literature review (Ying et al., 2004; Ying et al., 2006; Park, 1990). Among those three main challenges, social challenges and academic challenges such as limited higher order thinking skills, cooperative learning skills and presentation skills are considered to impede my participants’ inquiry-based teaching practices. In order to help their Chinese students overcome these difficulties, especially academic difficulties, the participants have realized the need to teach the students the required skills for
successful inquiry. Katherine suggested that teachers model the higher level thinking process step by step for their Chinese students. This suggestion is in line with Scardamalia’s (2002) findings which indicate that teachers’ modeling of the inquiry-based thinking process in sequence for students by posing the relevant open-ended questions is essential for the success of an inquiry class. These elements of Chinese students’ challenges are integral to how the participants went on to describe their own conceptions of inquiry-based learning and also provide insights into their own teaching practices, all of which will be discussed in the next section.

4.2 Teachers’ Interpretation and Application of Inquiry-Based Learning Approaches to Support Chinese Newcomer Students

This theme presents the three interviewees’ interpretation of inquiry-based learning, why they think this learning approach is beneficial for Chinese students and how they have reported used this approach to support the learning needs of their Chinese students.

4.2.1 Teachers’ interpretation of inquiry-based learning

Teachers have varied interpretations of inquiry-based learning and their personal interpretations influence the ways they use this approach in the classroom. When asked how they define the inquiry-based learning approach, Laura briefly described her understanding of an inquiry process, “the teacher might propose generally the topic, and then the student gets to create their own questions that they want to research. They do the inquiry and figure out where they need to do the research.” Laura first acknowledged the necessity of the teacher’s guidance. However, she perceived that it is the student’s responsibility to come up with questions and then to be a problem solver. In this sense, Laura requires her students to be an independent thinker who is equipped with basic questioning skills to function in her inquiry class. It took Katherine a
few minutes to define the inquiry-based learning because she said that this term is seldom used in her own teaching. But she eventually gave her thoughts about the inquiry: “the idea is that it’s more motivating for the students because they have a stick in the question. They’ve created their own questions presumably on something that they are really interested in.” In contrast with Laura’s emphasis on the independence in the students, Katherine is more focused on how inquiry-based learning is driven by students’ interests. Her perceived inquiry class is built upon students’ interests, stimulating their thirst for knowledge and therefore motivate them to explore the questions. When discussing the key characteristics of inquiry-based learning, Maria thinks that it has to be student-led; however, she also emphasized the importance of teacher’s guidance. “Students can’t just go crazy and ask questions about anything. They have to be given a guide on how to do research and how to find the answers to the questions. Teachers are responsible for providing them with the sources.” Her interpretation of inquiry-based learning is trying to find a balance between teacher’s guidance and students’ independent research.

4.2.2 Supporting Chinese immigrant students with inquiry-based learning

Teachers reported that they had designed a variety of inquiry-based learning activities for their Chinese students in different subject areas. They felt that the inquiry-based learning approach is the most effective approach in addressing Chinese immigrant students’ learning needs such as limited independent thinking skills, inquiry skills and creativity. During the interviews, I asked them to give me detailed examples of using this approach in their own teaching practices with Chinese immigrant students. First, in Maria’s ESL language class, she taught Chinese immigrant students newspaper writing. She told students to find the weirdest and the most interesting picture on the Internet and create a good headline for this picture. Then the
students were required to create a story based on “5 Ws”. The story has to match the picture and headline. When asked how her students respond to this class, she said:

They found it really fun because it’s their own way of finding out how newspaper works, and this is all derived from their own curiosity. They are creating a story instead of just reading it and talking about it and asking questions, so they had to do that and make sense.

Here, Maria shows her effort devoted to designing this fun class for her Chinese immigrant students. Through her step-by-step instruction, it stimulated the students’ creativity about newspapers writing and develop their independent working skills.

Katherine reported that she did inquiry mainly in social studies, especially when they were learning about First Nations people, her Chinese students were asked to complete some inquiry projects on how First Nations are marginalized in Canada. To ensure that students would be able to develop their inquiry project, she taught them the whole research process and about inquiry, such as how to develop questions. “I did lots of lessons around creating higher –level questions, using Bloom’s Taxonomy, and then they had to go out and find the answers of those questions on the topic that may interest them”. Still built on students’ interest, Katherine modeled the inquiry-based learning process to make it easier for her Chinese students to understand the inquiry task.

Laura tends to do more inquiry in history, geography, and science, these three subjects in particular. For example, in her geography class, they once did a local geography inquiry project around businesses: “students need to pick businesses in the area and look at the history of business, the kind of business it is, the owners, products, labor conditions on the product and the workers in the store that kind of thing.” She recalled that the geography project was interesting for the students because it was about exploring the history of their neighborhood. “The
fascinating thing is to see how these different waves of immigration have influenced the local area, such as how they come into the area, how they have settled and the business they have done here.”

When my interviewees were asked how they can draw on students’ cultural identities as resources for inquiry-based learning, they explained that being able to make the questions connected to their students’ real life is important in the inquiry class. For example, Maria prefers to use Venn diagram to visually compare the differences between Chinese culture and Canadian culture.

When they make the Venn diagram, I just give them a few key words from the English vocabulary, like Halloween. Then I ask them to compare that to something they experienced in their own culture. I don’t know about it, so they are the ones who have to direct the learning based on their culture. I would ask them all kinds of questions that just bring in their own culture so they can feel comfortable, relevant and supportive.

Laura gave me her geography project on China town’s local businesses as an example. “Certainly it would be their choice to choose the business that was related to their cultural identity to give them some insights into business or some relationship to it.”

This section talked about how teachers perceived inquiry-based learning as an interest-based, student-driven questioning process appropriately guided by teachers (Chiarotto, 2011; Tofade et al., 2013; Younker & Bracken, 2015). Built upon their understandings of the inquiry, teachers provided their inquiry-based teaching practices. Meanwhile, they highlighted the importance of connecting the questions with students’ own experiences. This matches one of the strategies that has been discussed in Chapter Two, “Teachers ought to provide these students meaningful cues such as context-based content to help students build connections and better
understand the questions” (Stoddart et al., 2002, p. 671). The next section will discuss Chinese students’ reported responses to inquiry-based learning.

4.3 Chinese Students’ Reported Responses to Inquiry-Based Learning

As indicated by my participants, confused and difficult are two common responses that Chinese students exhibit in the beginning of the inquiry process. However, the students are reported to become more comfortable with this approach to learning as they practice more in class. When asked how their Chinese students respond to the inquiry-based instructional strategies and why they believe that their students respond the way they do, Maria answered, “they are so confused because again, it’s like the teachers giving the power to the students to direct their own learning and they are not accustomed to having the power, so you have to teach that to them and that takes a very long time,” This reinforces one of the teachers’ perceived academic challenges faced by Chinese students, which is the absence of the independent thinking and working skills. The unfamiliarity with self-directed study, which is required by inquiry, is likely to cause confusion for Chinese students. Katherine went on to describe her beliefs about why her Chinese students think the inquiry is hard, “I think in part it’s difficult because it is usually very language-based, and for new students who don’t have a lot of English, it is a difficult thing to do.” She perceived that language barrier is an important reason that challenges her Chinese students’ understandings of the instruction. Laura attributed different learning experiences obtained from the Chinese school systems to her Chinese students’ hard feelings about the inquiry-based learning:

I think it is difficult because it’s a kind of different learning experience than that they might be used to in the former school system, I would imagine for some students it is
really exciting because they did something different they get to do, but at the same time, it might be hard for them to understand why they are doing this kind of work in this way.

Laura presented two types of reaction from her Chinese students: exciting and challenging. Inquiry is perceived by Laura as a new learning style for Chinese students, so it might give them a fresh learning experience. Meanwhile, because her Chinese students are from different parts of China and were trained in different school system, they may not have the required skills for the inquiry class.

When asked if these negative responses from Chinese students last all the time throughout the inquiry-based learning process, my participants stated that despite the initial confusion and difficulty experienced by the Chinese students, they are observed to show a growing comfort and confidence with this learning approach. These teachers believe that step-by-step instruction is extremely necessary in implementing inquiry tasks with Chinese immigrant students. In Katherine’s teaching experiences, her Chinese immigrant students reportedly do not know the routine of answering a higher order question, which may require them to rephrase and analyze the question, support answers with their own experiences and ideas, and make connections to other texts: “sometimes they internalize that spelling is important and is the reason why they cannot get an A, so really going through and showing them how to answer questions is a big thing cause they don’t understand it.” What she would do to improve students’ understanding is to read through the instruction step by step and get them to read the questions and break down the questions step by step in whatever subject. In Maria’s case, she would give students as many exemplars as possible for analysis, including good examples but bad ones as well: “you have to teach them how to research, find good sources, paraphrase, analyze, compare and contrast, and how not to plagiarize. You have to really teach the process and go through each
Although it does reportedly take a while for the teachers to work through the learning process with the new comer students, Katherine found that generally speaking, children in her inquiry class will learn these techniques very quickly, especially the new comer students. Then they will gradually be used to this learning approach and response positively in their later learning experiences.

This section has discussed how Chinese immigrant students’ were confused about the inquiry-based learning at the beginning and how they showed a growing understanding of it as observed by my participants. Students’ unfamiliarity with a new school system is likely to cause problems during the adaptation period (Dai et al., 2011). However, teachers’ scaffolding also impacts the quality of inquiry. Clear and well-organized instruction is essential in guiding and motivating students to learn (Colwell et al., 2013). The next theme will discuss the barriers encountered by teachers when supporting their Chinese immigrant students.

### 4.4 Challenges Faced by Teachers When Supporting Chinese Immigrant Students

In my participants’ experiences, the language barrier, a lack of resources, and limited school support are three main challenges for them when supporting the new Canadian students from China. In this theme, the interviewees shared their responses to these challenges and called for greater support from the Ontario education system.

When asked the range of challenges they experience when supporting newly arrived students from China, Katherine and Maria both acknowledged that the language can be a main hindrance for the effective communication between teachers and their newcomer students. In spite of the existence of dictionaries, interpreters and translators, Maria reflected that things like translators “can only get to the surface meaning”. She still has difficulties understanding the real
feelings of students and she thinks that the miscommunication might make it hard for students to trust the teachers and the school.

All my interviewees complained of a lack of resources to help them prepare and conduct a successful inquiry-based lessons with new Chinese students. Laura stated that we don’t have tons of resources, so it’s actually quite difficult. I know they’ve been doing some inquiry in history, but the history textbook is written at a grade 8 English level, which would be very difficult for someone who’s newly-arrived to read, so if we could have more resources for beginners, then it would be easier to do some inquiry work.

The resource that has not been provided for Laura’s Chinese newcomer students is the supplementary language books that are suitable for beginners to learn. Katherine said that she always tries to find ways to use students’ L1 and culture in the classroom. However, she thinks that she has limited access to finding the authentic experiences or resources of her Chinese students. Therefore, Katherine is asking for the resources that can speak to her Chinese students’ cultural identity and can help her integrate Chinese language and culture into her classroom.

Supports for new immigrant students, specifically for Chinese intermediate-aged students, reportedly vary from schools to schools. The same problem that both Maria and Katherine’s schools experience is a neglect of these students’ particular needs. As a high school ESL teacher, Maria complained that her school does not actually fulfill the needs of Chinese newcomer students: “you see the students by themselves. You don’t even see teachers going to talk to them. Not so many people are interacting with them, even from the staff. It’s left to the ESL teacher to do any kind of integration.” This cold treatment and ignorance of new Chinese students may negatively impact their feelings about being in schools. As a grade 6 homeroom teacher, Katherine thinks that there is a need to get classroom teacher and schools on board with seeing
the new immigrant students as positive aspects of schools, “not describing them as low or problems, but seeing them as great additions to classrooms.” Laura, a grade 7 homeroom teacher, complained that her school does not have regular ESL support: “the ESL teacher doesn’t come often enough and when she didn’t come, nobody replaced her and it took the school several weeks to get another teacher.” She hopes that the school board would have higher efficiency in contacting new ESL teachers so that there is a coherent communication and cooperation between the homeroom teacher and the ESL teacher.

Finally, the three teachers came up with some suggestions for Ontario education system to better assist them in meeting these challenges. First, they all see the significance of using students’ first language in class. Although the TDSB in Ontario has a lot of emphasis on maintaining students’ first language, Katherine found that a large number of teachers did not use enough of these students’ first language in their actual teaching practices. Therefore, she asks for more language support from education system. She also indicated that lots of people still do not know the complexity of learning a new language: “the traditional idea of the newcomer student who knows how to read and write in their L1 just be ready to learn English is very wrong. Most of the kids who are like that are still struggling with the schools here.” By reporting her experiences working with English language learners, she thinks that there is a need for education community to provide her students with more resources in their first language. Maria emphasized that the community effort would be helpful to address teacher’s challenge. “The whole school should care about the students, knowing that these kids are here alone, not speaking the language well and not being aware of all the cultural norms.” This statement was supported by Laura who recommended schools be welcoming and be interested in these student’s culture and language, and make sure that they are making friends and getting along with people.
Studies that have examined difficulties with implementing inquiry have found that teachers’ lack of good knowledge and resources of inquiry-based learning, oversized classroom, and inadequate time allocation in the school-time table is closely associated the challenges that teachers have experienced (Colwell et al., 2013; Olagoke et al., 2014). Throughout my participants’ descriptions, the limited school support and language issues are another two areas needs to be settled to the betterment of the inquiry class taken by Chinese immigrant students.

4.5 Conclusion

Four themes emerged from the analysis and were substantiated in this chapter. The first theme section examined family and schooling challenges that newly immigrant Chinese students encounter when they come to Canada, followed with the corresponding learning needs of higher level thinking skills, cooperative learning skills and presentation skills. The second theme connected to the central research question of how these participants view inquiry-based learning and reportedly apply it in their classrooms. The next theme presented Chinese students’ reported initial confusion and difficulty with inquiry-based learning approach, but with a growing comfort as they practice more in class. Lastly, the chapter revealed a range of challenges that teachers experienced such as language, limited resources and school support, followed with teachers’ discussion of how the Ontario education system can further support them in meeting these challenges. My findings specifically tie the Chinese intermediate-aged immigrant students to the inquiry-based learning and explain that although both students and teachers face challenges, this learning approach is found to be beneficial for Chinese immigrant students’ adaptation to the Ontario learning environment. In the next chapter and final chapter, I offer implications and recommendations for the Ontario ministry of education on clarifying the definitions of inquiry-based learning and give teachers sufficient time to prepare for their classes.
Chapter Five: Conclusion

5.0 Chapter Introduction

In this study I began by discussing the fact that a large number of younger Chinese immigrant students have come to study in Canada and in Ontario and asked the question: How are a small sample of Canadian intermediate English teachers reportedly using inquiry-based learning approach to support the learning needs of newly-arrived Chinese students? I explored the relevant literature pertaining to definitions of inquiry-based learning, challenges and learning needs of Chinese intermediate-aged students, coupled with analysis of why inquiry might work for Chinese students as well as of a selection of effective inquiry-based teaching practices. I collected and analyzed data by conducting semi-structured interviews with three intermediate English teachers. This small sample of teachers all held their own understandings of inquiry-based learning and implemented this approach in different subject areas, but encountered different challenges while helping their Chinese students. In this chapter I will give a brief overview of the findings summarized in Chapter Four and investigate the broad and narrow implications of these findings. Then I will provide recommendations for using inquiry-based teaching approaches to address the learning needs of Chinese immigrant students. Finally, I will suggest directions for future educational research.

5.1 Overview of Key Findings and Their Significance

The findings of this study are parallel with the literature, and four main themes emerged from the findings, which I will discuss in turn. All of my participants perceived that the biggest challenge for Chinese newcomer students is social inclusion. Both Maria and Katherine believed that the most important factor influencing Chinese students’ social competence in Canadian schools is their Chinese cultural identity. Maria spoke to how the conservativeness of Chinese
culture resulted in the overall introverted personality of students from China, which she believed made it harder for them to integrate into local schools and communities. Katherine reported that Chinese students have their own definitions and standards of friendship, especially of close friends, which she reported added challenges to finding what she perceived as ‘true friends.’ In addition, teachers also reported that different school systems and what is perceived as insufficient family support cause issues for students’ adaptation. The learning needs of the reported Chinese students that have been identified by their teachers are higher order thinking skills, group work and presentation skills.

The vast range of definitions of inquiry-based learning in the literature make it complicated for teachers to understand teaching practices relating to inquiry instruction. Each participant interpreted it differently depending on the context of the interview question. One of the participants Katherine even had difficulties defining inquiry-based learning when she was first asked about it in the interview. However, all of my participants agreed that inquiry-based learning is beneficial for not only Chinese immigrant students, but for all students in that it prioritizes students’ interests, motivates them to learn, develops independent learning abilities, and allows for critical thinking.

In addition to teaching Chinese students inquiry skills such as how to create higher level questions, develop inquiry projects and research skills, teachers reportedly also tried to draw on Chinese students’ cultural identities as resources for inquiry-based learning such as using Venn diagrams to compare cultural differences and going on field trips to Chinatown. Although Chinese students reportedly responded to this approach to learning with initial confusion, they were reported to have a growing comfort and confidence with inquiry.
Teachers reported that a lack of resources, insufficient planning time, and language barriers impeded the successful instruction of inquiry-based learning when supporting Chinese immigrant students. More supporting resources about teaching inquiry to students from different cultures is perceived by teachers as an important factor for improving Chinese students’ understanding of inquiry-based learning.

5.2 Implications

The findings from this study have a number of implications both for the broader educational community and for my own professional identity and practice. The implications for the wider education community focus on recognizing the unique learning needs of Chinese intermediate-aged immigrant students, and the values of integrating inquiry-based learning into classrooms. The implications for my personal practice relate to how I can advocate for and support teachers’ use of inquiry-based learning not only in Ontario schools but also in Chinese education contexts.

5.2.1 Broad implications: The educational community

First, the findings indicate that there are a number of definitions of inquiry-based learning that have been given by researchers and teachers. On the one hand, this can be interpreted as a positive phenomenon where the educational community has seen the value of inquiry and therefore the related literature and teaching practices have flourished. On the other hand, however, if there is no working definition for inquiry in the educational context, it could cause problems not only for the educational literature but for the future of effective inquiry-based learning instruction. The researchers may find teachers’ definitions of inquiry are not in line with their viewpoints whereas the definitions provided by literature may not align with teachers’ real
teaching practices. These discrepancies may negatively influence students’ achievement because of the poorly-structured or inconsistent instructions in inquiry.

The challenges that my participants reportedly encountered in supporting Chinese students with inquiry-based learning include a lack of support and resources, time limitations, and language barriers. Teachers reported that some school staff and administrators are not welcoming and supporting new immigrant students, which may add extra difficulties for Chinese students’ transitions to the Ontario school system. These reported problems reflect that teachers may be struggling to find the time, resources, and language supports to implement inquiry classes effectively. It also means the learning needs of Chinese students may not be appropriately met and they may not be developing the English proficiency, creativity, questioning skills, critical thinking skills and collaborative learning skills that are absent in some Chinese education systems.

5.2.2 Narrow implications: Professional identity and practice

The findings of this study have informed me how a small sample of teachers perceived challenges that intermediate-aged Chinese students encountered in their transition to Ontario schools, in addition to the common issues of language barriers and culture shock. These responses from teachers deepen my understanding of some specific challenges and potential ways of supporting the newcomer students. Meanwhile, my participants provided numerous examples of how they believe inquiry is an important element of the teaching and learning process, and how they believe it can work for Chinese newcomer students. This study has established my knowledge frame of inquiry-based learning and has given me confidence in applying this approach to my future classrooms.
The various definitions of inquiry-based learning found in the literature and given by my participants suggest the need for me to be purposeful in using this approach to help Chinese newcomer students. In addition to the meanings defined by the literature, I need to have my own interpretation of inquiry in the corresponding cultural context to support my practice in integrating inquiry-based learning into my teaching of the Ontario curriculum.

In terms of my professional identity and practice, I especially look forward to implementing an inquiry-based approach to learning in my Chinese classrooms since this is still a new teaching and learning pedagogy in Chinese education. I used to believe that the teacher plays the most important role in class. He or she is supposed to deliver knowledge, create assignments and assess students’ work based on the traditional Chinese philosophy of teaching. However, after conducting this study and doing my teaching practice in Ontario, I believe that the teacher is a key facilitator in class who is responsible for organizing student-centered learning activities. With inquiry-based learning approaches particularly in mind, my educational goal for my Chinese students is to develop their higher order thinking skills and help them become independent thinkers.

5.3 Recommendations

The wide range of definitions of inquiry-based learning that has been explored in the literature and provided by interviewees may cause teachers’ to be confused about inquiry, which may affect the assessments of their students’ work. My teacher participant Katherine is an example of having difficulties defining the inquiry-based learning. This phenomenon highlights an issue in the instruction of inquiry-based learning because the current curriculum document and educational system in Ontario lack a clear and comprehensive concept of what exactly the inquiry-based learning is, which should include specific learning goals, processes, skills and
assessment criteria to serve both teachers and students. Thus, the Ontario government and the ministry of education should immediately work on clarifying their definitions of inquiry-based learning, covering the detailed components and processes, roles of teachers and students, and specific evaluation criteria. This may help teacher education programs in Ontario prepare teacher candidates with a more comprehensive understanding of inquiry so that they will be able to better integrate inquiry-based learning into their future teaching practices. Teacher education programs should also extend their professional development programs and activities about inquiry-based learning approaches abided by the definitions provided by the Ontario ministry of education.

According to participants’ feedback on the challenges they reportedly encountered while using inquiry-based learning to support Chinese students, there may be a lack of planning time and resources which can impede the effective application of the learning approach. Therefore, I suggest governments, the ministry of education and school boards in Ontario give teachers and students more support and resources about culture, languages and inquiry in the next few years. For example, they can provide more materials, books and media propaganda of diverse cultures and languages of immigrants. Teachers need to have the access to the knowledge of teaching inquiry to students from different cultures and to be able to communicate in students’ first languages when students have problems understanding questions. In addition, school boards should give teachers sufficient time to prepare classes, especially those teachers who have many newcomer students.

Finally, I recommend all teachers consider what inquiry-based learning means to them individually with the support of definitions from the Ontario ministry of education under the context of their educational environments. Educators also need to be more responsive to different
cultures, not only Chinese cultures, but also other immigrant students. I suggest staff be more open and welcoming to newcomer students so they can feel secure in schools.

5.4 Areas for Further Research

In the scope of my research about inquiry-based learning, I have not found studies pertaining to teachers’ individual definitions of inquiry, and how to combine these into a working definition that can be used for educational purposes. Thus, research that elaborates on teacher definitions of inquiry-based learning will help educators see any influence that different definitions of inquiry-based learning may have on teaching practices. According to my findings, another important area for further research is to investigate how inquiry-based learning can be used with other immigrant cultures in addition to Chinese culture. This will provide a new direction for educational research scholars to explore the inherent relationships between inquiry-based learning and different cultures. As how I summarized Ontario teachers’ perceived academic challenges for Chinese students, researchers can shift their attention to finding out the potential challenges faced by the immigrant students who are from a different culture and thus coming up with more culturally responsive teaching pedagogies for Ontario teachers.

This research is based on teachers’ perspectives of Chinese intermediate-aged immigrant students’ challenges and learning needs, as well as their own reported inquiry-based learning teaching practices and their perceived effects on Chinese students. Additional data needs to be collected from Chinese students and parents because teachers’ perceptions alone may not be able to reflect and represent the authentic living and learning experiences from students and parents. Meanwhile, coupled with qualitative studies, more quantitative research around teachers, Chinese students and parents can provide significant insights for the education community.
which will allow a much more inclusive and comprehensive data to be analyzed by both researchers and educators.

5.5 Concluding Comments

I started to become interested in inquiry-based learning while pursuing a Master of Teaching degree at OISE at the University of Toronto. In my previous educational experiences, I had never been exposed to this concept. Therefore, I wondered what it might mean as a teaching and learning approach to both teachers and students. This led me to be more concerned with the characteristics and benefits of inquiry. After some preliminary research, I first questioned whether inquiry-based learning can work in Chinese kindergarten and elementary classrooms because of my cultural background. However, connecting to the research context where an increasing number of young Chinese immigrant students have come to study in Ontario, I asked how a sample of Ontario intermediate teachers report using inquiry approaches to support the learning needs of these newcomer students from China.

These findings are important because they present a unique contribution to the literature, which may be useful for educational researchers, teachers, and governments and the ministry of education in Ontario. During my research process, I reviewed the literature around English language learners (ELLs) and inquiry-based learning. However, my study is specifically focused on one ethnic group—Chinese, and newcomer students within the intermediate age group. I made a connection between the inquiry-based learning and Chinese newcomer students, which may provide direction for researchers to further explore a more effective definition of inquiry-based learning and culturally responsive pedagogy to serve the purposes of intermediate education. Teachers might use these findings to learn more about the reported challenges faced by Chinese students and the reported learning needs of Chinese students. Meanwhile, by reading
about how a sample of intermediate teachers have reportedly applied effective inquiry in classes to support Chinese learners, teachers can evaluate their own teaching practices and make more informed decisions when planning inquiry-based learning instruction. In light of these findings, policy makers and the ministry of education in Ontario can consider establishing a standard and more clearly-defined inquiry-based learning framework to inform teacher education programs, school boards and therefore teachers to help them better integrate this approach to learning into their own teaching practices. Furthermore, Ontario governments and the ministry of education can work on providing more resources and greater support accessible for all school boards, teachers, and students.

As an international student from China, especially after enrolling in the Master of Teaching program in Ontario, I have felt strong cultural contrasts between the two countries in terms of philosophies of education. My traditional Chinese education has endowed me with good memorization skills, a strong work ethic, and respectful attitudes towards teachers whereas Canadian education activates my creativity, group work ability, and higher order thinking skills. I am fortunate to have been able to receive different types of education from China, America and Canada. Each type of education has unique characteristics, benefits and problems. However, as a teacher candidate who was trained in Canada, I felt my Chinese elementary education had not prepared me with the creativity, collaborative learning skills and critical thinking skills that I think are essential in the twenty-first century. I believe that the rigid curriculum frame of Chinese elementary education needs to be reformed and improved. I hope the concept of inquiry-based learning can be commonly introduced to Chinese elementary schools and the approach can be effectively utilized by teachers to cultivate students’ problem-solving skills. As a future teacher who is going to teach in China, I hope that Chinese governments, school boards, teachers and
students can see the significance of the research I have done in Ontario context and consider what they can borrow from it to improve the inquiry-based teaching practices of Chinese education. Since my study is a qualitative study, I would also want to see the related quantitative study and how both of them can further benefit inquiry instruction. Finally, I sincerely hope that researchers in Ontario can continue to explore more teaching pedagogies, not restricted to inquiry-based learning, to further support newly-arrived Chinese students.
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Appendix A: A Letter of Consent

Date:

Dear _______________________________,

My name is Dandan Shi and I am a student in the Master of Teaching (MT) program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on Strategies for Helping Recent Chinese Immigrant Elementary Students Transit to the Ontario Inquiry-based Learning Environment. I am interested in interviewing teachers who have experience of working with ELLs, especially the recently-arrived Chinese intermediate-aged students. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one roughly 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for you, outside of school time. The contents of this interview will be used for my research project, which will include a final paper and informal presentations to my classmates. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded.

The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Dandan, Shi

Consent Form
I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw from this research study at any time without penalty.

I have read the letter provided to me by Dandan Shi and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: ______________________________________

Name: (printed) _______________________________________________

Date: ______________________________________
Appendix B: Interview Protocol

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn how a sample of teachers use an inquiry-based learning approach to support the learning needs of new Canadian students from China. This interview will last about 45-60 minutes, and I will ask you a series of questions that focus on your background, perspectives, teaching practices, and supporting resources. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

**Background:**

1. Can you please tell me your current position?
   a. What grades/subjects do you teach?
   b. Which grades/subjects have you previously taught?
   c. Do you fulfill any other roles in your school? (e.g. advisor, support worker, coach, parent liaison)

2. For how many years have you been teaching?

3. How many years have you been teaching at your current school?

4. Can you please tell me more about the school you teach in? (e.g. size, demographics of students, program priorities)
   a. Approximately what percentage of students in your school represents newly-arrived Canadians?
   b. Of those students, approximately what percentage represents newly arrived from China?
   c. Can you tell me what range of supports are available in your school for newly arrived Canadian students? (*listen, and probe as necessary re: cultural liaison workers, ESL/ELL support, welcome and literacy centers for parents and families)

5. What experiences have contributed to preparing you to support new Canadian students?
   a. Personal experiences (e.g. own experience as a child in K-12, experiences of friends/family members, travelling abroad etc.)
   b. Educational experiences (e.g. university studies, teachers college, additional qualifications, TESL certifications, professional development)
   c. Professional experiences (e.g. employment positions such as ELL support worker, experience working in schools with high numbers of newly arrived students)

6. Can you tell me more about your own cultural identity?
   a. How would you describe your cultural identity?
   b. And your language identity? Do you speak any other language except English?

**Teacher Beliefs and Perspectives**
1. In your experience, what are some of the challenges and barriers (in addition to the language barrier and culture shock) that newly arrived Canadian students face in schools?
   a. And what are some of the challenges and barriers that you have observed for newly arrived students from China, specifically? Please elaborate.
   b. In your view, what are some of the key causes of these challenges and barriers?

2. In your view, how well do schools do in addressing these challenges and barriers that confront newly arrived Canadian students? And newly arrived students from China, more specifically?
   a. What evidence have you seen, in your experience?
   b. What are some of the obstacles that get in the way of addressing such challenges?
   c. In your view, what are some ways that these challenges and obstacles can be addressed in order to enhance school support for newly arrived students? And for newly arrived students from China?

3. From your perspective and what you know about the Chinese education system, what are some of the key differences between the Chinese and Canadian education systems?
   a. What are some of the key differences in terms of approaches to teaching and learning?
   b. And in terms of how teachers and students relate to one another?
   c. And what about in terms of the role of the teacher, and the role of the student in teaching and learning?

4. As you know, I was interested in specifically interviewing teachers who have a commitment to inquiry-based learning. Can you tell me what “inquiry-based learning” means to you?
   a. What are some of the key characteristics of an inquiry-based approach to learning?
   b. Why do you believe that it is valuable to teach through an inquiry-based approach to learning?
   c. In your experience, what are some of the benefits to this approach?
   d. In your experience, how do you students who are newly arrived from China respond to this approach? Why do you believe they respond the way they do?

**Teacher Practice and Sources of Support**

1. Can you tell me more about what inquiry-based learning looks like in your teaching practice?
   a. If I were to spend a day in your classroom, what indicators of inquiry-based approaches to learning would I see and hear?
   b. Can you provide me with some examples of lessons that you have taught through an inquiry-based approach to learning, and please choose some whereby you recall supporting newly arrived students from China?
     i. What grades/subjects/curriculum were you teaching?
     ii. What were your learning goals?
     iii. What opportunities for learning did you create?
     iv. How did your students respond?
v. How did your newly arrived students from China respond?  
vi. What resources did you use to support your newly arrived students from China?  
vii. How, if at all, did you assess their learning and why? What did you assess and why?

2. What are some of the key instructional strategies that you use to support newly arrived students from China and why?  
   a. How do students respond to these strategies? What outcomes do you observe?  
   b. How do you scaffold your support for students who struggle with language proficiency but exhibit strong academic proficiency?

3. How, if at all, do you draw on students’ cultural identities as resources for inquiry-based learning? Can you please provide me with some examples?

4. What are some of the key areas that you support, and how do you offer support in these areas (e.g. academic, social-emotional well-being, communication, cultural transitions, community immersion)?

5. How do you assess the kinds of supports that these students require?

6. What range of resources do you use to support newly arrived students from China? (e.g. children’s literature, dual language books, peer mentors, ELL resource teachers, guest speakers, field trips, colleagues)

7. What range of factors and resources support you in this work? (e.g. school wide commitment, supportive admin and colleagues, school-community partnerships, access to material resources like dual language books, human resources such as ELL support workers, cultural transition support workers)

Challenges and Next Steps

8. What range of challenges do you experience when supporting newly arrived students from China?  
   a. How do you respond to these challenges?  
   b. How might the education system further support you in meeting these challenges?

9. What, if any, are some of your goals for developing the range of supports you provide to newly-arrived Canadian students generally, and to newly arrived students from China, more specifically?

10. What advice, if any, do you have for beginning teachers who are committed to supporting newly arrived Canadian students?  
    a. What advice, if any, do you have for beginning teachers who find themselves working in schools with a high population of Chinese immigrant students?

Thank you for your participation in this research study.